

METAPHORS We Live By

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Preface

This book grew out of a concern, on both our parts, with how people understand their language and their experience. When we first met, in early January 1979, we found that we shared, also, a sense that the dominant views on *meaning* in Western philosophy and linguistics are inadequate—that ‘‘meaning’’ in these traditions has very little to do with what people find *meaningful* in their lives.

We were brought together by a joint interest in metaphor. Mark had found that most traditional philosophical views permit metaphor little, if any, role in understanding our world and ourselves. George had discovered linguistic evidence showing that metaphor is pervasive in everyday language and thought—evidence that did not fit any contemporary Anglo-American theory of meaning within either linguistics or philosophy. Metaphor has traditionally been viewed in both fields as a matter of peripheral interest. We shared the intuition that it is, instead, a matter of central concern, perhaps the key to giving an adequate account of understanding.

Shortly after we met, we decided to collaborate on what we thought would be a brief paper giving some linguistic evidence to point up shortcomings in recent theories of meaning. Within a week we discovered that certain assumptions of contemporary philosophy and linguistics that have been taken for granted within the Western tradition since the Greeks precluded us from even raising the kind of issues we wanted to address. The problem was not one of extending or patching up some existing theory of meaning

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Concepts We Live By

Metaphor is for most people a device of the poetic imagination and the rhetorical flourish—a matter of extraordinary rather than ordinary language. Moreover, metaphor is typically viewed as characteristic of language alone, a matter of words rather than thought or action. For this reason, most people think they can get along perfectly well without metaphor. We have found, on the contrary, that metaphor is pervasive in everyday life, not just in language but in thought and action. Our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature.

The concepts that govern our thought are not just matters of the intellect. They also govern our everyday functioning, down to the most mundane details. Our concepts structure what we perceive, how we get around in the world, and how we relate to other people. Our conceptual system thus plays a central role in defining our everyday realities. If we are right in suggesting that our conceptual system is largely metaphorical, then the way we think, what we experience, and what we do every day is very much a matter of metaphor.

But our conceptual system is not something we are normally aware of. In most of the little things we do every day, we simply think and act more or less automatically along certain lines. Just what these lines are is by no means obvious. One way to find out is by looking at language. Since communication is based on the same conceptual system that we use in thinking and acting, language is an important source of evidence for what that system is like.

Primarily on the basis of linguistic evidence, we have found that most of our ordinary conceptual system is metaphorical in nature. And we have found a way to begin to identify in detail just what the metaphors are that structure how we perceive, how we think, and what we do.

To give some idea of what it could mean for a concept to be metaphorical and for such a concept to structure an everyday activity, let us start with the concept ARGUMENT and the conceptual metaphor ARGUMENT IS WAR. This metaphor is reflected in our everyday language by a wide variety of expressions:

ARGUMENT IS WAR

Your claims are *indefensible*.

He *attacked every weak point* in my argument.

His criticisms were *right on target*.

I *demolished* his argument.

I've never *won* an argument with him.

You disagree? Okay, *shoot!*

If you use that *strategy*, he'll *wipe you out*.

He *shot down* all of my arguments.

It is important to see that we don't just *talk* about arguments in terms of war. We can actually win or lose arguments. We see the person we are arguing with as an opponent. We attack his positions and we defend our own. We gain and lose ground. We plan and use strategies. If we find a position indefensible, we can abandon it and take a new line of attack. Many of the things we *do* in arguing are partially structured by the concept of war. Though there is no physical battle, there is a verbal battle, and the structure of an argument—attack, defense, counterattack, etc.—reflects this. It is in this sense that the ARGUMENT IS WAR metaphor is one that we live by in this culture; it structures the actions we perform in arguing.

Try to imagine a culture where arguments are not viewed in terms of war, where no one wins or loses, where there is no sense of attacking or defending, gaining or losing

ground. Imagine a culture where an argument is viewed as a dance, the participants are seen as performers, and the goal is to perform in a balanced and aesthetically pleasing way. In such a culture, people would view arguments differently, experience them differently, carry them out differently, and talk about them differently. But we would probably not view them as arguing at all: they would simply be doing something different. It would seem strange even to call what they were doing "arguing." Perhaps the most neutral way of describing this difference between their culture and ours would be to say that we have a discourse form structured in terms of battle and they have one structured in terms of dance.

This is an example of what it means for a metaphorical concept, namely, ARGUMENT IS WAR, to structure (at least in part) what we do and how we understand what we are doing when we argue. *The essence of metaphor is understanding and experiencing one kind of thing in terms of another.* It is not that arguments are a subspecies of war. Arguments and wars are different kinds of things—verbal discourse and armed conflict—and the actions performed are different kinds of actions. But ARGUMENT is partially structured, understood, performed, and talked about in terms of WAR. The concept is metaphorically structured, the activity is metaphorically structured, and, consequently, the language is metaphorically structured.

Moreover, this is the *ordinary* way of having an argument and talking about one. The normal way for us to talk about attacking a position is to use the words "attack a position." Our conventional ways of talking about arguments presuppose a metaphor we are hardly ever conscious of. The metaphor is not merely in the words we use—it is in our very concept of an argument. The language of argument is not poetic, fanciful, or rhetorical; it is literal. We talk about arguments that way because we conceive of them that way—and we act according to the way we conceive of things.

The most important claim we have made so far is that metaphor is not just a matter of language, that is, of mere words. We shall argue that, on the contrary, human *thought processes* are largely metaphorical. This is what we mean when we say that the human conceptual system is metaphorically structured and defined. Metaphors as linguistic expressions are possible precisely because there are metaphors in a person's conceptual system. Therefore, whenever in this book we speak of metaphors, such as ARGUMENT IS WAR, it should be understood that *metaphor* means *metaphorical concept*.

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The Systematicity of Metaphorical Concepts

Arguments usually follow patterns; that is, there are certain things we typically do and do not do in arguing. The fact that we in part conceptualize arguments in terms of battle systematically influences the shape arguments take and the way we talk about what we do in arguing. Because the metaphorical concept is systematic, the language we use to talk about that aspect of the concept is systematic.

We saw in the ARGUMENT IS WAR metaphor that expressions from the vocabulary of war, e.g., *attack a position*, *indefensible*, *strategy*, *new line of attack*, *win*, *gain ground*, etc., form a systematic way of talking about the battling aspects of arguing. It is no accident that these expressions mean what they mean when we use them to talk about arguments. A portion of the conceptual network of battle partially characterizes the concept of an argument, and the language follows suit. Since metaphorical expressions in our language are tied to metaphorical concepts in a systematic way, we can use metaphorical linguistic expressions to study the nature of metaphorical concepts and to gain an understanding of the metaphorical nature of our activities.

To get an idea of how metaphorical expressions in everyday language can give us insight into the metaphorical nature of the concepts that structure our everyday activities, let us consider the metaphorical concept TIME IS MONEY as it is reflected in contemporary English.

TIME IS MONEY

You're *wasting* my time.
This gadget will *save* you hours.

I don't *have* the time to *give* you.
 How do you *spend* your time these days?
 That flat tire *cost* me an hour.
 I've *invested* a lot of time in her.
 I don't *have enough* time to *spare* for that.
 You're *running out* of time.
 You need to *budget* your time.
Put aside some time for ping pong.
 Is that *worth your while*?
 Do you *have much* time *left*?
 He's living on *borrowed* time.
 You don't *use* your time *profitably*.
 I *lost* a lot of time when I got sick.
Thank you for your time.

Time in our culture is a valuable commodity. It is a limited resource that we use to accomplish our goals. Because of the way that the concept of work has developed in modern Western culture, where work is typically associated with the time it takes and time is precisely quantified, it has become customary to pay people by the hour, week, or year. In our culture TIME IS MONEY in many ways: telephone message units, hourly wages, hotel room rates, yearly budgets, interest on loans, and paying your debt to society by "serving time." These practices are relatively new in the history of the human race, and by no means do they exist in all cultures. They have arisen in modern industrialized societies and structure our basic everyday activities in a very profound way. Corresponding to the fact that we *act* as if time is a valuable commodity—a limited resource, even money—we *conceive of* time that way. Thus we understand and experience time as the kind of thing that can be spent, wasted, budgeted, invested wisely or poorly, saved, or squandered.

TIME IS MONEY, TIME IS A LIMITED RESOURCE, and TIME IS A VALUABLE COMMODITY are all metaphorical concepts. They are metaphorical since we are using our everyday experiences with money, limited resources, and valuable

commodities to conceptualize time. This isn't a necessary way for human beings to conceptualize time; it is tied to our culture. There are cultures where time is none of these things.

The metaphorical concepts TIME IS MONEY, TIME IS A RESOURCE, and TIME IS A VALUABLE COMMODITY form a single system based on subcategorization, since in our society money is a limited resource and limited resources are valuable commodities. These subcategorization relationships characterize entailment relationships between the metaphors. TIME IS MONEY entails that TIME IS A LIMITED RESOURCE, which entails that TIME IS A VALUABLE COMMODITY.

We are adopting the practice of using the most specific metaphorical concept, in this case TIME IS MONEY, to characterize the entire system. Of the expressions listed under the TIME IS MONEY metaphor, some refer specifically to money (*spend, invest, budget, profitably, cost*), others to limited resources (*use, use up, have enough of, run out of*), and still others to valuable commodities (*have, give, lose, thank you for*). This is an example of the way in which metaphorical entailments can characterize a coherent system of metaphorical concepts and a corresponding coherent system of metaphorical expressions for those concepts.

Metaphorical Systematicity: Highlighting and Hiding

The very systematicity that allows us to comprehend one aspect of a concept in terms of another (e.g., comprehending an aspect of arguing in terms of battle) will necessarily hide other aspects of the concept. In allowing us to focus on one aspect of a concept (e.g., the battling aspects of arguing), a metaphorical concept can keep us from focusing on other aspects of the concept that are inconsistent with that metaphor. For example, in the midst of a heated argument, when we are intent on attacking our opponent's position and defending our own, we may lose sight of the cooperative aspects of arguing. Someone who is arguing with you can be viewed as giving you his time, a valuable commodity, in an effort at mutual understanding. But when we are preoccupied with the battle aspects, we often lose sight of the cooperative aspects.

A far more subtle case of how a metaphorical concept can hide an aspect of our experience can be seen in what Michael Reddy has called the "conduit metaphor." Reddy observes that our language about language is structured roughly by the following complex metaphor:

IDEAS (OR MEANINGS) ARE OBJECTS.
LINGUISTIC EXPRESSIONS ARE CONTAINERS.
COMMUNICATION IS SENDING.

The speaker puts ideas (objects) into words (containers) and sends them (along a conduit) to a hearer who takes the idea/objects out of the word/containers. Reddy documents this with more than a hundred types of expressions in English, which he estimates account for at least 70 percent of

the expressions we use for talking about language. Here are some examples:

The CONDUIT Metaphor

It's hard to *get* that idea *across* to him.

I *gave* you that idea.

Your reasons *came through* to us.

It's difficult to *put* my ideas *into* words.

When you *have* a good idea, try to *capture* it immediately in words.

Try to *pack* more thought *into* fewer words.

You can't simply *stuff* ideas *into* a sentence any old way.

The meaning is right there *in* the words.

Don't *force* your meanings *into* the wrong words.

His words *carry* little meaning.

The introduction *has* a great deal of thought *content*.

Your words seem *hollow*.

The sentence is *without* meaning.

The idea is *buried* in terribly dense paragraphs.

In examples like these it is far more difficult to see that there is anything hidden by the metaphor or even to see that there is a metaphor here at all. This is so much the conventional way of thinking about language that it is sometimes hard to imagine that it might not fit reality. But if we look at what the CONDUIT metaphor entails, we can see some of the ways in which it masks aspects of the communicative process.

First, the LINGUISTIC EXPRESSIONS ARE CONTAINERS FOR MEANINGS aspect of the CONDUIT metaphor entails that words and sentences have meanings in themselves, independent of any context or speaker. The MEANINGS ARE OBJECTS part of the metaphor, for example, entails that meanings have an existence independent of people and contexts. The part of the metaphor that says LINGUISTIC EXPRESSIONS ARE CONTAINERS FOR MEANING entails that words (and sentences) have meanings, again independent of contexts and speakers. These metaphors are appropriate in many situations—those where context differences don't

matter and where all the participants in the conversation understand the sentences in the same way. These two entailments are exemplified by sentences like

The meaning is *right there* in the words.

which, according to the CONDUR metaphor, can correctly be said of any sentence. But there are many cases where context does matter. Here is a celebrated one recorded in actual conversation by Pamela Downing:

Please sit in the apple-juice seat.

In isolation this sentence has no meaning at all, since the expression "apple-juice seat" is not a conventional way of referring to any kind of object. But the sentence makes perfect sense in the context in which it was uttered. An overnight guest came down to breakfast. There were four place settings, three with orange juice and one with apple juice. It was clear what the apple-juice seat was. And even the next morning, when there was no apple juice, it was still clear which seat was the apple-juice seat.

In addition to sentences that have no meaning without context, there are cases where a single sentence will mean different things to different people. Consider:

We need new alternative sources of energy.

This means something very different to the president of Mobil Oil from what it means to the president of Friends of the Earth. The meaning is not right there in the sentence—it matters a lot who is saying or listening to the sentence and what his social and political attitudes are. The CONDUR metaphor does not fit cases where context is required to determine whether the sentence has any meaning at all and, if so, what meaning it has.

These examples show that the metaphorical concepts we have looked at provide us with a partial understanding of what communication, argument, and time are and that, in doing this, they hide other aspects of these concepts. It is

important to see that the metaphorical structuring involved here is partial, not total. If it were total, one concept would actually *be* the other, not merely be understood in terms of it. For example, time isn't really money. If you *spend your time* trying to do something and it doesn't work, you can't get your time back. There are no time banks. I can *give you a lot of time*, but you can't give me back the same time, though you can *give me back the same amount of time*. And so on. Thus, part of a metaphorical concept does not and cannot fit.

On the other hand, metaphorical concepts can be extended beyond the range of ordinary literal ways of thinking and talking into the range of what is called figurative, poetic, colorful, or fanciful thought and language. Thus, if ideas are objects, we can *dress them up in fancy clothes*, *juggle them*, *line them up nice and neat*, etc. So when we say that a concept is structured by a metaphor, we mean that it is partially structured and that it can be extended in some ways but not others.

Orientational Metaphors

So far we have examined what we will call *structural metaphors*, cases where one concept is metaphorically structured in terms of another. But there is another kind of metaphorical concept, one that does not structure one concept in terms of another but instead organizes a whole system of concepts with respect to one another. We will call these *orientational metaphors*, since most of them have to do with spatial orientation: up-down, in-out, front-back, on-off, deep-shallow, central-peripheral. These spatial orientations arise from the fact that we have bodies of the sort we have and that they function as they do in our physical environment. Orientational metaphors give a concept a spatial orientation; for example, HAPPY IS UP. The fact that the concept HAPPY is oriented UP leads to English expressions like "I'm feeling *up* today."

Such metaphorical orientations are not arbitrary. They have a basis in our physical and cultural experience. Though the polar oppositions up-down, in-out, etc., are physical in nature, the orientational metaphors based on them can vary from culture to culture. For example, in some cultures the future is in front of us, whereas in others it is in back. We will be looking at up-down spatialization metaphors, which have been studied intensively by William Nagy (1974), as an illustration. In each case, we will give a brief hint about how each metaphorical concept might have arisen from our physical and cultural experience. These accounts are meant to be suggestive and plausible, not definitive.

ORIENTATIONAL METAPHORS

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HAPPY IS UP; SAD IS DOWN

I'm feeling *up*. That *boosted* my spirits. My spirits *rose*. You're in *high* spirits. Thinking about her always gives me a *lift*. I'm feeling *down*. I'm *depressed*. He's really *low* these days. I *fell* into a depression. My spirits *sank*.

Physical basis: Drooping posture typically goes along with sadness and depression, erect posture with a positive emotional state.

CONSCIOUS IS UP; UNCONSCIOUS IS DOWN

Get *up*. Wake *up*. I'm *up* already. He *risers* early in the morning. He *fell* asleep. He *dropped* off to sleep. He's *under* hypnosis. He *sank* into a coma.

Physical basis: Humans and most other mammals sleep lying down and stand up when they awaken.

HEALTH AND LIFE ARE UP; SICKNESS AND DEATH ARE DOWN

He's at the *peak* of health. Lazarus *rose* from the dead. He's in *top* shape. As to his health, he's way *up* there. He *fell* ill. He's *sinking* fast. He came *down* with the flu. His health is *declining*. He *dropped* dead.

Physical basis: Serious illness forces us to lie down physically. When you're dead, you are physically down.

HAVING CONTROL OR FORCE IS UP; BEING SUBJECT TO CONTROL OR FORCE IS DOWN

I have control *over* her. I am *on top* of the situation. He's in a *superior* position. He's at the *height* of his power. He's in the *high* command. He's in the *upper* echelon. His power *rose*. He ranks *above* me in strength. He is *under* my control. He *fell* from power. His power is on the *decline*. He is my social *inferior*. He is *low man* on the totem pole.

Physical basis: Physical size typically correlates with physical strength, and the victor in a fight is typically on top.

MORE IS UP; LESS IS DOWN

The number of books printed each year keeps going *up*. His

draft number is *high*. My income *rose* last year. The amount of artistic activity in this state has gone *down* in the past year. The number of errors he made is incredibly *low*. His income *fell* last year. He is *underage*. If you're too hot, turn the heat *down*.

Physical basis: If you add more of a substance or of physical objects to a container or pile, the level goes up.

FORESEEABLE FUTURE EVENTS ARE UP (and AHEAD)

All *upcoming* events are listed in the paper. What's coming *up* this week? I'm afraid of what's *up ahead* of us. What's *up*?

Physical basis: Normally our eyes look in the direction in which we typically move (ahead, forward). As an object approaches a person (or the person approaches the object), the object appears larger. Since the ground is perceived as being fixed, the top of the object appears to be moving upward in the person's field of vision.

HIGH STATUS IS UP; LOW STATUS IS DOWN

He has a *lofty* position. She'll *rise* to the *top*. He's at the *peak* of his career. He's *climbing* the ladder. He has little *upward* mobility. He's at the *bottom* of the social hierarchy. She *fell* in status.

Social and physical basis: Status is correlated with (social) power and (physical) power is UP.

GOOD IS UP; BAD IS DOWN

Things are looking *up*. We hit a *peak* last year, but it's been *downtill* ever since. Things are at an all-time *low*. He does *high-quality* work.

Physical basis for personal well-being: Happiness, health, life, and control—the things that principally characterize what is good for a person—are all UP.

VIRTUE IS UP; DEPRAVITY IS DOWN

He is *high-minded*. She has *high* standards. She is *upright*. She is an *upstanding* citizen. That was a *low* trick. Don't be

underhanded. I wouldn't *stoop* to that. That would be *beneath* me. He *fell* into the *abyss* of depravity. That was a *low-down* thing to do.

Physical and social basis: GOOD IS UP for a person (physical basis), together with a metaphor that we will discuss below, SOCIETY IS A PERSON (in the version where you are *not* identifying with your society). To be virtuous is to act in accordance with the standards set by the society/person to maintain its well-being. VIRTUE IS UP because virtuous actions correlate with social well-being from the society/person's point of view. Since socially based metaphors are part of the culture, it's the society/person's point of view that counts.

RATIONAL IS UP; EMOTIONAL IS DOWN

The discussion *fell* to the *emotional* level, but I *raised* it back *up* to the *rational* plane. We put our *feelings* aside and had a *high-level intellectual* discussion of the matter. He couldn't *rise above* his *emotions*.

Physical and cultural basis: In our culture people view themselves as being in control over animals, plants, and their physical environment, and it is their unique ability to reason that places human beings above other animals and gives them this control. CONTROL IS UP thus provides a basis for MAN IS UP and therefore for RATIONAL IS UP.

Conclusions

On the basis of these examples, we suggest the following conclusions about the experiential grounding, the coherence, and the systematicity of metaphorical concepts:

—Most of our fundamental concepts are organized in terms of one or more spatialization metaphors.

—There is an internal systematicity to each spatialization metaphor. For example, HAPPY IS UP defines a coherent system rather than a number of isolated and random cases. (An example of an incoherent system would be one where, say, "I'm

feeling up" meant "I'm feeling happy," but "My spirits rose" meant "I became sadder.")

—There is an overall external systematicity among the various spatialization metaphors, which defines coherence among them. Thus, GOOD IS UP gives an UP orientation to general well-being, and this orientation is coherent with special cases like HAPPY IS UP, HEALTH IS UP, ALIVE IS UP, CONTROL IS UP. STATUS IS UP is coherent with CONTROL IS UP.

—Spatialization metaphors are rooted in physical and cultural experience; they are not randomly assigned. A metaphor can serve as a vehicle for understanding a concept only by virtue of its experiential basis. (Some of the complexities of the experiential basis of metaphor are discussed in the following section.)

—There are many possible physical and social bases for metaphor. Coherence within the overall system seems to be part of the reason why one is chosen and not another. For example, happiness also tends to correlate physically with a smile and a general feeling of expansiveness. This could in principle form the basis for a metaphor HAPPY IS WIDE; SAD IS NARROW. And in fact there are minor metaphorical expressions, like "I'm feeling *expansive*," that pick out a different aspect of happiness than "I'm feeling *up*" does. But the major metaphor in our culture is HAPPY IS UP; there is a reason why we speak of the height of ecstasy rather than the breadth of ecstasy. HAPPY IS UP is maximally coherent with GOOD IS UP, HEALTHY IS UP, etc.

—In some cases spatialization is so essential a part of a concept that it is difficult for us to imagine any alternative metaphor that might structure the concept. In our society "high status" is such a concept. Other cases, like happiness, are less clear. Is the concept of happiness independent of the HAPPY IS UP metaphor, or is the up-down spatialization of happiness a part of the concept? We believe that it is a part of the concept within a given conceptual system. The HAPPY IS UP metaphor places happiness within a coherent metaphorical system, and part of its meaning comes from its role in that system.

—So-called purely intellectual concepts, e.g., the concepts in a

scientific theory, are often—perhaps always—based on metaphors that have a physical and/or cultural basis. The *high* in "high-energy particles" is based on MORE IS UP. The *high* in "high-level functions," as in physiological psychology, is based on RATIONAL IS UP. The *low* in "low-level phonology" (which refers to detailed phonetic aspects of the sound systems of languages) is based on MUNDANE REALITY IS DOWN (as in "down to earth"). The intuitive appeal of a scientific theory has to do with how well its metaphors fit one's experience.

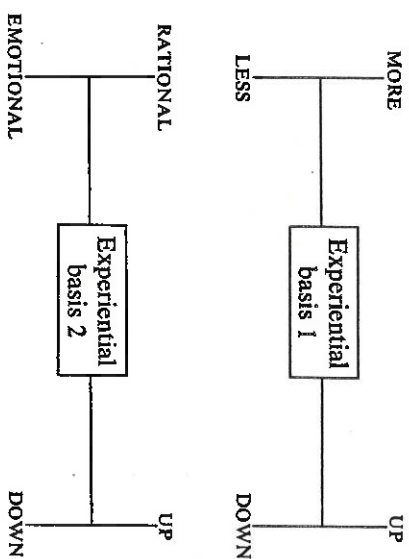
—Our physical and cultural experience provides many possible bases for spatialization metaphors. Which ones are chosen, and which ones are major, may vary from culture to culture.

—It is hard to distinguish the physical from the cultural basis of a metaphor, since the choice of one physical basis from among many possible ones has to do with cultural coherence.

Experiential Bases of Metaphors

We do not know very much about the experiential bases of metaphors. Because of our ignorance in this matter, we have described the metaphors separately, only later adding speculative notes on their possible experiential bases. We are adopting this practice out of ignorance, not out of principle. *In actuality we feel that no metaphor can ever be comprehended or even adequately represented independently of its experiential basis.* For example, MORE IS UP has a very different kind of experiential basis than HAPPY IS UP or RATIONAL IS UP. Though the concept UP is the same in all these metaphors, the experiences on which these UP metaphors are based are very different. It is not that there are many different UPS; rather, verticality enters our experience in many different ways and so gives rise to many different metaphors.

One way of emphasizing the inseparability of metaphors from their experiential bases would be to build the experiential basis into the representations themselves. Thus, instead of writing MORE IS UP and RATIONAL IS UP, we might have the more complex relationship shown in the diagram.



Such a representation would emphasize that the two parts of each metaphor are linked only via an experiential basis and that it is only by means of these experiential bases that the metaphor can serve the purpose of understanding.

We will not use such representations, but only because we know so little about experiential bases of metaphors. We will continue to use the word "is" in stating metaphors like MORE IS UP, but the IS should be viewed as a shorthand for some set of experiences on which the metaphor is based and in terms of which we understand it.

The role of the experiential basis is important in understanding the workings of metaphors that do not fit together because they are based on different kinds of experience. Take, for example, a metaphor like UNKNOWN IS UP; KNOWN IS DOWN. Examples are "That's *up in the air*" and "The matter is *settled*." This metaphor has an experiential basis very much like that of UNDERSTANDING IS GRASPING, as in "I couldn't *grasp* his explanation." With physical objects, if you can grasp something and hold it in your hands, you can look it over carefully and get a reasonably good understanding of it. It's easier to grasp something and look at it carefully if it's on the ground in a fixed location than if it's floating through the air (like a leaf or a piece of paper). Thus UNKNOWN IS UP; KNOWN IS DOWN is coherent with UNDERSTANDING IS GRASPING.

But UNKNOWN IS UP is not coherent with metaphors like GOOD IS UP and FINISHED IS UP (as in "I'm finishing *up*"). One would expect FINISHED to be paired with KNOWN and UNFINISHED to be paired with UNKNOWN. But, so far as verticality metaphors are concerned, this is not the case. The reason is that UNKNOWN IS UP has a very different experiential basis than FINISHED IS UP.

Metaphor and Cultural Coherence

The most fundamental values in a culture will be coherent with the metaphorical structure of the most fundamental concepts in the culture. As an example, let us consider some cultural values in our society that are coherent with our UP-DOWN spatialization metaphors and whose opposites would not be.

"More is better" is coherent with MORE IS UP and GOOD IS UP.
 "Less is better" is not coherent with them.

"Bigger is better" is coherent with MORE IS UP and GOOD IS UP.
 "Smaller is better" is not coherent with them.

"The future will be better" is coherent with THE FUTURE IS UP and GOOD IS UP. "The future will be worse" is not.

"There will be more in the future" is coherent with MORE IS UP and THE FUTURE IS UP.

"Your status should be higher in the future" is coherent with HIGH STATUS IS UP and THE FUTURE IS UP.

These are values deeply embedded in our culture. "The future will be better" is a statement of the concept of progress. "There will be more in the future" has as special cases the accumulation of goods and wage inflation. "Your status should be higher in the future" is a statement of careerism. These are coherent with our present spatialization metaphors; their opposites would not be. So it seems that our values are not independent but must form a coherent system with the metaphorical concepts we live by. We are not claiming that all cultural values coherent with a

metaphorical system actually exist, only that those that do exist and are deeply entrenched are consistent with the metaphorical system.

The values listed above hold in our culture generally—all things being equal. But because things are usually not equal, there are often conflicts among these values and hence conflicts among the metaphors associated with them. To explain such conflicts among values (and their metaphors), we must find the different priorities given to these values and metaphors by the subculture that uses them. For instance, MORE IS UP seems always to have the highest priority since it has the clearest physical basis. The priority of MORE IS UP over GOOD IS UP can be seen in examples like "Inflation is rising" and "The crime rate is going up." Assuming that inflation and the crime rate are bad, these sentences mean what they do because MORE IS UP always has top priority.

In general, which values are given priority is partly a matter of the subculture one lives in and partly a matter of personal values. The various subcultures of a mainstream culture share basic values but give them different priorities. For example, BIGGER IS BETTER may be in conflict with THERE WILL BE MORE IN THE FUTURE when it comes to the question of whether to buy a big car now, with large time payments that will eat up future salary, or whether to buy a smaller, cheaper car. There are American subcultures where you buy the big car and don't worry about the future, and there are others where the future comes first and you buy the small car. There was a time (before inflation and the energy crisis) when owning a small car had a high status within the subculture where VIRTUE IS UP and SAVING RESOURCES IS VIRTUOUS took priority over BIGGER IS BETTER. Nowadays the number of small-car owners has gone up drastically because there is a large subculture where SAVING MONEY IS BETTER has priority over BIGGER IS BETTER. In addition to subcultures, there are groups whose defining characteristic is that they share certain important values

that conflict with those of the mainstream culture. But in less obvious ways they preserve other mainstream values. Take monastic orders like the Trappists. There *LESS IS BETTER* and *SMALLER IS BETTER* are true with respect to material possessions, which are viewed as hindering what is important, namely, serving God. The Trappists share the mainstream value *VIRTUE IS UP*, though they give it the highest priority and a very different definition. *MORE IS STILL BETTER*, though it applies to virtue; and status is still *UP*, though it is not of this world but of a higher one, the Kingdom of God. Moreover, *THE FUTURE WILL BE BETTER* is true in terms of spiritual growth (*UP*) and, ultimately, salvation (really *UP*). This is typical of groups that are out of the mainstream culture. Virtue, goodness, and status may be radically redefined, but they are still *UP*. It is still better to have more of what is important, *THE FUTURE WILL BE BETTER* with respect to what is important, and so on. Relative to what is important for a monastic group, the value system is both internally coherent and, with respect to what is important for the group, coherent with the major orientational metaphors of the mainstream culture.

Individuals, like groups, vary in their priorities and in the ways they define what is good or virtuous to them. In this sense, they are subgroups of one. Relative to what is important for them, their individual value systems are coherent with the major orientational metaphors of the mainstream culture.

Not all cultures give the priorities we do to up-down orientation. There are cultures where balance or centrality plays a much more important role than it does in our culture. Or consider the nonspatial orientation active-passive. For us *ACTIVE IS UP* and *PASSIVE IS DOWN* in most matters. But there are cultures where passivity is valued more than activity. In general the major orientations up-down, in-out, central-peripheral, active-passive, etc., seem to cut across all cultures, but which concepts are oriented which way and which orientations are most important vary from culture to culture.

6

Ontological Metaphors

Entity and Substance Metaphors

Spatial orientations like up-down, front-back, on-off, center-periphery, and near-far provide an extraordinarily rich basis for understanding concepts in orientational terms. But one can do only so much with orientation. Our experience of physical objects and substances provides a further basis for understanding—one that goes beyond mere orientation. Understanding our experiences in terms of objects and substances allows us to pick out parts of our experience and treat them as discrete entities or substances of a uniform kind. Once we can identify our experiences as entities or substances, we can refer to them, categorize them, group them, and quantify them—and, by this means, reason about them.

When things are not clearly discrete or bounded, we still categorize them as such, e.g., mountains, street corners, hedges, etc. Such ways of viewing physical phenomena are needed to satisfy certain purposes that we have: locating mountains, meeting at street corners, trimming hedges. Human purposes typically require us to impose artificial boundaries that make physical phenomena discrete just as we are: entities bounded by a surface.

Just as the basic experiences of human spatial orientations give rise to orientational metaphors, so our experiences with physical objects (especially our own bodies) provide the basis for an extraordinarily wide variety of ontological metaphors, that is, ways of viewing events, activities, emotions, ideas, etc., as entities and substances.

Ontological metaphors serve various purposes, and the

various kinds of metaphors there are reflect the kinds of purposes served. Take the experience of rising prices, which can be metaphorically viewed as an entity via the noun *inflation*. This gives us a way of referring to the experience:

INFLATION IS AN ENTITY

Inflation is lowering our standard of living.

If there's much more inflation, we'll never survive.

We need to combat inflation.

Inflation is backing us into a corner.

Inflation is taking its toll at the checkout counter and the gas pump.

Buying land is the best way of dealing with inflation.

Inflation makes me sick.

In these cases, viewing inflation as an entity allows us to refer to it, quantify it, identify a particular aspect of it, see it as a cause, act with respect to it, and perhaps even believe that we understand it. Ontological metaphors like this are necessary for even attempting to deal rationally with our experiences.

The range of ontological metaphors that we use for such purposes is enormous. The following list gives some idea of the kinds of purposes, along with representative examples of ontological metaphors that serve them.

Referring

My fear of insects is driving my wife crazy.

That was a beautiful catch.

We are working toward peace.

The middle class is a powerful silent force in American politics.

The honor of our country is at stake in this war.

Quantifying

It will take a lot of patience to finish this book.

There is so much hatred in the world.

DuPont has a lot of political power in Delaware.

You've got too much hostility in you.

Pete Rose has a lot of hustle and baseball know-how.

Identifying Aspects

The ugly side of his personality comes out under pressure.

The brutality of war dehumanizes us all.

I can't keep up with the pace of modern life.

His emotional health has deteriorated recently.

We never got to feel the thrill of victory in Vietnam.

Identifying Causes

The pressure of his responsibilities caused his breakdown.

He did it out of anger.

Our influence in the world has declined because of our lack of moral fiber.

Internal dissension cost them the pennant.

Setting Goals and Motivating Actions

We went to New York to seek fame and fortune.

Here's what you have to do to insure financial security.

I'm changing my way of life so that I can find true happiness.

The FBI will act quickly in the face of a threat to national security.

She saw getting married as the solution to her problems.

As in the case of orientational metaphors, most of these expressions are not noticed as being metaphorical. One reason for this is that ontological metaphors, like orientational metaphors, serve a very limited range of purposes—referring, quantifying, etc. Merely viewing a nonphysical thing as an entity or substance does not allow us to comprehend very much about it. But ontological metaphors may be further elaborated. Here are two examples of how the ontological metaphor THE MIND IS AN ENTITY is elaborated in our culture.

THE MIND IS A MACHINE

We're still trying to grind out the solution to this equation.

My mind just isn't operating today.

Boy, the wheels are turning now!

I'm a little rusty today.

We've been working on this problem all day and now we're running out of steam.

THE MIND IS A BRITTLE OBJECT

Her ego is very fragile.

You have to handle him with care since his wife's death.

He broke under cross-examination.

She is easily crushed.

The experience shattered him.

I'm going to pieces.

His mind snapped.

These metaphors specify different kinds of objects. They give us different metaphorical models for what the mind is and thereby allow us to focus on different aspects of mental experience. The MACHINE metaphor gives us a conception of the mind as having an on-off state, a level of efficiency, a productive capacity, an internal mechanism, a source of energy, and an operating condition. The BRITTLE OBJECT metaphor is not nearly as rich. It allows us to talk only about psychological strength. However, there is a range of mental experience that can be conceived of in terms of either metaphor. The examples we have in mind are these:

He broke down. (THE MIND IS A MACHINE)

He cracked up. (THE MIND IS A BRITTLE OBJECT)

But these two metaphors do not focus on *exactly* the same aspect of mental experience. When a machine breaks down, it simply ceases to function. When a brittle object shatters, its pieces go flying, with possibly dangerous consequences. Thus, for example, when someone goes crazy and becomes wild or violent, it would be appropriate to say "He cracked up." On the other hand, if someone becomes lethargic and unable to function for psychological reasons, we would be more likely to say "He broke down."

Ontological metaphors like these are so natural and so pervasive in our thought that they are usually taken as self-evident, direct descriptions of mental phenomena. The fact that they are metaphorical never occurs to most of us. We take statements like "He cracked under pressure" as being directly true or false. This expression was in fact used by

various journalists to explain why Dan White brought his gun to the San Francisco City Hall and shot and killed Mayor George Moscone. Explanations of this sort seem perfectly natural to most of us. The reason is that metaphors like THE MIND IS A BRITTLE OBJECT are an integral part of the model of the mind that we have in this culture; it is the model most of us think and operate in terms of.

Container Metaphors

Land Areas

We are physical beings, bounded and set off from the rest of the world by the surface of our skins, and we experience the rest of the world as outside us. Each of us is a container, with a bounding surface and an in-out orientation. We project our own in-out orientation onto other physical objects that are bounded by surfaces. Thus we also view them as containers with an inside and an outside. Rooms and houses are obvious containers. Moving from room to room is moving from one container to another, that is, moving *out* of one room and *into* another. We even give solid objects this orientation, as when we break a rock open to see what's inside it. We impose this orientation on our natural environment as well. A clearing in the woods is seen as having a bounding surface, and we can view ourselves as being *in* the clearing or *out* of the clearing, *in* the woods or *out* of the woods. A clearing in the woods has something we can perceive as a natural boundary—the fuzzy area where the trees more or less stop and the clearing more or less begins. But even where there is no natural physical boundary that can be viewed as defining a container, we impose boundaries—marking off territory so that it has an inside and a bounding surface—whether a wall, a fence, or an abstract line or plane. There are few human instincts more basic than territoriality. And such defining of a territory, putting a boundary around it, is an act of quantification.

Bounded objects, whether human beings, rocks, or land areas, have sizes. This allows them to be quantified in terms of the amount of substance they contain. Kansas, for example, is a bounded area—a CONTAINER—which is why we can say, "There's a lot of land in Kansas."

Substances can themselves be viewed as containers. Take a tub of water, for example. When you get into the tub, you get into the water. Both the tub and the water are viewed as containers, but of different sorts. The tub is a CONTAINER OBJECT, while the water is a CONTAINER SUBSTANCE.

The Visual Field

We conceptualize our visual field as a container and conceptualize what we see as being inside it. Even the term "visual field" suggests this. The metaphor is a natural one that emerges from the fact that, when you look at some territory (land, floor space, etc.), your field of vision defines a boundary of the territory, namely, the part that you can see. Given that a bounded physical space is a CONTAINER and that our field of vision correlates with that bounded physical space, the metaphorical concept VISUAL FIELDS ARE CONTAINERS emerges naturally. Thus we can say:

The ship is coming into view.
I have him in sight.
I can't see him—the tree is in the way.
He's out of sight now.
That's in the center of my field of vision.
There's nothing in sight.
I can't get all of the ships in sight at once.

Events, Actions, Activities, and States

We use ontological metaphors to comprehend events, actions, activities, and states. Events and actions are conceptualized metaphorically as objects, activities as substances, states as containers. A race, for example, is an event, which is viewed as a discrete entity. The race exists

in space and time, and it has well-defined boundaries. Hence we view it as a CONTAINER OBJECT, having in it participants (which are objects), events like the start and finish (which are metaphorical objects), and the activity of running (which is a metaphorical substance). Thus we can say of a race:

Are you in the race on Sunday? (race as CONTAINER OBJECT)
Are you going to the race? (race as OBJECT)
Did you see the race? (race as OBJECT)
The finish of the race was really exciting. (finish as EVENT OBJECT within CONTAINER OBJECT)
There was a lot of good running in the race. (running as a SUBSTANCE in a CONTAINER)
I couldn't do much sprinting until the end. (sprinting as SUBSTANCE)
Halfway into the race, I ran out of energy. (race as CONTAINER OBJECT)
He's out of the race now. (race as CONTAINER OBJECT)

Activities in general are viewed metaphorically as SUBSTANCES and therefore as CONTAINERS:

In washing the window, I splashed water all over the floor.
How did Jerry get out of washing the windows?
Outside of washing the windows, what else did you do?
How much window-washing did you do?
How did you get into window-washing as a profession?
He's immersed in washing the windows right now.

Thus, activities are viewed as containers for the actions and other activities that make them up. They are also viewed as containers for the energy and materials required for them and for their by-products, which may be viewed as in them or as emerging from them:

I put a lot of energy into washing the windows.
I get a lot of satisfaction out of washing windows.
There is a lot of satisfaction in washing windows.

Various kinds of states may also be conceptualized as containers. Thus we have examples like these:

7

Personification

He's in love.
 We're out of trouble now.
 He's coming out of the coma.
 I'm slowly getting into shape.
 He entered a state of euphoria.
 He fell into a depression.
 He finally emerged from the catatonic state he had been in since the end of finals week.

Perhaps the most obvious ontological metaphors are those where the physical object is further specified as being a person. This allows us to comprehend a wide variety of experiences with nonhuman entities in terms of human motivations, characteristics, and activities. Here are some examples:

His theory explained to me the behavior of chickens raised in factories.
 This fact argues against the standard theories.
 Life has cheated me.
 Inflation is eating up our profits.
 His religion tells him that he cannot drink fine French wines.
 The Michelson-Morley experiment gave birth to a new physical theory.
 Cancer finally caught up with him.

In each of these cases we are seeing something nonhuman as human. But personification is not a single unified general process. Each personification differs in terms of the aspects of people that are picked out. Consider these examples.

Inflation has attacked the foundation of our economy.
 Inflation has pinned us to the wall.
 Our biggest enemy right now is inflation.
 The dollar has been destroyed by inflation.
 Inflation has robbed me of my savings.
 Inflation has outwitted the best economic minds in the country.
 Inflation has given birth to a money-minded generation.
 Here inflation is personified, but the metaphor is not

Metonymy

merely INFLATION IS A PERSON. It is much more specific, namely, INFLATION IS AN ADVERSARY. It not only gives us a very specific way of thinking about inflation but also a way of acting toward it. We think of inflation as an adversary that can attack us, hurt us, steal from us, even destroy us. The INFLATION IS AN ADVERSARY metaphor therefore gives rise to and justifies political and economic actions on the part of our government: declaring war on inflation, setting targets, calling for sacrifices, installing a new chain of command, etc.

The point here is that personification is a general category that covers a very wide range of metaphors, each picking out different aspects of a person or ways of looking at a person. What they all have in common is that they are extensions of ontological metaphors and that they allow us to make sense of phenomena in the world in human terms—terms that we can understand on the basis of our own motivations, goals, actions, and characteristics. Viewing something as abstract as inflation in human terms has an explanatory power of the only sort that makes sense to most people. When we are suffering substantial economic losses due to complex economic and political factors that no one really understands, the INFLATION IS AN ADVERSARY metaphor at least gives us a coherent account of why we're suffering these losses.

In the cases of personification that we have looked at we are imputing human qualities to things that are not human—theories, diseases, inflation, etc. In such cases there are no actual human beings referred to. When we say "Inflation robbed me of my savings," we are not using the term "inflation" to refer to a person. Cases like this must be distinguished from cases like

The *ham sandwich* is waiting for his check.

where the expression "the ham sandwich" is being used to refer to an actual person, the person who ordered the ham sandwich. Such cases are not instances of personification metaphors, since we do not understand "the ham sandwich" by imputing human qualities to it. Instead, we are using one entity to refer to another that is related to it. This is a case of what we will call *metonymy*. Here are some further examples:

He likes to read the *Marquis de Sade*. (= the writings of the marquis)

He's in *dance*. (= the dancing profession)

Acrylic has taken over the art world. (= the use of acrylic paint)

The *Times* hasn't arrived at the press conference yet. (= the reporter from the *Times*)

Mrs. Grundy frowns on *blue jeans*. (= the wearing of blue jeans)

New windshield wipers will satisfy him. (= the state of having new wipers)

We are including as a special case of metonymy what traditional rhetoricians have called *synecdoche*, where the part stands for the whole, as in the following.

THE PART FOR THE WHOLE

The *automobile* is clogging our highways. (= the collection of automobiles)

We need a couple of *strong bodies* for our team. (= strong people)

There are a lot of *good heads* in the university. (= intelligent people)

I've got a new *set of wheels*. (= car, motorcycle, etc.)

We need some *new blood* in the organization. (= new people)

In these cases, as in the other cases of metonymy, one entity is being used to refer to another. Metaphor and metonymy are different *kinds* of processes. Metaphor is principally a way of conceiving of one thing in terms of another, and its primary function is understanding. Metonymy, on the other hand, has primarily a referential function, that is, it allows us to use one entity to *stand for* another. But metonymy is not merely a referential device. It also serves the function of providing understanding. For example, in the case of the metonymy THE PART FOR THE WHOLE there are many parts that can stand for the whole. Which part we pick out determines which aspect of the whole we are focusing on. When we say that we need some *good heads* on the project, we are using "good heads" to refer to "intelligent people." The point is not just to use a part (head) to stand for a whole (person) but rather to pick out a particular characteristic of the person, namely, intelligence, which is associated with the head. The same is true of other kinds of metonymies. When we say "The *Times* hasn't arrived at the press conference yet," we are using "The *Times*" not merely to refer to some reporter or other reporter represents. So "The *Times* has not yet arrived for the press conference" means something different from

"Steve Roberts has not yet arrived for the press conference," even though Steve Roberts may be the *Times* reporter in question.

Thus metonymy serves some of the same purposes that metaphor does, and in somewhat the same way, but it allows us to focus more specifically on certain aspects of what is being referred to. It is also like metaphor in that it is not just a poetic or rhetorical device. Nor is it just a matter of language. Metonymic concepts (like THE PART FOR THE WHOLE) are part of the ordinary, everyday way we think and act as well as talk.

For example, we have in our conceptual system a special case of the metonymy THE PART FOR THE WHOLE, namely, THE FACE FOR THE PERSON. For example:

She's just a *pretty face*.

There are an *awful lot of faces* out there in the audience.

We need some *new faces* around here.

This metonymy functions actively in our culture. The tradition of portraits, in both painting and photography, is based on it. If you ask me to show you a picture of my son and I show you a picture of his face, you will be satisfied. You will consider yourself to have seen a picture of him. But if I show you a picture of his body without his face, you will consider it strange and will not be satisfied. You might even ask, "But what does he look like?" Thus the metonymy THE FACE FOR THE PERSON is not merely a matter of language. In our culture we look at a person's face—rather than his posture or his movements—to get our basic information about what the person is like. We function in terms of a metonymy when we perceive the person in terms of his face and act on those perceptions.

Like metaphors, metonymies are not random or arbitrary occurrences, to be treated as isolated instances. Metonymic concepts are also systematic, as can be seen in the following representative examples that exist in our culture.

THE PART FOR THE WHOLE

Get your butt over here!
 We don't hire longhairs.
 The Giants need a stronger arm in right field.
 I've got a new four-on-the-floor V-8.

PRODUCER FOR PRODUCT

I'll have a Löwenbräu.
 He bought a Ford.
 He's got a Picasso in his den.
 I hate to read Heidegger.

OBJECT USED FOR USER

The sax has the flu today.
 The BLT is a lousy tipper.
 The gun he hired wanted fifty grand.
 We need a better glove at third base.
 The buses are on strike.

CONTROLLER FOR CONTROLLED

Nixon bombed Hanoi.
 Ozawa gave a terrible concert last night.
 Napoleon lost at Waterloo.
 Casey Stengel won a lot of pennants.
 A Mercedes rear-ended me.

INSTITUTION FOR PEOPLE RESPONSIBLE

Exxon has raised its prices again.
 You'll never get the university to agree to that.
 The Army wants to reinstitute the draft.
 The Senate thinks abortion is immoral.
 I don't approve of the government's actions.

THE PLACE FOR THE INSTITUTION

The White House isn't saying anything.
 Washington is insensitive to the needs of the people.
 The Kremlin threatened to boycott the next round of SALT talks.
 Paris is introducing longer skirts this season.
 Hollywood isn't what it used to be.
 Wall Street is in a panic.

THE PLACE FOR THE EVENT

Let's not let Thailand become another Vietnam.
 Remember the Alamo.
 Pearl Harbor still has an effect on our foreign policy.
 Watergate changed our politics.
 It's been Grand Central Station here all day.

Metonymic concepts like these are systematic in the same way that metaphoric concepts are. The sentences given above are not random. They are instances of certain general metonymic concepts in terms of which we organize our thoughts and actions. Metonymic concepts allow us to conceptualize one thing by means of its relation to something else. When we think of *a Picasso*, we are not just thinking of a work of art alone, in and of itself. We think of it in terms of its relation to the artist, that is, his conception of art, his technique, his role in art history, etc. We act with reverence toward *a Picasso*, even a sketch he made as a teen-ager, because of its relation to the artist. This is a way in which the PRODUCER FOR PRODUCT metonymy affects both our thought and our action. Similarly, when a waitress says "The ham sandwich wants his check," she is not interested in the person as a person but only as a customer, which is why the use of such a sentence is dehumanizing. Nixon himself may not have dropped the bombs on Hanoi, but via the CONTROLLER FOR CONTROLLED metonymy we not only say "Nixon bombed Hanoi" but also think of him as doing the bombing and hold him responsible for it. Again this is possible because of the nature of the metonymic relationship in the CONTROLLER FOR CONTROLLED metonymy, where responsibility is what is focused on.

Thus, like metaphors, metonymic concepts structure not just our language but our thoughts, attitudes, and actions. And, like metaphoric concepts, metonymic concepts are grounded in our experience. In fact, the grounding of metonymic concepts is in general more obvious than is the case with metaphoric concepts, since it usually involves direct physical or causal associations. The PART FOR

WHOLE metonymy, for example, emerges from our experiences with the way parts in general are related to wholes. PRODUCER FOR PRODUCT is based on the causal (and typically physical) relationship between a producer and his product. THE PLACE FOR THE EVENT is grounded in our experience with the physical location of events. And so on.

Cultural and religious symbolism are special cases of metonymy. Within Christianity, for example, there is the metonymy DOVE FOR HOLY SPIRIT. As is typical with metonymies, this symbolism is not arbitrary. It is grounded in the conception of the dove in Western culture and the conception of the Holy Spirit in Christian theology. There is a reason why the dove is the symbol of the Holy Spirit and not, say, the chicken, the vulture, or the ostrich. The dove is conceived of as beautiful, friendly, gentle, and, above all, peaceful. As a bird, its natural habitat is the sky, which metonymically stands for heaven, the natural habitat of the Holy Spirit. The dove is a bird that flies gracefully, glides silently, and is typically seen coming out of the sky and landing among people.

The conceptual systems of cultures and religions are metaphorical in nature. Symbolic metonymies are critical links between everyday experience and the coherent metaphorical systems that characterize religions and cultures. Symbolic metonymies that are grounded in our physical experience provide an essential means of comprehending religious and cultural concepts.

9

Challenges to Metaphorical Coherence

We have offered evidence that metaphors and metonymies are not random but instead form coherent systems in terms of which we conceptualize our experience. But it is easy to find apparent incoherences in everyday metaphorical expressions. We have not made a complete study of these, but those that we have looked at in detail have turned out not to be incoherent at all, though they appeared that way at first. Let us consider two examples.

An Apparent Metaphorical Contradiction

Charles Fillmore has observed (in conversation) that English appears to have two contradictory organizations of time. In the first, the future is in front and the past is behind:

In the weeks ahead of us . . . (future)

That's all behind us now. (past)

In the second, the future is behind and the past is in front:

In the following weeks . . . (future)

In the preceding weeks . . . (past)

This appears to be a contradiction in the metaphorical organization of time. Moreover, the apparently contradictory metaphors can mix with no ill effect, as in

We're looking *ahead* to the *following* weeks.

Here it appears that *ahead* organizes the future in front, while *following* organizes it behind.

To see that there is, in fact, a coherence here, we first

have to consider some facts about front-back organization. Some things, like people and cars, have inherent fronts and backs, but others, like trees, do not. A rock may receive a front-back organization under certain circumstances. Suppose you are looking at a medium-sized rock and there is a ball between you and the rock—say, a foot away from the rock. Then it is appropriate for you to say “The ball is in front of the rock.” The rock has received a front-back orientation, as if it had a front that faced you. This is not universal. There are languages—Hausa, for instance—where the rock would receive the reverse orientation and you would say that the ball was behind the rock if it was between you and the rock.

Moving objects generally receive a front-back orientation so that the front is in the direction of motion (or in the canonical direction of motion, so that a car backing up retains its front). A spherical satellite, for example, that has no front while standing still, gets a front while in orbit by virtue of the direction in which it is moving.

Now, time in English is structured in terms of the TIME IS A MOVING OBJECT metaphor, with the future moving toward us:

The time will come when...

The time has long since gone when...

The time for action has arrived.

The proverb “Time flies” is an instance of the TIME IS A MOVING OBJECT metaphor. Since we are facing toward the future, we get:

Coming up in the weeks ahead...

I look forward to the arrival of Christmas.

Before us is a great opportunity, and we don't want it to pass us by.

By virtue of the TIME IS A MOVING OBJECT metaphor, time receives a front-back orientation facing in the direction of motion, just as any moving object would. Thus the future is

facing toward us as it moves toward us, and we find expressions like:

I can't face the future.

The face of things to come...

Let's meet the future head-on.

Now, while expressions like *ahead of us*, *I look forward*, and *before us* orient times with respect to people, expressions like *precede* and *follow* orient times with respect to times. Thus we get:

Next week and the week following it.

but not:

The week following me...

Since future times are facing toward us, the times following them are further in the future, and all future times follow the present. That is why the *weeks to follow* are the same as the *weeks ahead of us*.

The point of this example is not merely to show that there is no contradiction but also to show all the subtle details that are involved: the TIME IS A MOVING OBJECT metaphor, the front-back orientation given to time by virtue of its being a moving object, and the consistent application of words like *follow*, *precede*, and *face* when applied to time on the basis of the metaphor. All of this consistent detailed metaphorical structure is part of our everyday literal language about time, so familiar that we would normally not notice it.

Coherence versus Consistency

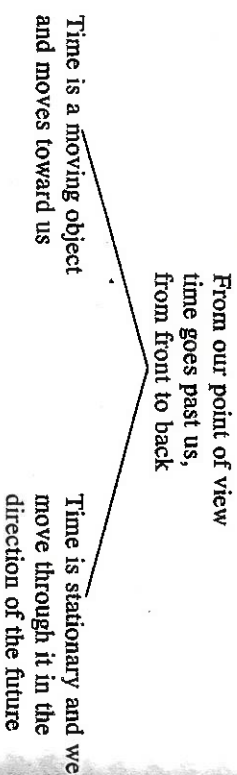
We have shown that the TIME IS A MOVING OBJECT metaphor has an internal consistency. But there is another way in which we conceptualize the passing of time:

TIME IS STATIONARY AND WE MOVE THROUGH IT

As we go through the years,...

As we go further into the 1980s, . . .
We're approaching the end of the year.

What we have here are two subcases of TIME PASSES US: in one case, we are moving and time is standing still; in the other, time is moving and we are standing still. What is in common is relative motion with respect to us, with the future in front and the past behind. That is, they are two subcases of the same metaphor, as shown in the accompanying diagram.



This is another way of saying that they have a major common entailment. Both metaphors entail that, from our point of view, time goes past us from front to back.

Although the two metaphors are not consistent (that is, they form no single image), they nonetheless "fit together," by virtue of being subcategories of a major category and therefore sharing a major common entailment. There is a difference between metaphors that are *coherent* (that is, "fit together") with each other and those that are *consistent*. We have found that the connections between metaphors are more likely to involve coherence than consistency.

As another example, let us take another metaphor:

LOVE IS A JOURNEY

Look how far we've come.

We're at a crossroads.

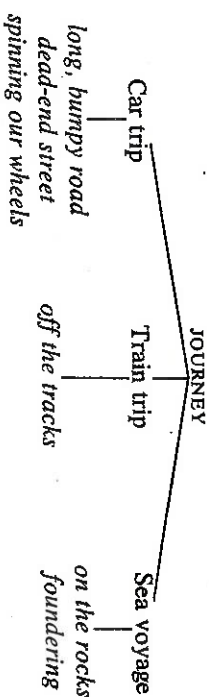
We'll just have to go our separate ways.

We can't turn back now.

I don't think this relationship is going anywhere.

Where are we?
We're stuck.
It's been a long, bumpy road.
This relationship is a dead-end street.
We're just spinning our wheels.
Our marriage is on the rocks.
We've gotten off the track.
This relationship is foundering.

Here the basic metaphor is that of a JOURNEY, and there are various types of journeys that one can make: a car trip, a train trip, or a sea voyage.



Once again, there is no single consistent image that the JOURNEY metaphors all fit. What makes them *coherent* is that they are all JOURNEY metaphors, though they specify different means of travel. The same sort of thing occurs with the TIME IS A MOVING OBJECT metaphor, where there are various ways in which something can move. Thus, *time flies*, *time creeps along*, *time speeds by*. In general, metaphorical concepts are defined not in terms of concrete images (flying, creeping, going down the road, etc.), but in terms of more general categories, like *passing*.

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Some Further Examples

We have been claiming that metaphors partially structure our everyday concepts and that this structure is reflected in our literal language. Before we can get an overall picture of the philosophical implications of these claims, we need a few more examples. In each of the ones that follow we give a metaphor and a list of ordinary expressions that are special cases of the metaphor. The English expressions are of two sorts: simple literal expressions and idioms that fit the metaphor and are part of the normal everyday way of talking about the subject.

THEORIES (and ARGUMENTS) ARE BUILDINGS

Is that the *foundation* for your theory? The theory needs more *support*. The argument is *shaky*. We need some more facts or the argument will *fall apart*. We need to *construct* a strong argument for that. I haven't figured out yet what the *form* of the argument will be. Here are some more facts to *shore up* the theory. We need to *buttress* the theory with *solid* arguments. The theory will *stand or fall* on the *strength* of that argument. The argument *collapsed*. They *exploded* his latest theory. We will show that theory to be without *foundation*. So far we have put together only the *framework* of the theory.

IDEAS ARE FOOD

What he said *left a bad taste in my mouth*. All this paper has in it are *raw facts*, *half-baked ideas*, and *warmed-over theories*. There are too many facts here for me to *digest* them all. I just can't *swallow* that claim. That argument *smells fishy*. Let me *stew* over that for a while. Now there's a theory

SOME FURTHER EXAMPLES

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you can really *sink your teeth into*. We need to let that idea *percolate* for a while. That's *food for thought*. He's a *voracious* reader. We don't need to *spoon-feed* our students. He *devoured* the book. Let's let that idea *simmer on the back burner* for a while. This is the *meaty* part of the paper. Let that idea *jell* for a while. That idea has been *fermenting* for years.

With respect to life and death IDEAS ARE ORGANISMS, either PEOPLE OR PLANTS.

IDEAS ARE PEOPLE

The theory of relativity *gave birth* to an enormous number of ideas in physics. He is the *father* of modern biology. Whose *brainchild* was that? Look at what his ideas have *spawned*. Those ideas *died off* in the Middle Ages. His ideas will *live on forever*. Cognitive psychology is still in its *infancy*. That's an idea that ought to be *resurrected*. Where'd you *dig up* that idea? He *breathed new life into* that idea.

IDEAS ARE PLANTS

His ideas have finally come to *fruition*. That idea *died on the vine*. That's a *budding* theory. It will take years for that idea to *come to full flower*. He views chemistry as a mere *offshoot* of physics. Mathematics has many *branches*. The *seeds* of his great ideas were *planted* in his youth. She has a *fertile* imagination. Here's an idea that I'd like to *plant* in your mind. He has a *barren* mind.

IDEAS ARE PRODUCTS

We're really *turning* (*churning, cranking, grinding*) out new ideas. We've *generated* a lot of ideas this week. He *produces* new ideas at an astounding rate. His *intellectual productivity* has decreased in recent years. We need to *take the rough edges off* that idea, *hone it down, smooth it out*. It's a rough idea; it needs to be *refined*.

IDEAS ARE COMMODITIES

It's important how you *package* your ideas. He won't *buy* that. That idea just won't *sell*. There is always a *market* for good ideas. That's a *worthless* idea. He's been a source of

valuable ideas. I wouldn't give a plugged nickel for that idea. Your ideas don't have a chance in the intellectual marketplace.

IDEAS ARE RESOURCES

He ran out of ideas. Don't waste your thoughts on small projects. Let's pool our ideas. He's a resourceful man. We've used up all our ideas. That's a useless idea. That idea will go a long way.

IDEAS ARE MONEY

Let me put in my two cents' worth. He's rich in ideas. That book is a treasure trove of ideas. He has a wealth of ideas.

IDEAS ARE CUTTING INSTRUMENTS

That's an incisive idea. That cuts right to the heart of the matter. That was a cutting remark. He's sharp. He has a razor wit. He has a keen mind. She cut his argument to ribbons.

IDEAS ARE FASHIONS

That idea went out of style years ago. I hear sociobiology is in these days. Marxism is currently fashionable in western Europe. That idea is old hat! That's an outdated idea. What are the new trends in English criticism? Old-fashioned notions have no place in today's society. He keeps up-to-date by reading the New York Review of Books. Berkeley is a center of avant-garde thought. Semiotics has become quite chic. The idea of revolution is no longer in vogue in the United States. The transformational grammar craze hit the United States in the mid-sixties and has just made it to Europe.

UNDERSTANDING IS SEEING; IDEAS ARE LIGHT-SOURCES; DISCOURSE IS A LIGHT-MEDIUM

I see what you're saying. It looks different from my point of view. What is your outlook on that? I view it differently. Now I've got the whole picture. Let me point something out to you. That's an insightful idea. That was a brilliant remark. The argument is clear. It was a murky discussion. Could you elucidate your remarks? It's a transparent argument. The discussion was opaque.

LOVE IS A PHYSICAL FORCE (ELECTROMAGNETIC, GRAVITATIONAL, etc.)

I could feel the electricity between us. There were sparks. I was magnetically drawn to her. They are uncontrollably attracted to each other. They gravitated to each other immediately. His whole life revolves around her. The atmosphere around them is always charged. There is incredible energy in their relationship. They lost their momentum.

LOVE IS A PATIENT

This is a sick relationship. They have a strong, healthy marriage. The marriage is dead—it can't be revived. Their marriage is on the mend. We're getting back on our feet. Their relationship is in really good shape. They've got a listless marriage. Their marriage is on its last legs. It's a tired affair.

LOVE IS MADNESS

I'm crazy about her. She drives me out of my mind. He constantly raves about her. He's gone mad over her. I'm just wild about Harry. I'm insane about her.

LOVE IS MAGIC

She cast her spell over me. The magic is gone. I was spellbound. She had me hypnotized. He has me in a trance. I was entranced by him. I'm charmed by her. She is bewitching.

LOVE IS WAR

He is known for his many rapid conquests. She fought for him, but his mistress won out. He fled from her advances. She pursued him relentlessly. He is slowly gaining ground with her. He won her hand in marriage. He overpowered her. She is besieged by suitors. He has to fend them off. He enlisted the aid of her friends. He made an ally of her mother. Theirs is a misalliance if I've ever seen one.

WEALTH IS A HIDDEN OBJECT

He's seeking his fortune. He's flaunting his new-found wealth. He's a fortune-hunter. She's a gold-digger. He lost his fortune. He's searching for wealth.

SIGNIFICANT IS BIG

He's a *big* man in the garment industry. He's a *giant* among writers. That's the *biggest* idea to hit advertising in years. He's *head and shoulders above* everyone in the industry. It was only a *small* crime. That was only a *little* white lie. I was astounded at the *enormity* of the crime. That was one of the *greatest* moments in World Series history. His accomplishments *tower over* those of lesser men.

SEEING IS TOUCHING; EYES ARE LIMBS

I can't *take* my eyes *off* her. He sits with his eyes *glued* to the TV. Her eyes *picked out* every detail of the pattern. Their eyes *met*. She never *moves* her eyes *from* his face. She *ran* her eyes *over* everything in the room. He wants everything *within reach* of his eyes.

THE EYES ARE CONTAINERS FOR THE EMOTIONS

I could see the fear in his eyes. His eyes were *filled* with anger. There was passion in her eyes. His eyes *displayed* his compassion. She couldn't *get* the fear *out* of her eyes. Love *showed* in his eyes. Her eyes *welled* with emotion.

EMOTIONAL EFFECT IS PHYSICAL CONTACT

His mother's death *hit* him *hard*. That idea *bowled* me *over*. She's a *knockout*. I was *struck* by his sincerity. That really *made an impression* on me. He *made his mark* on the world. I was *touched* by his remark. That *blew me away*.

PHYSICAL AND EMOTIONAL STATES ARE ENTITIES WITHIN A PERSON

He has a pain in his shoulder. Don't *give* me the flu. My cold has *gone from my head* to my chest. His pains *went away*. His depression *returned*. Hot tea and honey will *get rid of* your cough. He could barely *contain* his joy. The smile *left* his face. *Wipe* that sneer *off* your face, private! His fears *keep coming back*. I've got to *shake off* this depression—it *keeps hanging on*. If you've got a cold, drinking lots of tea will *flush it out* of your system. There isn't a trace of cowardice in him. He hasn't got an *honest bone* in his body.

VITALITY IS A SUBSTANCE

She's *brimming* with vim and vigor. She's *overflowing* with vitality. He's *devoid* of energy. I don't *have* any energy *left* at the end of the day. I'm *drained*. That *took a lot out* of me.

LIFE IS A CONTAINER

I've had a *full* life. Life is *empty* for him. There's *not much left* for him in life. Her life is *crammed* with activities. *Get the most out of* life. His life *contained* a great deal of sorrow. *Live your life to the fullest*.

LIFE IS A GAMBLING GAME

I'll *take my chances*. The *odds are against* me. I've got an *ace up my sleeve*. He's *holding all the aces*. It's a *toss-up*. If you *play your cards right*, you can do it. He *won big*. He's a *real loser*. Where is he when the *chips are down*? That's my *ace in the hole*. He's *bluffing*. The president is *playing it close to his vest*. Let's *up the ante*. Maybe we need to *sweeten the pot*. I think we should *stand pat*. That's *the luck of the draw*. Those are *high stakes*.

In this last group of examples we have a collection of what are called "speech formulas," or "fixed-form expressions," or "phrasal lexical items." These function in many ways like single words, and the language has thousands of them. In the examples given, a set of such phrasal lexical items is coherently structured by a single metaphorical concept. Although each of them is an instance of the LIFE IS A GAMBLING GAME metaphor, they are typically used to speak of life, not of gambling situations. They are normal ways of talking about life situations, just as using the word "construct" is a normal way of talking about theories. It is in this sense that we include them in what we have called literal expressions structured by metaphorical concepts. If you say "The odds are against us" or "We'll have to take our chances," you would not be viewed as speaking metaphorically but as using the normal everyday language appropriate to the situation. Nevertheless, your way of talking about, conceiving, and even experiencing your situation would be metaphorically structured.

The Partial Nature of Metaphorical Structuring

Up to this point we have described the systematic character of metaphorically defined concepts. Such concepts are understood in terms of a number of different metaphors (e.g., TIME IS MONEY, TIME IS A MOVING OBJECT, etc.). The metaphorical structuring of concepts is necessarily partial and is reflected in the lexicon of the language, including the phrasal lexicon, which contains fixed-form expressions such as "to be without foundation." Because concepts are metaphorically structured in a systematic way, e.g., THEORIES ARE BUILDINGS, it is possible for us to use expressions (*construct*, *foundation*) from one domain (BUILDINGS) to talk about corresponding concepts in the metaphorically defined domain (THEORIES). What *foundation*, for example, means in the metaphorically defined domain (THEORY) will depend on the details of how the metaphorical concept THEORIES ARE BUILDINGS is used to structure the concept THEORY.

The parts of the concept BUILDING that are used to structure the concept THEORY are the foundation and the outer shell. The roof, internal rooms, staircases, and hallways are parts of a building not used as part of the concept THEORY. Thus the metaphor THEORIES ARE BUILDINGS has a "used" part (foundation and outer shell) and an "unused" part (rooms, staircases, etc.). Expressions such as *construct* and *foundation* are instances of the used part of such a metaphorical concept and are part of our ordinary literal language about theories.

But what of the linguistic expressions that reflect the

"unused" part of a metaphor like THEORIES ARE BUILDINGS? Here are four examples:

His theory has thousands of little rooms and long, winding corridors.

His theories are Bauhaus in their pseudofunctional simplicity.

He prefers massive Gothic theories covered with gargoyles. Complex theories usually have problems with the plumbing.

These sentences fall outside the domain of normal literal language and are part of what is usually called "figurative" or "imaginative" language. Thus, literal expressions ("He has constructed a theory") and imaginative expressions ("His theory is covered with gargoyles") can be instances of the same general metaphor (THEORIES ARE BUILDINGS).

Here we can distinguish three different subspecies of imaginative (or nonliteral) metaphor:

Extensions of the used part of a metaphor, e.g., "These facts are the bricks and mortar of my theory." Here the outer shell of the building is referred to, whereas the THEORIES ARE BUILDINGS metaphor stops short of mentioning the materials used.

Instances of the unused part of the literal metaphor, e.g., "His theory has thousands of little rooms and long, winding corridors."

Instances of novel metaphor, that is, a metaphor not used to structure part of our normal conceptual system but as a new way of thinking about something, e.g., "Classical theories are patriarchs who father many children, most of whom fight incessantly." Each of these subspecies lies outside the *used* part of a metaphorical concept that structures our normal conceptual system.

We note in passing that all of the linguistic expressions we have given to characterize general metaphorical concepts are figurative. Examples are TIME IS MONEY, TIME IS A MOVING OBJECT, CONTROL IS UP, IDEAS ARE FOOD, THEORIES ARE BUILDINGS, etc. None of these is literal. This

is a consequence of the fact that only *part* of them is used to structure our normal concepts. Since they necessarily contain parts that are not used in our normal concepts, they go beyond the realm of the literal.

Each of the metaphorical expressions we have talked about so far (e.g., the time *will come*; we *construct* a theory, *attack* an idea) is used within a whole system of metaphorical concepts—concepts that we constantly use in living and thinking. These expressions, like all other words and phrasal lexical items in the language, are fixed by convention. In addition to these cases, which are parts of whole metaphorical systems, there are idiosyncratic metaphorical expressions that stand alone and are not used systematically in our language or thought. These are well-known expressions like the *foot* of the mountain, a *head* of cabbage, the *leg* of a table, etc. These expressions are isolated instances of metaphorical concepts, where there is only one instance of a used part (or maybe two or three). Thus the *foot* of the mountain is the only used part of the metaphor A MOUNTAIN IS A PERSON. In normal discourse we do not speak of the *head*, *shoulders*, or *trunk* of a mountain, though in special contexts it is possible to construct novel metaphorical expressions based on these unused parts. In fact, there is an aspect of the metaphor A MOUNTAIN IS A PERSON in which mountain climbers will speak of the *shoulder* of a mountain (namely, a ridge near the top) and of *conquering, fighting*, and even *being killed* by a mountain. And there are cartoon conventions where mountains become animate and their peaks become heads. The point here is that there are metaphors, like A MOUNTAIN IS A PERSON, that are marginal in our culture and our language; their used part may consist of only one conventionally fixed expression of the language, and they do not systematically interact with other metaphorical concepts because so little of them is used. This makes them relatively uninteresting for our purposes but not completely so, since they can be extended to their unused part in coining novel metaphorical

expressions, making jokes, etc. And our ability to extend them to unused parts indicates that, however marginal they are, they do exist.

Examples like the *foot* of the mountain are idiosyncratic, unsystematic, and isolated. They do not interact with other metaphors, play no particularly interesting role in our conceptual system, and hence are not metaphors that we live by. The only signs of life they have is that they can be extended in subcultures and that their unused portions serve as the basis for (relatively uninteresting) novel metaphors. If any metaphorical expressions deserve to be called "dead," it is these, though they do have a bare spark of life, in that they are understood partly in terms of marginal metaphorical concepts like A MOUNTAIN IS A PERSON.

It is important to distinguish these isolated and unsystematic cases from the systematic metaphorical expressions we have been discussing. Expressions like *wasting time, attacking positions, going our separate ways*, etc., are reflections of systematic metaphorical concepts that structure our actions and thoughts. They are "alive" in the most fundamental sense: they are metaphors we live by. The fact that they are conventionally fixed within the lexicon of English makes them no less alive.

How Is Our Conceptual System Grounded?

We claim that most of our normal conceptual system is metaphorically structured; that is, most concepts are partially understood in terms of other concepts. This raises an important question about the grounding of our conceptual system. Are there any concepts at all that are understood directly, without metaphor? If not, how can we understand anything at all?

The prime candidates for concepts that are understood directly are the simple spatial concepts, such as UP. Our spatial concept UP arises out of our spatial experience. We have bodies and we stand erect. Almost every movement we make involves a motor program that either changes our up-down orientation, maintains it, presupposes it, or takes it into account in some way. Our constant physical activity in the world, even when we sleep, makes an up-down orientation not merely relevant to our physical activity but centrally relevant. The centrality of up-down orientation in our motor programs and everyday functioning might make one think that there could be no alternative to this orientational concept. Objectively speaking, however, there are many possible frameworks for spatial orientation, including Cartesian coordinates, that don't in themselves have up-down orientation. Human spatial concepts, however, include UP-DOWN, FRONT-BACK, IN-OUT, NEAR-FAR, etc. It is these that are relevant to our continual everyday bodily functioning, and this gives them priority over other possible structurings of space—for us. In other words, the structure of our spatial concepts emerges from our constant spatial

experience, that is, our interaction with the physical environment. Concepts that emerge in this way are concepts that we live by in the most fundamental way.

Thus UP is not understood purely in its own terms but emerges from the collection of constantly performed motor functions having to do with our erect position relative to the gravitational field we live in. Imagine a spherical being living outside any gravitational field, with no knowledge or imagination of any other kind of experience. What could UP possibly mean to such a being? The answer to this question would depend, not only on the physiology of this spherical being, but also on its culture.

In other words, what we call "direct physical experience" is never merely a matter of having a body of a certain sort; rather, *every* experience takes place within a vast background of cultural presuppositions. It can be misleading, therefore, to speak of direct physical experience as though there were some core of immediate experience which we then "interpret" in terms of our conceptual system. Cultural assumptions, values, and attitudes are not a conceptual overlay which we may or may not place upon experience as we choose. It would be more correct to say that all experience is cultural through and through, that we experience our "world" in such a way that our culture is already present in the very experience itself.

However, even if we grant that every experience involves cultural presuppositions, we can still make the important distinction between experiences that are "more" physical, such as standing up, and those that are "more" cultural, such as participating in a wedding ceremony. When we speak of "physical" versus "cultural" experience in what follows, it is in this sense that we use the terms.

Some of the central concepts in terms of which our bodies function—UP-DOWN, IN-OUT, FRONT-BACK, LIGHT-DARK, WARM-COLD, MALE-FEMALE, etc.—are more sharply delineated than others. While our emotional experience is

as basic as our spatial and perceptual experience, our emotional experiences are much less sharply delineated in terms of what we do with our bodies. Although a sharply delineated conceptual structure for space emerges from our perceptual-motor functioning, no sharply defined conceptual structure for the emotions emerges from our emotional functioning alone. Since there are *systematic correlates* between our emotions (like happiness) and our sensory-motor experiences (like erect posture), these form the basis of orientational metaphorical concepts (such as HAPPY IS UP). Such metaphors allow us to conceptualize our emotions in more sharply defined terms and also to relate them to other concepts having to do with general well-being (e.g., HEALTH, LIFE, CONTROL, etc.). In this sense, we can speak of *emergent metaphors* and *emergent concepts*.

For example, the concepts OBJECT, SUBSTANCE, and CONTAINER emerge directly. We experience ourselves as entities, separate from the rest of the world—as containers with an inside and an outside. We also experience things external to us as entities—often also as containers with insides and outsides. We experience ourselves as being made up of substances—e.g., flesh and bone—and external objects as being made up of various kinds of substances—wood, stone, metal, etc. We experience many things, through sight and touch, as having distinct boundaries, and when things have no distinct boundaries, we often project boundaries upon them—conceptualizing them as entities and often as containers (for example, forests, clearings, clouds, etc.).

As in the case of orientational metaphors, basic ontological metaphors are grounded by virtue of *systematic correlates within our experience*. As we saw, for example, the metaphor THE VISUAL FIELD IS A CONTAINER is grounded in the correlation between what we see and a bounded physical space. The TIME IS A MOVING OBJECT metaphor is based on the correlation between an object moving toward us and

the time it takes to get to us. The same correlation is a basis for the TIME IS A CONTAINER metaphor (as in "He did it in ten minutes"), with the bounded space traversed by the object correlated with the time the object takes to traverse it. Events and actions are correlated with bounded time spans, and this makes them CONTAINER OBJECTS.

Experience with physical objects provides the basis for metonymy. Metonymic concepts emerge from correlations in our experience between two physical entities (e.g., PART FOR WHOLE, OBJECT FOR USER) or between a physical entity and something metaphorically conceptualized as a physical entity (e.g., THE PLACE FOR THE EVENT, THE INSTITUTION FOR THE PERSON RESPONSIBLE).

Perhaps the most important thing to stress about grounding is the distinction between an experience and the way we conceptualize it. We are not claiming that physical experience is in any way more basic than other kinds of experience, whether emotional, mental, cultural, or whatever. All of these experiences may be just as basic as physical experiences. Rather, what we are claiming about grounding is that we typically conceptualize the nonphysical *in terms of* the physical—that is, we conceptualize the less clearly delineated in terms of the more clearly delineated. Consider the following examples:

Harry is in the kitchen.

Harry is in the Elks.

Harry is in love.

The sentences refer to three different domains of experience: spatial, social, and emotional. None of these has experiential priority over the others; they are all equally basic kinds of experience.

But with respect to conceptual structuring there is a difference. The concept IN of the first sentence emerges directly from spatial experience in a clearly delineated fashion. It is not an instance of a metaphorical concept. The other two sentences, however, are instances of metaphorical

cal concepts. The second is an instance of the SOCIAL GROUPS ARE CONTAINERS metaphor, in terms of which the concept of a social group is structured. This metaphor allows us to "get a handle on" the concept of a social group by means of a spatialization. The word "in" and the concept IN are the same in all three examples; we do not have three different concepts of IN or three homophonous words "in." We have one emergent concept IN, one word for it, and two metaphorical concepts that partially define social groups and emotional states. What these cases show is that it is possible to have equally basic kinds of experiences while having conceptualizations of them that are not equally basic.

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The Grounding of Structural Metaphors

Metaphors based on simple physical concepts—up-down, in-out, object, substance, etc.—which are as basic as anything in our conceptual system and without which we could not function in the world—could not reason or communicate—are not in themselves very rich. To say that something is viewed as a CONTAINER OBJECT with an IN-OUT orientation does not say very much about it. But, as we saw with the MIND IS A MACHINE metaphor and the various personification metaphors, we can elaborate spatialization metaphors in much more specific terms. This allows us not only to elaborate a concept (like the MIND) in considerable detail but also to find appropriate means for highlighting some aspects of it and hiding others. Structural metaphors (such as RATIONAL ARGUMENT IS WAR) provide the richest source of such elaboration. Structural metaphors allow us to do much more than just orient concepts, refer to them, quantify them, etc., as we do with simple orientational and ontological metaphors; they allow us, in addition, to use one highly structured and clearly delineated concept to structure another.

Like orientational and ontological metaphors, structural metaphors are grounded in systematic correlations within our experience. To see what this means in detail, let us examine how the RATIONAL ARGUMENT IS WAR metaphor might be grounded. This metaphor allows us to conceptualize what a rational argument is in terms of something that we understand more readily, namely, physical conflict. Fighting is found everywhere in the animal kingdom and

nowhere so much as among human animals. Animals fight to get what they want—food, sex, territory, control, etc.—because there are other animals who want the same thing or who want to stop them from getting it. The same is true of human animals, except that we have developed more sophisticated techniques for getting our way. Being “rational animals,” we have institutionalized our fighting in a number of ways, one of them being war. Even though we have over the ages institutionalized physical conflict and have employed many of our finest minds to develop more effective means of carrying it out, its basic structure remains essentially unchanged. In fights between two brute animals, scientists have observed the practices of issuing challenges for the sake of intimidation, of establishing and defending territory, attacking, defending, counterattacking, retreating, and surrendering. Human fighting involves the same practices.

Part of being a rational animal, however, involves getting what you want without subjecting yourself to the dangers of actual physical conflict. As a result, we humans have evolved the social institution of verbal argument. We have arguments all the time in order to try to get what we want, and sometimes these “degenerate” into physical violence. Such verbal battles are comprehended in much the same terms as physical battles. Take a domestic quarrel, for instance. Husband and wife are both trying to get what each of them wants, such as getting the other to accept a certain viewpoint on some issue or at least to act according to that viewpoint. Each sees himself as having something to win and something to lose, territory to establish and territory to defend. In a no-holds-barred argument, you attack, defend, counterattack, etc., using whatever verbal means you have at your disposal—intimidation, threat, invoking authority, insult, belittling, challenging authority, evading issues, bargaining, flattering, and even trying to give “rational reasons.” But all of these tactics can be, and often are, presented as *reasons*; for example:

- ... because I'm bigger than you. (*intimidation*)
- ... because if you don't, I'll... (*threat*)
- ... because I'm the boss. (*authority*)
- ... because you're stupid. (*insult*)
- ... because you usually do it wrong. (*belittling*)
- ... because I have as much right as you do. (*challenging authority*)
- ... because I love you. (*evading the issue*)
- ... because if you will..., I'll... (*bargaining*)
- ... because you're so much better at it. (*flattery*)

Arguments that use tactics like these are the most common in our culture, and because they are so much a part of our daily lives, we sometimes don't notice them. However, there are important and powerful segments of our culture where such tactics are, at least in principle, frowned upon because they are considered to be “irrational” and “unfair.” The academic world, the legal world, the diplomatic world, the ecclesiastical world, and the world of journalism claim to present an ideal, or “higher,” form of RATIONAL ARGUMENT, in which all of these tactics are forbidden. The only permissible tactics in this RATIONAL ARGUMENT are supposedly the stating of premises, the citing of supporting evidence, and the drawing of logical conclusions. But even in the most ideal cases, where all of these conditions hold, RATIONAL ARGUMENT is still comprehended and carried out in terms of war. There is still a position to be established and defended, you can win or lose, you have an opponent whose position you attack and try to destroy and whose argument you try to shoot down. If you are completely successful, you can wipe him out.

The point here is that not only our conception of an argument but the way we carry it out is grounded in our knowledge and experience of physical combat. Even if you have never fought a fistfight in your life, much less a war, but have been arguing from the time you began to talk, you still conceive of arguments, and execute them, according to the

ARGUMENT IS WAR metaphor because the metaphor is built into the conceptual system of the culture in which you live. Not only are all the "rational" arguments that are assumed to actually live up to the ideal of RATIONAL ARGUMENT conceived of in terms of WAR, but almost all of them contain, in hidden form, the "irrational" and "unfair" tactics that rational arguments in their ideal form are supposed to transcend. Here are some typical examples:

It is plausible to assume that... (*intimidation*)

Clearly,...

Obviously,...

It would be unscientific to fail to... (*threat*)

To say that would be to commit the Fallacy of...

As Descartes showed,... (*authority*)

Hume observed that...

Footnote 374: cf. Verschlungenheimer, 1954.

The work lacks the necessary rigor for... (*insult*)

Let us call such a theory "Narrow," Rationalism.

In a display of "scholarly objectivity,"...

The work will not lead to a formalized theory. (*belittling*)

His results cannot be quantified.

Few people today seriously hold that view.

Lest we succumb to the error of positivist approaches,... (*challenging authority*)

Behaviorism has led to...

He does not present any alternative theory. (*evading the issue*)

But that is a matter of...

The author does present some challenging facts, although...

Your position is right as far as it goes,... (*bargaining*)

If one takes a realist point of view, one can accept the claim that...

In his stimulating paper,... (*flattery*)

His paper raises some interesting issues...

Examples like these allow us to trace the lineage of our rational argument back through "irrational" argument (= *everyday arguing*) to its origins in physical combat. The

tactics of intimidation, threat, appeal to authority, etc., though couched, perhaps, in more refined phrases, are just as present in rational argument as they are in everyday arguing and in war. Whether we are in a scientific, academic, or legal setting, aspiring to the ideal of rational argument, or whether we are just trying to get our way in our own household by haggling, the way we conceive of, carry out, and describe our arguments is grounded in the ARGUMENT IS WAR metaphor.

Let us now consider other structural metaphors that are important in our lives: LABOR IS A RESOURCE and TIME IS A RESOURCE. Both of these metaphors are culturally grounded in our experience with material resources. Material resources are typically raw materials or sources of fuel. Both are viewed as serving purposeful ends. Fuel may be used for heating, transportation, or the energy used in producing a finished product. Raw materials typically go directly into products. In both cases, the material resources can be *quantified* and given a *value*. In both cases, it is the *kind* of material as opposed to the particular piece or quantity of it that is important for achieving the purpose. For example, it doesn't matter which particular pieces of coal heat your house as long as they are the right *kind* of coal. In both cases, the material gets *used up* progressively as the purpose is served. To summarize:

A material resource is a *kind* of substance
 can be *quantified* fairly precisely
 can be assigned a *value* per unit quantity
 serves a *purposeful* end
 is *used up* progressively as it serves its
 purpose

Take the simple case where you make a product from raw material. It takes a certain amount of labor. In general, the more labor you perform, the more you produce. Assuming that this is true—that the labor is proportional to the amount of product—we can assign *value* to the labor in

terms of the time it takes to produce a unit of product. The perfect model of this is the assembly line, where the raw material comes in at one end, labor is performed in progressive stages, whose duration is fixed by the speed of the line itself, and products come out at the other end. This provides a grounding for the LABOR IS RESOURCE metaphor, as follows:

LABOR is a *kind* of activity (recall: AN ACTIVITY IS A SUBSTANCE)
 can be *quantified* fairly precisely (in terms of time)
 can be assigned a *value* per unit
 serves a *purposeful* end
 is *used up* progressively as it serves its purpose

Since labor can be quantified in terms of time and usually is, in an industrial society, we get the basis for the TIME IS A RESOURCE metaphor:

TIME is a *kind* of (abstract) SUBSTANCE
 can be *quantified* fairly precisely
 can be assigned a *value* per unit
 serves a *purposeful* end
 is *used up* progressively as it serves its purpose

When we are living by the metaphors LABOR IS A RESOURCE and TIME IS A RESOURCE, as we do in our culture, we tend not to see them as metaphors at all. But, as the above account of their grounding in experience shows, both are structural metaphors that are basic to Western industrial societies.

These two complex structural metaphors both employ simple ontological metaphors. LABOR IS A RESOURCE uses AN ACTIVITY IS A SUBSTANCE. TIME IS A RESOURCE uses TIME IS A SUBSTANCE. These two SUBSTANCE metaphors permit labor and time to be quantified—that is, measured, conceived of as being progressively “used up,” and assigned monetary values; they also allow us to view time and labor as things that can be “used” for various ends.

LABOR IS A RESOURCE and TIME IS A RESOURCE are by no means universal. They emerged naturally in our culture because of the way we view work, our passion for quantification, and our obsession with purposeful ends. These metaphors highlight those aspects of labor and time that are centrally important in our culture. In doing this, they also deemphasize or hide certain aspects of labor and time. We can see what both metaphors hide by examining what they focus on.

In viewing labor as a *kind* of activity, the metaphor assumes that labor can be clearly identified and distinguished from things that are not labor. It makes the assumptions that we can tell work from play and productive activity from nonproductive activity. These assumptions obviously fail to fit reality much of the time, except perhaps on assembly lines, chain gangs, etc. The view of labor as merely a *kind* of activity, independent of who performs it, how he experiences it, and what it means in his life, hides the issues of whether the work is personally meaningful, satisfying, and humane.

The quantification of labor in terms of time, together with the view of time as serving a purposeful end, induces a notion of LEISURE TIME, which is parallel to the concept LABOR TIME. In a society like ours, where inactivity is not considered a purposeful end, a whole industry devoted to leisure activity has evolved. As a result, LEISURE TIME becomes a RESOURCE too—to be spent productively, used wisely, saved up, budgeted, wasted, lost, etc. What is hidden by the RESOURCE metaphors for labor and time is the way our concepts of LABOR and TIME affect our concept of LEISURE, turning it into something remarkably like LABOR.

The RESOURCE metaphors for labor and time hide all sorts of possible conceptions of labor and time that exist in other cultures and in some subcultures of our own society: the idea that work can be play, that inactivity can be productive, that much of what we classify as LABOR serves either no clear purpose or no worthwhile purpose.

The three structural metaphors we have considered in

this section—RATIONAL ARGUMENT IS WAR, LABOR IS A RESOURCE, and TIME IS A RESOURCE—all have a strong cultural basis. They emerged naturally in a culture like ours because what they highlight corresponds so closely to what we experience collectively and what they hide corresponds to so little. But not only are they grounded in our physical and cultural experience; they also influence our experience and our actions.

14

Causation: Partly Emergent and Partly Metaphorical

We have seen in our discussion of grounding that there are directly emergent concepts (like UP-DOWN, IN-OUT, OBJECT, SUBSTANCE, etc.) and emergent metaphorical concepts based on our experience (like THE VISUAL FIELD IS A CONTAINER, AN ACTIVITY IS A CONTAINER, etc.). From the limited range of examples we have considered, it might seem as if there were a clear distinction between directly emergent and metaphorically emergent concepts and that every concept must be one or the other. This is not the case. Even a concept as basic as CAUSATION is not purely emergent or purely metaphorical. Rather, it appears to have a directly emergent core that is elaborated metaphorically.

Direct Manipulation: The Prototype of Causation

Standard theories of meaning assume that all of our complex concepts can be analyzed into undecomposable primitives. Such primitives are taken to be the ultimate “building blocks” of meaning. The concept of causation is often taken to be such an ultimate building block. We believe that the standard theories are fundamentally mistaken in assuming that basic concepts are undecomposable primitives.

We agree that causation is a basic human concept. It is one of the concepts most often used by people to organize their physical and cultural realities. But this does not mean that it is an undecomposable primitive. We would like to suggest instead that causation is best understood as an

experiential gestalt. A proper understanding of causation requires that it be viewed as a cluster of other components. But the cluster forms a gestalt—a whole that we human beings find more basic than the parts.

We can see this most clearly in infants. Piaget has hypothesized that infants first learn about causation by realizing that they can directly manipulate objects around them—pull off their blankets, throw their bottles, drop toys. There is, in fact, a stage in which infants seem to “practice” these manipulations, e.g., they repeatedly drop their spoons. Such direct manipulations, even on the part of infants, involve certain shared features that characterize the notion of direct causation that is so integral a part of our constant everyday functioning in our environment—as when we flip light switches, button our shirts, open doors, etc. Though each of these actions is different, the overwhelming proportion of them share features of what we may call a “prototypical” or “paradigmatic” case of direct causation. These shared features include:

- The agent has as a goal some change of state in the patient.
- The change of state is physical.
- The agent has a “plan” for carrying out this goal.
- The plan requires the agent’s use of a motor program.
- The agent is in control of that motor program.
- The agent is primarily responsible for carrying out the plan.
- The agent is the energy source (i.e., the agent is directing his energies toward the patient), and the patient is the energy goal (i.e., the change in the patient is due to an external source of energy).
- The agent touches the patient either with his body or an instrument (i.e., there is a spatiotemporal overlap between what the agent does and the change in the patient).
- The agent successfully carries out the plan.
- The change in the patient is perceptible.
- The agent monitors the change in the patient through sensory perception.

There is a single specific agent and a single specific patient.

This set of properties characterizes “prototypical” direct manipulations, and these are cases of causation par excellence. We are using the word “prototypical” in the sense Rosch uses it in her theory of human categorization (1977). Her experiments indicate that people categorize objects, not in set-theoretical terms, but in terms of prototypes and family resemblances. For example, small flying singing birds, like sparrows, robins, etc., are *prototypical birds*. Chickens, ostriches, and penguins are birds but are not central members of the category—they are nonprototypical birds. But they are birds nonetheless, because they bear sufficient family resemblances to the prototype; that is, they share enough of the relevant properties of the prototype to be classified by people as birds.

The twelve properties given above characterize a prototype of causation in the following sense. They recur together over and over in action after action as we go through our daily lives. We experience them as a *gestalt*; that is, the complex of properties occurring together is more basic to our experience than their separate occurrence. Through their constant recurrence in our everyday functioning, the category of causation emerges with this complex of properties characterizing prototypical causations. Other kinds of causation, which are less prototypical, are actions or events that bear sufficient family resemblances to the prototype. These would include action at a distance, nonhuman agency, the use of an intermediate agent, the occurrence of two or more agents, involuntary or uncontrolled use of the motor program, etc. (In physical causation the agent and patient are events, a physical law takes the place of plan, goal, and motor activity, and all of the peculiarly human aspects are factored out.) When there is an insufficient family resemblance to the prototype, we cease to characterize what happens as causation. For example, if there were multiple agents, if what the agents did was remote in space and time from the patient’s change, and if

there were neither desire nor plan nor control, then we probably wouldn't say that this was an instance of causation, or at least we would have questions about it.

Although the category of causation has fuzzy boundaries, it is clearly delineated in an enormous range of instances. Our successful functioning in the world involves the application of the concept of causation to ever new domains of activity—through intention, planning, drawing inferences, etc. The concept is stable because we continue to function successfully in terms of it. Given a concept of causation that emerges from our experience, we can apply that concept to metaphorical concepts. In "Harry raised our morale by telling jokes," for example, we have an instance of causation where what Harry did made our morale go UP, as in the HAPPY IS UP metaphor.

Though the concept of causation as we have characterized it is basic to human activity, it is not a "primitive" in the usual building-block sense, that is, it is not unanalyzable and undecomposable. Since it is defined in terms of a prototype that is characterized by a recurrent complex of properties, our concept of causation is at once holistic, analyzable into those properties, and capable of a wide range of variation. The terms into which the causation prototype is analyzed (e.g., control, motor program, volition, etc.) are probably also characterized by prototype and capable of further analysis. This permits us to have concepts that are at once basic, holistic, and indefinitely analyzable.

Metaphorical Extensions of Prototypical Causation

Simple instances of making an object (e.g., a paper airplane, a snowball, a sand castle) are all special cases of direct causation. They all involve prototypical direct manipulation, with all of the properties listed above. But they have one additional characteristic that sets them apart as instances of *making*: As a result of the manipulation, we

view the object as a different *kind* of thing. What was a sheet of paper is now a paper airplane. We categorize it differently—it has a different form and function. It is essentially this that sets instances of *making* apart from other kinds of direct manipulation. Even a simple change of state, like the change from water to ice, can be viewed as an instance of making, since ice has a different form and function than water. Thus we get examples like:

You can make ice out of water by freezing it.

This parallels examples like:

I made a paper airplane out of a sheet of newspaper.

I made a statue out of clay.

We conceptualize changes of this kind—from one state into another, having a new form and function—in terms of the metaphor THE OBJECT COMES OUT OF THE SUBSTANCE. This is why the expression *out of* is used in the above examples: the ice is viewed as emerging out of the water; the airplane is viewed as emerging out of the paper; the statue is viewed as emerging out of the clay. In a sentence like "I made a statue out of clay," the substance clay is viewed as the CONTAINER (via the SUBSTANCE IS A CONTAINER metaphor) from which the object—namely, the statue—emerges. Thus the concept MAKING is partly, but not totally, metaphorical. That is, MAKING is an instance of a directly emergent concept, namely, DIRECT MANIPULATION, which is further elaborated by the metaphor THE OBJECT COMES OUT OF THE SUBSTANCE.

Another way we can conceptualize making is by elaborating on direct manipulation, using another metaphor: THE SUBSTANCE GOES INTO THE OBJECT. Thus:

I made a sheet of newspaper *into* an airplane.

I made the clay you gave me *into* a statue.

Here the object is viewed as a container for the material.

The SUBSTANCE GOES INTO THE OBJECT metaphor occurs

far more widely than in the concept of MAKING. We conceptualize a wide range of changes, natural as well as man-made, in terms of this metaphor. For example:

The water turned *into* ice.

The caterpillar turned *into* a butterfly.

She is slowly changing *into* a beautiful woman.

THE OBJECT COMES OUT OF THE SUBSTANCE metaphor is also used outside the concept of MAKING but in a much more limited range of circumstances, mostly those having to do with evolution:

Mammals developed *out of* reptiles.

Our present legal system evolved *out of* English common law.

Thus the two metaphors we use to elaborate direct manipulation into the concept of MAKING are both used independently to conceptualize various concepts of CHANGE.

These two metaphors for CHANGE, which are used as part of the concept of MAKING, emerge naturally from as fundamental a human experience as there is, namely, birth. In mental a human experience as there is, namely, birth. In birth, an object (the baby) comes out of a container (the mother). At the same time, the mother's substance (her flesh and blood) are in the baby (the container object). The experience of birth (and also agricultural growth) provides a grounding for the general concept of CREATION, which has as its core the concept of MAKING a physical object but which extends to abstract entities as well. We can see this grounding in birth metaphors for creation in general:

Our nation was *born out of* a desire for freedom.

His writings are products of his *fertile* imagination.

His experiment *spawned* a host of new theories.

Your actions will only *breed* violence.

He *hatched* a clever scheme.

He *conceived* a brilliant theory of molecular motion.

Universities are *incubators* for new ideas.

The theory of relativity *first saw the light of day* in 1905.

The University of Chicago was the *birthplace* of the nuclear age.

Edward Teller is the *father* of the hydrogen bomb.

These are all instances of the general metaphor CREATION IS BIRTH. This gives us another instance where a special case of causation is conceptualized metaphorically.

Finally, there is another special case of CAUSATION which we conceptualize in terms of the EMERGENCE metaphor. This is the case where a mental or emotional state is viewed as causing an act or event:

He shot the mayor *out of* desperation.

He gave up his career *out of* love for his family.

His mother nearly went crazy *from* loneliness.

He dropped *from* exhaustion.

He became a mathematician *out of* a passion for order.

Here the STATE (desperation, loneliness, etc.) is viewed as a container, and the act or event is viewed as an object that emerges from the container. The CAUSATION is viewed as the EMERGENCE of the EVENT from the STATE.

Summary

As we have just seen, the concept of CAUSATION is based on the prototype of DIRECT MANIPULATION, which emerges directly from our experience. The prototypical core is elaborated by metaphor to yield a broad concept of CAUSATION, which has many special cases. The metaphors used are THE OBJECT COMES OUT OF THE SUBSTANCE, THE SUBSTANCE GOES INTO THE OBJECT, CREATION IS BIRTH, and CAUSATION (of event by state) IS EMERGENCE (of the event/object from the state/container).

We also saw that the prototypical core of the concept CAUSATION, namely, DIRECT MANIPULATION, is not an unanalyzable semantic primitive but rather a gestalt consisting of properties that naturally occur together in our daily experience of performing direct manipulations. The pro-

totypical concept **DIRECT MANIPULATION** is basic and primitive in our experience, but not in the sense required by a "building-block" theory. In such theories, each concept either *is* an ultimate building block or can be broken down into ultimate building blocks in one and only one way. The theory we will propose in the next chapter suggests, instead, that there are natural dimensions of experience and that concepts can be analyzed along these dimensions in more than one way. Moreover, along each dimension, concepts can often be analyzed further and further, relative to our experience, so that there are not always ultimate building blocks.

Thus there are three ways in which **CAUSATION** is not an unanalyzable primitive:

- It is characterized in terms of family resemblances to the prototype of **DIRECT MANIPULATION**.
- The **DIRECT MANIPULATION** prototype itself is an indefinitely analyzable gestalt of naturally cooccurring properties.
- The prototypical core of **CAUSATION** is elaborated metaphorically in various ways.

15

The Coherent Structuring of Experience

Experiential Gestalts and the Dimensions of Experience

We have talked throughout of metaphorical concepts as ways of partially structuring one experience in terms of another. In order to see in detail what is involved in metaphorical structuring, we must first have a clearer idea of what it means for an experience or set of experiences to be coherent by virtue of having a structure. For example, we have suggested that an argument is a conversation that is partially structured by the concept **WAR** (thus giving us the **ARGUMENT IS WAR** metaphor). Suppose you are having a conversation and you suddenly realize that it has turned into an argument. What is it that makes a conversation an argument, and what does that have to do with war? To see the difference between a conversation and an argument, we first have to see what it means to be engaged in a conversation.

The most basic kind of conversation involves two people who are talking to each other. Typically, one of them initiates it and they take turns talking about some common topic or set of topics. Maintaining the turn-taking and keeping to the topic at hand (or shifting topics in a permissible fashion) takes a certain amount of cooperation. And whatever other purposes a conversation may have for the participants, conversations generally serve the purpose of polite social interaction.

Even in as simple a case as a polite two-party conversation, several dimensions of structure can be seen:

Participants: The participants are of a certain natural kind, namely, people. Here they take the role of speakers. The conversation is defined by what the participants do, and the same participants play a role throughout the conversation.

Parts: The parts consist of a certain natural kind of activity, namely, talking. Each turn at talking is a part of the conversation as a whole, and these parts must be put together in a certain fashion for there to be a coherent conversation.

Stages: Conversations typically have a set of initial conditions and then pass through various stages, including at least a beginning, a central part, and an end. Thus there are certain things that are said in order to initiate a conversation ("Hello!", "How are you?", etc.), others that move it along to the central part, and still others that end it.

Linear sequence: The participants' turns at speaking are ordered in a linear sequence, with the general constraint that the speakers alternate. Certain overlappings are permitted, and there are lapses where one speaker doesn't take his turn and the other speaker continues. Without such constraints on linear sequencing of parts, you get a monologue or a jumble of words but no conversation.

Causation: The finish of one turn at talking is expected to result in the beginning of the next turn.

Purpose: Conversations may serve any number of purposes, but all typical conversations share the purpose of maintaining polite social interaction in a reasonably cooperative manner.

There are many details that could be added that characterize conversation more precisely, but these six dimensions of structure give the main outlines of what is common to typical conversations.

If you are engaged in a conversation (which has at least these six dimensions of structure) and you perceive it turning into an argument, what is it that you perceive over and above being in a conversation? The basic difference is a sense of being embattled. You realize that you have an opinion that matters to you and that the other person doesn't accept it. At least one participant wants the other to

give up his opinion, and this creates a situation where there is something to be won or lost. You sense that you are in an argument when you find your own position under attack or when you feel a need to attack the other person's position. It becomes a full-fledged argument when both of you devote most of your conversational energy to trying to discredit the other person's position while maintaining your own. The argument remains a conversation, although the element of polite cooperation in maintaining the conversational structure may be strained if the argument becomes heated.

The sense of being embattled comes from experiencing yourself as being in a warlike situation even though it is not actual combat—since you are maintaining the amenities of conversation. You experience the other participant as an adversary, you attack his position, you try to defend your own, and you do what you can to make him give in. The structure of the conversation takes on aspects of the structure of a war, and you act accordingly. Your perceptions and actions correspond in part to the perceptions and actions of a party engaged in war. We can see this in more detail in the following list of characteristics of argument:

You have an opinion that matters to you. (*having a position*)

The other participant does not agree with your opinion. (*has a different position*)

It matters to one or both of you that the other give up his opinion (*surrender*) and accept yours (*victory*). (*he is your adversary*)

The difference of opinion becomes a conflict of opinions. (*conflict*)

You think of how you can best convince him of your view (*plan strategy*) and consider what evidence you can bring to bear on the issue (*marshal forces*).

Considering what you perceive as the weaknesses of his position, you ask questions and raise objections designed to force him ultimately to give up his position and adopt yours. (*attack*)

You try to change the premises of the conversation so that you will be in a stronger position. (*maneuvering*)
 In response to his questions and objections, you try to maintain your own position. (*defense*)

As the argument progresses, maintaining your general view may require some revision. (*retreat*)

You may raise new questions and objections. (*counterattack*)
 Either you get tired and decide to quit arguing (*truce*), or neither of you can convince the other (*stalemate*), or one of you gives in. (*surrender*)

What gives coherence to this list of things that make a conversation into an argument is that they correspond to elements of the concept WAR. What is added from the concept WAR to the concept CONVERSATION can be viewed in terms of the same six dimensions of structure that we gave in our description of conversational structure.

Participants: The kind of participants are people or groups of people. They play the role of adversaries.

Parts: The two positions
 Planning strategy
 Attack
 Defense
 Retreat
 Maneuvering
 Counterattack
 Stalemate
 Truce
 Surrender/victory

Stages: Initial conditions: Participants have different positions. One or both wants the other to surrender. Each participant assumes he can defend his position.
 Beginning: One adversary attacks.
 Middle: Combinations of defense maneuvering

retreat
 counterattack
 End: Either truce or stalemate or surrender/
 victory

Final state: Peace, victor has dominance over
 loser

Linear sequence: Retreat after attack
 Defense after attack
 Counterattack after attack

Causation: Attack results in defense or counterattack or
 retreat or end.

Purpose: Victory

Understanding a conversation as being an argument involves being able to superimpose the multidimensional structure of part of the concept WAR upon the corresponding structure CONVERSATION. Such multidimensional structures characterize *experiential gestalts*, which are ways of organizing experiences into *structured wholes*. In the ARGUMENT IS WAR metaphor, the gestalt for CONVERSATION is structured further by means of correspondences with selected elements of the gestalt for WAR. Thus one activity, talking, is understood in terms of another, physical fighting. Structuring our experience in terms of such multidimensional gestalts is what makes our experience *coherent*. We experience a conversation as an argument when the WAR gestalt fits our perceptions and actions in the conversation.

Understanding such multidimensional gestalts and the correlations between them is the key to understanding coherence in our experience. As we saw above, *experiential gestalts are multidimensional structured wholes*. Their dimensions, in turn, are defined in terms of directly emergent concepts. That is, the various dimensions (participants, parts, stages, etc.) are categories that emerge naturally from our experience. We have already seen that CAUSATION is a directly emergent concept, and the other dimensions in

terms of which we categorize our experience have a fairly obvious experiential basis:

Participants: This dimension arises out of the concept of the SELF as an actor distinguishable from the actions he performs. We also distinguish *kinds* of participants (e.g., people, animals, objects).

Parts: We experience ourselves as having parts (arms, legs, etc.) that we can control independently. Likewise, we experience physical objects either in terms of parts that they naturally have or parts that we impose upon them, either by virtue of our perceptions, our interactions with them, or our uses for them. Similarly, we impose a part-whole structure on events and activities. And, as in the case of participants, we distinguish *kinds* of parts (e.g., kinds of objects, kinds of activities, etc.).

Stages: Our simplest motor functions involve knowing where we are and what position we are in (initial conditions), starting to move (beginning), carrying out the motor function (middle), and stopping (end), which leaves us in a final state.

Linear sequence: Again, the control of our simplest motor functions requires us to put them in the right linear sequence. *Purpose:* From birth (and even before), we have needs and desires, and we realize very early that we can perform certain actions (crying, moving, manipulating objects) to satisfy them.

These are some of the basic dimensions of our experience. We classify our experiences in such terms. And we see *coherence* in diverse experiences when we can categorize them in terms of gestalts with at least these dimensions.

What Does It Mean for a Concept to Fit an Experience?

Let us return to the experience of being in a conversation that turns into an argument. As we saw, being in a conversation is a structured experience. As we experience a conversation, we are automatically and unconsciously classifying our experience in terms of the natural dimensions of

the CONVERSATION gestalt: Who's participating? Whose turn is it? (= which part?) What stage are we at? And so on. It is in terms of imposing the CONVERSATION gestalt on what is happening that we experience the talking and listening that we engage in as a particular *kind* of experience, namely, a conversation. When we perceive dimensions of our experience as fitting the WAR gestalt in addition, we become aware that we are participating in another *kind* of experience, namely, an argument. It is by this means that we classify particular experiences, and we need to classify our experiences in order to comprehend, so that we will know what to do.

Thus we classify particular experiences in terms of experiential gestalts in our conceptual system. Here we must distinguish between: (1) the experience itself, as we structure it, and (2) the concepts that we employ in structuring it, that is, the multidimensional gestalts like CONVERSATION and ARGUMENT. The concept (say, CONVERSATION) specifies certain natural dimensions (e.g., participants, parts, stages, etc.) and how these dimensions are related. There is a correlation, dimension by dimension, between the concept CONVERSATION and the aspects of the actual activity of conversing. This is what we mean when we say that a concept fits an experience.

It is by means of conceptualizing our experiences in this manner that we pick out the "important" aspects of an experience. And by picking out what is "important" in the experience, we can categorize the experience, understand it, and remember it. If we were to tell you that we had an argument yesterday, we would be telling you the truth if our concept of an ARGUMENT, with us as participants, fits an experience that we had yesterday, dimension by dimension.

Metaphorical Structuring versus Subcategorization

In our discussion of the concept ARGUMENT, we have been assuming a clear-cut distinction between subcategorization

and metaphorical structuring. On the one hand, we took "An argument is a conversation" to be an instance of subcategorization, because an argument is basically a *kind* of conversation. The same kind of activity occurs in both, namely, talking, and an argument has all the basic structural features of a conversation. Thus our criteria for subcategorization were (a) same kind of activity and (b) enough of the same structural features. On the other hand, we took ARGUMENT IS WAR to be a metaphor because an argument and a war are basically different kinds of activity, and ARGUMENT is partially structured in terms of WAR. Argument is a different kind of activity because it involves talking instead of combat. The structure is partial, because only selected elements of the concept WAR are used. Thus our criteria for metaphor were (a) a difference in kind of activity and (b) partial structuring (use of certain selected parts).

But we cannot always distinguish subcategorization from metaphor on the basis of these criteria. The reason is that it is not always clear when two activities (or two things) are of the same kind or of different kinds. Take, for example, AN ARGUMENT IS A FIGHT. Is this a subcategorization or a metaphor? The issue here is whether fighting and arguing are the same kind of activity. This is not a simple issue. Fighting is an attempt to gain dominance that typically involves hurting, inflicting pain, injuring, etc. But there is both physical pain and what is called psychological pain; there is physical dominance and there is psychological dominance. If your concept FIGHT includes psychological dominance and psychological pain on a par with physical dominance and pain, then you may see AN ARGUMENT IS A FIGHT as a subcategorization rather than a metaphor, since both would involve gaining psychological dominance. On this view an argument would be a kind of fight, structured in the form of a conversation. If, on the other hand, you conceive of FIGHT as purely physical, and if you view psychological pain only as pain taken metaphorically, then you might view AN ARGUMENT IS A FIGHT as metaphorical.

The point here is that subcategorization and metaphor are endpoints on a continuum. A relationship of the form *A* is *B* (for example, AN ARGUMENT IS A FIGHT) will be a clear subcategorization if *A* and *B* are the same kind of thing or activity and will be a clear metaphor if they are clearly different kinds of things or activities. But when it is not clear whether *A* and *B* are the same kind of thing or activity, then the relationship *A* is *B* falls somewhere in the middle of the continuum.

The important thing to note is that the theory outlined in chapter 14 allows for such unclear cases as well as for the clear ones. The unclear cases will involve the same kinds of structures (with the same dimensions and the same possible complexities) as the clear cases. In an unclear case of the form *A* is *B*, *A* and *B* will both be gestalts that structure certain kinds of activities (or things), and the only question will be whether the activities or things structured by those gestalts are of the same *kind*.

We have so far characterized coherence in terms of experiential gestalts, which have various dimensions that emerge naturally from experience. Some gestalts are relatively simple (CONVERSATION) and some are extremely elaborate (WAR). There are also complex gestalts, which are structured partially in terms of other gestalts. These are what we have been calling *metaphorically structured concepts*. Certain concepts are structured almost entirely metaphorically. The concept LOVE, for example, is structured mostly in metaphorical terms: LOVE IS A JOURNEY, LOVE IS A PATIENT, LOVE IS A PHYSICAL FORCE, LOVE IS MADNESS, LOVE IS WAR, etc. The concept of LOVE has a core that is minimally structured by the subcategorization LOVE IS AN EMOTION and by links to other emotions, e.g., liking. This is typical of emotional concepts, which are not clearly delineated in our experience in any direct fashion and therefore must be comprehended primarily indirectly, via metaphor.

But there is more to coherence than structuring in terms

of multidimensional gestalts. When a concept is structured by more than one metaphor, the different metaphorical structurings usually fit together in a coherent fashion. We will now turn to other aspects of coherence, both within a single metaphorical structuring and across two or more metaphors.

16

Metaphorical Coherence

Specialized Aspects of a Concept

So far we have looked at the concept ARGUMENT in enough detail to get a sense of its general overall structure. As is the case with many of our general concepts, the concept ARGUMENT has specialized aspects that are used in certain subcultures or in certain situations. We saw, for example, that in the academic world, legal world, etc., the concept ARGUMENT is specialized to RATIONAL ARGUMENT, which is distinguished from everyday, "irrational" argument. In RATIONAL ARGUMENT the tactics are *ideally* restricted to stating premises, citing supporting evidence, and drawing logical conclusions. In practice, as we saw, the tactics of everyday argument (intimidation, appeal to authority, etc.) appear in actual "rational" argument in a disguised or refined form. These additional restrictions define RATIONAL ARGUMENT as a specialized branch of the general concept ARGUMENT. Moreover, the purpose of argument is further restricted in the case of RATIONAL ARGUMENT. In the ideal case, the purpose of winning the argument is seen as serving the higher purpose of understanding.

Within RATIONAL ARGUMENT itself there is a further specialization. Since written discourse rules out the dialogue inherent in two-party arguments, a special form of one-party argument has developed. Here speaking typically becomes writing, and the author addresses himself, not to an actual adversary, but to a set of hypothetical adversaries or to actual adversaries who are not present to defend themselves, counterattack, etc. What we have here is the specialized concept ONE-PARTY RATIONAL ARGUMENT.

Finally, there is a distinction between an argument as a *process* (arguing) and an argument as a *product* (what has been written or said in the course of arguing). In this case, the process and the product are intimately related aspects of the same general concept, neither of which can exist without the other, and either of which can be focused on. Thus we speak of the stage of an argument as applying indifferently to the process or the product.

A ONE-PARTY RATIONAL ARGUMENT is a specialized branch of the general concept ARGUMENT and, as such, has many special constraints on it. Since there is no particular adversary present, an idealized adversary must be assumed. If the purpose of victory is to be maintained, it must be victory over an idealized adversary who is not present. The only way to guarantee victory is to be able to overcome all possible adversaries and to win neutral parties over to your side. To do this, you have to anticipate possible objections, defenses, attacks, etc., and deal with them as you construct your argument. Since this is a RATIONAL ARGUMENT, all of these steps must be taken, not just to win, but in the service of the higher purpose of understanding.

The further restrictions placed on one-party rational arguments require us to pay special attention to certain aspects of argument which are not so important (or perhaps not even present) in everyday argument. Among them are:

Content: You have to have enough supporting evidence and say enough of the right things in order to make your point and to overcome any possible objections.

Progress: You have to start with generally agreed upon premises and move in linear fashion toward some conclusion.

Structure: RATIONAL ARGUMENT requires appropriate logical connections among the various parts.

Strength: The ability of the argument to withstand assault depends on the weight of the evidence and the tightness of the logical connections.

Basicness: Some claims are more important to maintain and defend than others, since subsequent claims will be based upon them.

Obviousness: In any argument there will be things which are not obvious. These need to be identified and explored in sufficient detail.

Directness: The force of an argument can depend on how straightforwardly you move from premises to conclusions.

Clarity: What you are claiming and the connections between your claims must be sufficiently clear for the reader to understand them.

These are aspects of a one-party rational argument that are not necessarily present in an ordinary everyday argument. The concept CONVERSATION and the ARGUMENT IS WAR metaphor do not focus on these aspects, which are crucial to idealized RATIONAL ARGUMENT. As a result, the concept RATIONAL ARGUMENT is further defined by means of other metaphors which *do* enable us to focus on these important aspects: AN ARGUMENT IS A JOURNEY, AN ARGUMENT IS A CONTAINER, and AN ARGUMENT IS A BUILDING. As we will see, each of these gives us a handle on some of the above aspects of the concept RATIONAL ARGUMENT. No one of them is sufficient to give us a complete, consistent, and comprehensive understanding of all these aspects, but together they do the job of giving us a coherent understanding of what a rational argument is. We will now take up the question of what it means for various different metaphors, each of which partially structures a concept, to jointly provide a coherent understanding of the concept as a whole.

Coherence within a Single Metaphor

We can get some idea of the mechanism of coherence within a single metaphorical structuring by starting with the metaphor AN ARGUMENT IS A JOURNEY. This metaphor has

to do with the goal of the argument, the fact that it must have a beginning, proceed in a linear fashion, and make progress in stages toward that goal. Here are some obvious instances of the metaphor:

AN ARGUMENT IS A JOURNEY

We have *set out* to prove that bats are birds.

When we *get to the next point*, we shall see that philosophy is dead.

So far, we've seen that no current theories will work.

We will *proceed in a step-by-step* fashion.

Our goal is to show that hummingbirds are essential to military defense.

This observation *points the way* to an elegant solution.

We have *arrived at* a disturbing conclusion.

One thing we know about journeys is that a JOURNEY DEFINES A PATH.

A JOURNEY DEFINES A PATH

He *strayed from* the path.

He's *gone off in the wrong direction*.

They're *following us*.

I'm *lost*.

Putting together AN ARGUMENT IS A JOURNEY and A JOURNEY DEFINES A PATH, we get:

AN ARGUMENT DEFINES A PATH

He *strayed from* the line of argument

Do you *follow* my argument?

Now we've *gone off in the wrong direction* again.

I'm *lost*.

You're *going around in circles*.

Moreover, paths are conceived of as surfaces (think of a carpet unrolling as you go along, thus creating a path behind you):

THE PATH OF A JOURNEY IS A SURFACE

We *covered* a lot of ground.

He's *on* our trail.

He *strayed off* the trail.
We went *back over* the same trail.

Given that AN ARGUMENT DEFINES A PATH and THE PATH OF A JOURNEY IS A SURFACE, we get:

THE PATH OF AN ARGUMENT IS A SURFACE

We have already *covered* those points.

We have *covered* a lot of *ground* in our argument.

Let's go *back over* the argument again.

You're *getting off* the subject.

You're really *onto* something there.

We're well *on* our way to solving this problem.

Here we have a set of cases that fall under the metaphor AN ARGUMENT IS A JOURNEY. What makes them systematic is a pair of metaphorical entailments that are based on two facts about journeys.

The facts about journeys:

A JOURNEY DEFINES A PATH

THE PATH OF A JOURNEY IS A SURFACE

The metaphorical entailments:

AN ARGUMENT IS A JOURNEY

A JOURNEY DEFINES A PATH

Therefore, AN ARGUMENT DEFINES A PATH

AN ARGUMENT IS A JOURNEY

THE PATH OF A JOURNEY IS A SURFACE

Therefore, THE PATH OF AN ARGUMENT IS A SURFACE

Here metaphorical entailments characterize the *internal* systematicity of the metaphor AN ARGUMENT IS A JOURNEY, that is, they make coherent all the examples that fall under that metaphor.

Coherence between Two Aspects of a Single

Concept

AN ARGUMENT IS A JOURNEY is only one of the metaphors for arguments, the one we use to highlight or talk about the

goal, direction, or progress of an argument. When we want to talk about the content of an argument, we use the structurally complex metaphor AN ARGUMENT IS A CONTAINER. Containers can be viewed as defining a limited space (with a bounding surface, a center, and a periphery) and as holding a substance (which may vary in amount, and which may have a core located in the center). We use the ARGUMENT IS A CONTAINER metaphor when we want to highlight any of these aspects of an argument.

AN ARGUMENT IS A CONTAINER

Your argument doesn't have much *content*.

That argument *has holes in it*.

You don't have *much of an argument*, but his objections have *even less substance*.

Your argument is *vacuous*.

I'm tired of your *empty arguments*.

You won't *find* that idea in his argument.

That conclusion *falls out of* my argument.

Your argument *won't hold water*.

Those points are *central* to the argument—the rest is *peripheral*.

I still haven't gotten to the *core* of his argument.

Since the purposes of the JOURNEY and CONTAINER metaphors are different, that is, since they are used to focus in detail on different aspects of an argument (goal and progress versus content), we would not expect these metaphors to overlap completely. It is possible in some cases to focus jointly on both the JOURNEY (progress) and CONTAINER (content) aspects of an argument. Thus we get certain mixed metaphors that display both of these aspects at once.

Overlap between JOURNEY and CONTAINER metaphors:

At this point our argument doesn't have *much content*.

In what we've done so far, we have provided the *core* of our argument.

If we keep going the way we're going, we'll *fit all the facts in*.

What makes this overlap possible is that the JOURNEY and CONTAINER metaphors have shared entailments. Both

metaphors allow us to distinguish the form of the argument from the content. In the JOURNEY metaphor, the path corresponds to the form of the argument and the ground covered corresponds to the content. When we are going around in circles, we may have a long path, but we don't cover much ground; that is, the argument doesn't have much content. In a good argument, however, each element of form is used to express some content. In the JOURNEY metaphor, the longer the path (the longer the argument), the more ground is covered (the more content the argument has). In the CONTAINER metaphor, the bounding surface of the container corresponds to the form of the argument, and what is in the container corresponds to the "content" of the argument. In a container that is designed and used most efficiently, all of the bounding surface is used to hold content. Ideally, the more surface there is (the longer the argument), the more substance there is in the container (the more content the argument has). As the path of the journey unfolds, more and more of the surface defined by that path is created, just as more and more of the surface of the container is created. The overlap between the two metaphors is the progressive creation of a surface. As the argument covers more ground (via the JOURNEY surface), it gets more content (via the CONTAINER surface).

What characterizes this overlap is a shared entailment that arises in the following way.

A nonmetaphorical entailment about journeys:

As we make a journey, more of a path is created.

A PATH IS A SURFACE.

Therefore, As we make a journey, more of a surface is created.

A metaphorical entailment about arguments (based on journeys):

AN ARGUMENT IS A JOURNEY.

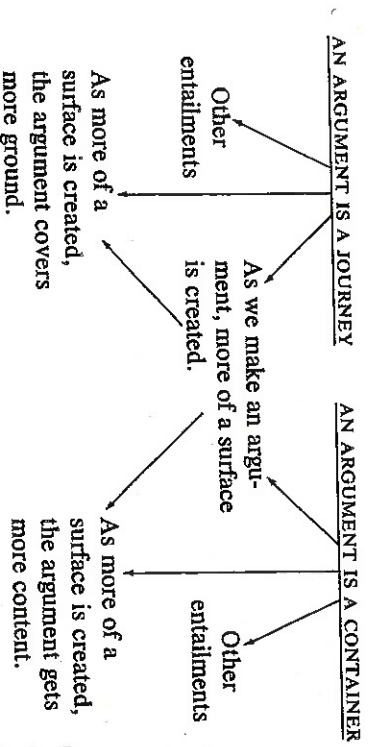
As we make a journey, more of a surface is created.

Therefore, As we make an argument, more of a surface is created.

A metaphorical entailment about arguments (based on containers):

AN ARGUMENT IS A CONTAINER.
As we make a container, more of a surface is created.
 Therefore, As we make an argument, more of a surface is created.

Here the two metaphorical entailments have the same conclusion. This can be represented by the accompanying diagram.



It is this overlap of entailments between the two metaphors that defines the coherence between them and provides the link between the amount of ground the argument covers and the amount of content it has. This is what allows them to “fit together,” even though they are not completely consistent, that is, there is no “single image” that completely fits both metaphors. The surface of a container and the surface of the ground are both surfaces by virtue of common topological properties. But our image of ground surface is very different than our images of various kinds of container surfaces. The abstract topological concept of a surface which forms the overlap between these two metaphors is not concrete enough to form an image. In general when metaphors are coherent but not consistent, we should not expect them to form consistent images. The difference between coherence and consistency is

crucial. Each metaphor focuses on one aspect of the concept ARGUMENT: in this, each serves a single purpose. Moreover, each metaphor allows us to understand one aspect of the concept in terms of a more clearly delineated concept, e.g., JOURNEY or CONTAINER. The reason we need two metaphors is because there is no one metaphor that will do the job—there is no one metaphor that will allow us to get a handle simultaneously on both the direction of the argument and the content of the argument. These two purposes cannot both be served at once by a single metaphor. And where the purposes won’t mix, the metaphors won’t mix. Thus we get instances of impermissible mixed metaphors resulting from the impossibility of a single clearly delineated metaphor that satisfies both purposes at once. For example, we can speak of the *direction* of the argument and of the *content* of the argument but not of the *direction of the content* of the argument nor of the *content of the direction* of the argument. Thus we do not get sentences like:

We can now follow the *path* of the *core* of the argument.
 The *content* of the argument *proceeds* as follows.
 The *direction* of his argument has no *substance*.
 I am disturbed by the *vacuous path* of your argument.

The two metaphors would be consistent if there were a way to *completely* satisfy both purposes with one clearly delineated concept. Instead, what we get is coherence, where there is a partial satisfaction of both purposes. For instance, the JOURNEY metaphor highlights both direction and progress toward a goal. The CONTAINER metaphor highlights the content with respect to its amount, density, centrality, and boundaries. The *progress* aspect of the JOURNEY metaphor and the *amount* aspect of the CONTAINER metaphor can be highlighted simultaneously because the amount increases as the argument progresses. And, as we saw, this results in permissible mixed metaphors.

So far we have looked at the coherences between two metaphorical structurings of the concept ARGUMENT, and we have found the following:

—Metaphorical entailments play an essential role in linking all of the instances of a *single* metaphorical structuring of a concept (as in the various instances of the AN ARGUMENT IS A JOURNEY metaphor).

—Metaphorical entailments also play an essential role in linking *two different* metaphorical structurings of a single concept (as in the JOURNEY and CONTAINER metaphors for ARGUMENT).

—A shared metaphorical entailment can establish a cross-metaphorical correspondence. For example, the shared entailment AS WE MAKE AN ARGUMENT, MORE OF A SURFACE IS CREATED establishes a correspondence between the amount of ground covered in the argument (which is in the JOURNEY metaphor) and the amount of content in the argument (which is in the CONTAINER metaphor).

—The various metaphorical structurings of a concept serve different purposes by highlighting different aspects of the concept.

—Where there is an overlapping of purposes, there is an overlapping of metaphors and hence a coherence between them. Permissible mixed metaphors fall into this overlap.

—In general, complete consistency across metaphors is rare; coherence, on the other hand, is typical.

17

Complex Coherences across Metaphors

The most important thing to bear in mind throughout our discussion of coherence is the role of purpose. A metaphorical structuring of a concept, say the JOURNEY metaphor for arguments, allows us to get a handle on one aspect of the concept. Thus a metaphor works when it satisfies a purpose, namely, understanding an aspect of the concept. When two metaphors successfully satisfy two purposes, then overlaps in the purposes will correspond to overlaps in the metaphors. Such overlaps, we claim, can be characterized in terms of shared metaphorical entailments and the cross-metaphorical correspondences established by them.

We saw this in a simple example in the last chapter. We would now like to show that the same mechanisms are involved in complex examples. There are two sources of such complexity: (1) there are often many metaphors that partially structure a single concept and (2) when we discuss one concept, we use other concepts that are themselves understood in metaphorical terms, which leads to further overlapping of metaphors. We can isolate the factors that lead to such complexities by examining further the concept ARGUMENT.

In general, arguments serve the purpose of understanding. We construct arguments when we need to show the connections between things that are obvious—that we take for granted—and other things that are not obvious. We do this by putting ideas together. These ideas constitute the content of the argument. The things we take for granted are the starting point of the argument. The things we wish to

show are the goals that we must reach. As we proceed toward these goals, we make progress by establishing connections. The connections may be strong or weak, and the network of connections has an overall structure. In any argument certain ideas and connections may be more basic than others, certain ideas will be more obvious than others. How good an argument is will depend on its content, the strength of the connections, how directly it establishes the connections, and how easy it is to understand the connections. Briefly, the various ARGUMENT metaphors serve the purpose of providing an understanding of the following aspects of the concept:

| | |
|-----------|-------------|
| content | basicness |
| progress | obviousness |
| structure | directness |
| strength | clarity |

In the preceding chapter we saw that the JOURNEY metaphor focuses at least on content and progress, that the CONTAINER metaphor focuses at least on content, and that there is an overlap based on the progressive accumulation of content. But these two metaphors serve even more purposes and are involved in even more complex coherences. We can see this by considering a third metaphor for arguments:

AN ARGUMENT IS A BUILDING

We've got the *framework* for a *solid* argument.

If you don't *support* your argument with *solid* facts, the whole thing will *collapse*.

He is trying to *buttress* his argument with a lot of irrelevant facts, but it is still so *shaky* that it will easily *fall apart* under criticism.

With the *groundwork* you've got, you can *construct* a pretty *strong* argument.

Together, the JOURNEY, CONTAINER, and BUILDING metaphors focus on all of the above aspects of the concept ARGUMENT, as the following lists show:

| | | |
|-------------|-----------|-----------|
| JOURNEY | CONTAINER | BUILDING |
| content | content | content |
| progress | progress | progress |
| directness | basicness | basicness |
| obviousness | strength | strength |
| | clarity | structure |

Here are some examples of how we understand each of these aspects in terms of the metaphors:

JOURNEY

So far, we haven't covered much ground. (progress, content)

This is a roundabout argument. (directness)

We need to go into this further in order to see clearly what's involved. (progress, obviousness)

CONTAINER

You have all the right ideas in your argument, but the argument is still not transparent. (content, progress, clarity)

These ideas form the solid core of the argument. (strength, basicness)

BUILDING

We've got a foundation for the argument, now we need a solid framework. (basicness, strength, structure)

We have now constructed most of the argument. (progress, content)

We saw in the preceding chapter that the fact that both journeys and containers define surfaces was the basis for the overlap between the JOURNEY and CONTAINER metaphors. The fact that a building also has a surface, namely, the foundation and the outer shell, makes possible further overlaps with the BUILDING metaphor. In each case the *surface* defines the *content*, but in different ways:

JOURNEY: The surface defined by the path of the argument "covers ground," and the content is the ground covered by the argument.

CONTAINER: The content is inside the container, whose boundaries are defined by its surface.

BUILDING: The surface is the outer shell and foundation, which define an interior for the building. But in the **BUILDING** metaphor, unlike the **CONTAINER** metaphor, the content is not in the interior; instead, the foundation and outer shell *constitute* the content. We can see this in examples like: "The foundation of your argument does not have enough content to support your claims" and "The framework of your argument does not have enough substance to withstand criticism."

Let us call these surfaces "content-defining surfaces."

The notion of a content-defining surface is not sufficient to account for many of the coherences that we find among the metaphors. For example, there are instances of metaphorical overlap based on the notion of depth. Since depth is also defined relative to a surface, we might think that the depth-defining surface for each metaphor would be the same as the content-defining surface. However, this is not always the case, as the following examples show:

This is a *shallow* argument; it needs more *foundation*.

(**BUILDING**)

We have *gone over* these ideas in *great depth*. (**JOURNEY**)

You haven't gotten to the *deepest* points yet—those at the *core* of the argument. (**CONTAINER**)

In both the **BUILDING** and **JOURNEY** metaphors, the depth-defining surface is the ground level. In the **CONTAINER** metaphor, it is again the container surface.

| | JOURNEY | CONTAINER | BUILDING |
|--------------------------|-------------------------------------|--------------------------|----------------------|
| Content-defining surface | Surface created by path (the cover) | Surface of the container | Foundation and shell |
| Depth-defining surface | Ground level | Surface of the container | Ground level |

Before proceeding to the coherences, it is important to recognize that there are two different notions of depth operating here. In the **BUILDING** and **CONTAINER** metaphors, what is deeper is more basic. The most basic

parts of the argument are the deepest: the foundation and the core. However, in the **JOURNEY** metaphor, deep facts are those that are not obvious. Facts that are not on the surface are hidden from immediate view; we need to go into them in depth. The purposes of an argument include covering certain topics (finishing with them—"putting the lid on") and, in addition, covering them at *appropriate depths*. Progress in an argument is not merely a matter of covering topics; it also requires us to go sufficiently deeply into them. Going into the topic to the required depth is part of the journey:

As we go into the topic *more deeply*, we find . . .

We have come to a point where we must *explore* the issues at a *deeper level*.

Since most of the journey is over the surface of the earth, it is that surface that defines the *depth* of the topics to be covered. But as we go into any one topic in depth, we leave a trail (a surface) behind us, as we do on all parts of the journey. It is by leaving this surface behind that we cover a topic at a *certain depth*. This accounts for the following expressions:

We will be going *deeply into* a variety of topics.

As we go *along*, we will go through these issues in *depth*.

We have now covered all the topics at the *appropriate levels*.

Thus the metaphorical orientation of depth corresponds to basicness in the **BUILDING** and **CONTAINER** metaphors but to lack of obviousness in the **JOURNEY** metaphor. Since depth and progress are very different aspects of an argument, there is no *consistent* image possible within any of the **ARGUMENT** metaphors. But here, as before, though consistency is not possible, there is metaphorical coherence.

Having clarified the distinction between content-defining surfaces and depth-defining surfaces, we are in a position to see a number of other complex coherences. As in the case of the coherence between the **JOURNEY** and **CONTAINER** metaphors, there is coherence among all three metaphors

based on the fact that all three have content-defining surfaces. As the argument proceeds, more of a surface is created, and hence the argument gets more content. This overlap among the three metaphorical structurings of the concept allows mixed metaphors of the following sort:

So far we have constructed the core of our argument.

Here "so far" is from the JOURNEY metaphor, "construct" is from the BUILDING metaphor, and "core" is from the CONTAINER metaphor. Notice that we can say pretty much the same thing by using the building concept "foundation" or the neutral concept "most basic part" in place of "core":

So far we have constructed the foundation of the argument.

So far we have constructed the most basic part of the argument.

What makes this possible is that depth characterizes basicness in both the BUILDING and CONTAINER metaphors. Both of them have a deepest, that is, most basic part: In the CONTAINER metaphor it is the *core*, and in the BUILDING metaphor it is the *foundation*. Thus we have a correspondence between the two metaphors. This can be seen in the following examples, where the CONTAINER and BUILDING metaphors can be freely mixed by virtue of the correspondence.

These points are *central* to our argument and provide the *foundation* for all that is to come.

We can *undermine* the argument by showing that the *central* points in it are weak.

The most important ideas, *upon* which everything else rests, are at the *core* of the argument.

The correspondence here is based on the shared entailment:

AN ARGUMENT IS A BUILDING.

A building has a deepest part.

Therefore, AN ARGUMENT HAS A DEEPEST PART.

AN ARGUMENT IS A CONTAINER.

A container has a deepest part.

Therefore, AN ARGUMENT HAS A DEEPEST PART.

Since depth characterizes basicness for both metaphors, the deepest part is the most basic part. The concept MOST BASIC PART therefore falls into the overlap of the two metaphors and is neutral between them.

Since the purpose of an argument is to provide understanding, it is not surprising that the metaphor UNDERSTANDING IS SEEING should overlap with the various ARGUMENT metaphors. When you travel, you see more as you go along. This carries over to the metaphor AN ARGUMENT IS A JOURNEY. As you go along through the argument, you see more—and, since UNDERSTANDING IS SEEING, you understand more. This accounts for expressions like:

We have just *observed* that Aquinas used certain Platonic notions.

Having come this far, we can now see how Hegel went wrong.

Because a journey may have a guide who points out things of interest along the way, we also get expressions like:

We will now *show* that Green misinterpreted Kant's account of will.

Notice that X does not follow from Y without added assumptions.

We ought to *point out* that no such proof has yet been found.

In these cases, the author is the guide who takes us through the argument.

Part of the JOURNEY metaphor involves going deeply into a subject. The UNDERSTANDING IS SEEING metaphor applies in this case too. In an argument the superficial points (those on the surface) are obvious; they are easy to see, easy to understand. But the deeper points are not obvious. It requires effort—digging—to reveal them so that we can see them. As we go more deeply into an issue, we reveal more,

which allows us to see more, that is, to understand more. This accounts for expressions like:

Dig further into his argument and you will discover a great deal.

We can see this only if we delve deeply into the issues.

Shallow arguments are practically worthless, since they don't show us very much.

The UNDERSTANDING IS SEEING metaphor also overlaps with the BUILDING metaphor, where what is seen is the structure (shape, form, outline, etc.) of the argument:

We can now see the outline of the argument.

If we look carefully at the structure of the argument...

Finally, the UNDERSTANDING IS SEEING metaphor overlaps with the CONTAINER metaphor, where what we see is the content (through the surface of the container), as in:

That is a remarkably transparent argument.

I didn't see that point in your argument.

Since your argument isn't very clear, I can't see what you're getting at.

Your argument has no content at all—I can see right through it.

Another cross-metaphorical coherence appears in discussing the quality of an argument. Many of the aspects of an argument that are focused on by the various ARGUMENT metaphors can be quantified—for example, content, clarity, strength, directness, and obviousness. The MORE IS BETTER metaphor overlaps with all of the ARGUMENT metaphors and allows us to view quality in terms of quantity. Thus we have examples like the following:

That's not much of an argument.

Your argument doesn't have any content.

It's not a very good argument, since it covers hardly any ground at all.

This argument won't do—it's just not clear enough.

Your argument is too weak to support your claims.

The argument is *too roundabout*—no one will be able to follow it.

Your argument doesn't cover the subject matter in *enough depth*.

All of these assess quality in terms of quantity.

We have by no means exhausted all the cross-metaphorical coherences involving ARGUMENT metaphors. Consider, for example, the extensive network of coherences based on the ARGUMENT IS WAR metaphor. Here it is possible to win or lose, to attack and defend, to plan and pursue a strategy, etc. Here arguments may be fortresses via the BUILDING metaphor, so that we can launch an attack on an argument, knock holes in it, tear it down and destroy it. Arguments may also be missiles, via the CONTAINER metaphor. Thus we can offer the challenge "Shoot!" and the argument in reply may be right on target and hit the mark. In defense you can try to shoot down your opponent's argument.

By now it should be clear that the same kinds of coherence found in simple examples also occur in far more complex cases of the sort we have just examined. What may at first appear to be random, isolated metaphorical expressions—for example, *cover those points, buttress your argument, get to the core, dig deeper, attack a position, and shoot down*—turn out to be not random at all. Rather, they are part of whole metaphorical systems that together serve the complex purpose of characterizing the concept of an argument in all of its aspects, as we conceive them. Though such metaphors do not provide us with a single consistent concrete image, they are nonetheless coherent and do fit together when there are overlapping entailments, though not otherwise. The metaphors come out of our clearly delineated and concrete experiences and allow us to construct highly abstract and elaborate concepts, like that of an argument.