CHAPTER ONE

A Glimpse of the Material

THE ABUNDANCE OF VISUAL IMAGERY IN AMERICAN SIGN LANGUAGE

Imagine that you are taking part in a conversation using American Sign Language (ASL), the language of the American Deaf community.¹ You are about to see an integration of visual imagery with linguistic structure on a scale that no spoken language can equal.

The signer is telling you about her kitchen. She sketches the four walls in space, then quickly identifies the appliances and furnishings. As she names each one – refrigerator, sink, cabinets, and so on – she places it within the sketched outline of the kitchen, punctuating each placement with a special head nod. Before long, a virtual map of the room floats in the space between you.

Now the signer is describing a conversation she had with her six-yearold son. She names her son and points to a spot on her right. Her body shifts to face rightward and her signing angles down toward where a sixyear-old's face and body would be, as she reports how she asked her son to get her a towel; then her body shifts to face upward to the left as she gives his assent. The relative heights and locations of the signer and her son are clear to your mind's eye.

The woman goes on to describe how her son ran about the house to find the towel. Her index finger is extended upward from her fist, and she traces a complex path through the air with that handshape. The

¹ I follow the usual convention of using *Deaf* as a cultural label and *deaf* as an audiological label; that is, *Deaf* people participate in the community and culture of Deafness (which has its own folklore, customs, and language; cf. Lane et al. 1996), whereas *deaf* people are those with a severe hearing loss, regardless of whether they participate in mainstream or Deaf culture.

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twists and turns of her hand sketch out for you the path her son took around the house: rapid and somewhat random.

Later, she is explaining to you how hard it can be to get the child to understand what she wants. Once again she uses the straight index-finger handshape; it moves from her temple toward her son's "spot" on her right, hits the palm of her other hand, and bounces off. (An English speaker might have said, "I can't get through to him.") Eventually, the son understands; now the finger moves from temple to hand and penetrates between the index and middle fingers. You can see the woman's thoughts metaphorically portrayed as objects traveling from her head to her son through a barrier.

All of these features of the conversation are perfectly normal, conventional features of ASL. They are not mime or playacting; you will find each one in standard ASL textbooks and dictionaries. But like mime, they contain vivid visual representations of physical forms. These signs and grammatical features bear a striking resemblance to the things they represent: they are *iconic* forms. (The fourth example is more complex; as we shall see, it is metaphorical as well as iconic, a fact with interesting implications.) This book investigates the impressive variety of iconic and metaphorical forms in signed languages, compares them to their tamer counterparts in spoken languages, and explores the implications for linguistic theory.

THE SIGN IS NOT ALWAYS ARBITRARY

Why should we care about iconic and metaphorical types of signing – other than their intrinsic beauty, of course? One answer is because they tell us a great deal about the nature of language itself.

For a long time, the doctrine of the "arbitrariness of the sign," attributed to de Saussure (1983 [1915]), has held sway in linguistics. A *lack* of connection between a word's form and its meaning has been seen as the highest property of language, the thing that raises humans above beasts. Any creature, this reasoning goes, could imitate a dog's bark and use that sound to mean *dog*; any creature can growl when angry and yip when frightened; humans alone have detached these sounds from immediate, intuitive associations and fashioned an elegant system of symbols from them. These symbolic forms, no longer restricted by the need to physically resemble their referents, are what allow us to talk about everything from amnesia to ethics.

According to this view, iconic forms are limited to playacting, imitations, and the rare onomatopoeic word, and their meanings can never be sophisticated or abstract in any way. As Liddell (1992) noted, and as we

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shall see in the next sections, this view is completely mistaken. Unfortunately, the intense prejudice against iconic forms led to prejudice against signed languages. People claimed for many years (some still do) on the basis of the iconic aspects of signed languages that they were merely mime, playacting, imitations – not true languages at all, and incapable of expressing abstract concepts (e.g., Greene 1975, cited in Lane 1992). This is wholly untrue, as linguists from Stokoe (1960) onward have shown. Nevertheless, part of the enterprise of proving ASL to be a language has focused on minimizing and discounting its iconicity to make it seem more like "true" languages – that is, supposedly arbitrary spoken languages (e.g., Hoemann 1975, Klima & Bellugi 1979; cf. McDonald 1982).

This enterprise, though understandable, is misguided. The relative scarceness of iconicity in spoken language is not a virtue - it is merely a consequence of the fact that most phenomena do not have a characteristic noise to be used in motivating a linguistic form (cf. Armstrong 1983, Stokoe 1986, Liddell 1992). In particular, three-dimensional spatial relationships, so crucial to language in many ways (e.g., Johnson 1987; Lakoff 1987; Langacker 1987; Regier 1996; Talmy 1985a, 1985b) cannot be represented iconically using the one-dimensional sequential medium of sound.² Even so, researchers are now finding (Haiman 1985a; Hinton, Nichols, & Ohala 1994) that iconicity is common enough to be of serious interest in the spoken languages of the world; if sound were not so limited in what it can iconically represent, they would no doubt have even more iconicity. Signed languages, created in space with the signer's body and perceived visually, have incredible potential for iconic expression of a broad range of basic conceptual structures (e.g., shapes, movements, locations, human actions), and this potential is fully realized.

METAPHOR LETS ICONIC SIGNS HAVE ABSTRACT MEANINGS

An exciting development in signed language research is the emerging recognition (e.g., Brennan 1990; Grushkin 1998; Holtemann 1990; Moy 1988; Taub 1997, 1998; Wilbur 1987; Wilcox 1993, 2000) of signs that combine metaphor and iconicity. *Conceptual metaphor* is the consistent use of one basic conceptual area to describe another, perhaps less self-evident area. For example, English consistently uses language about

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² We can speculate on what spoken language might be like if, like dolphins, we had highly developed abilities to localize objects in space using sound, and if we could create sound patterns that appeared to be coming from specific locations. In such a species, soundbased language might be highly iconic in unexpected ways.

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throwing and catching objects to describe communication of ideas (e.g., "I couldn't catch what you said"; "We were tossing ideas back and forth"; "It went over my head").

It has been argued (e.g., Lakoff 1992, Lakoff & Johnson 1980, Lakoff & Turner 1989) that these patterns of metaphorical language reflect how we think about abstract concepts: Because we have no direct sensory contact with ideas and their communication, we reason and talk about them on the basis of what we know about throwing and catching objects – a directly perceived activity that is easily accessible to other people. It is easy to believe that we share knowledge, and can thus share language, about an event like catching a ball, but it is harder to develop similar shared terminology about a communicated and understood idea. Because the two activities are analogous in certain ways, it makes sense that the concrete one is used to talk about the nonphysical one.

A great many ASL signs for abstract concepts – emotions, ideas, personal interactions, and so on – incorporate a visual image of a concrete thing or activity. For example, the signs described in the introduction to this chapter, roughly glossed as THINK–BOUNCE and THINK–PENETRATE (see Figs. 6.1 and 6.5), give a visual depiction of communication as objects moving from one person to another.³ Anger can be shown as fire in the abdomen or as explosions; affection can be shown as closeness of articulators; authority can be shown as height, to name only a few other examples.

Not only do these signs demonstrate that metaphor exists in ASL, but they also shed light on the innumerable twists and turns and connections within the ASL user's conceptual system. A vast array of concepts are linked by metaphor to concrete concepts; a great deal of meaning can therefore be expressed by visual images of concrete objects and actions. Metaphorical signs can be taken as evidence for conceptual connections between pairs of domains of thought.

Though certain choices of English words for ASL signs have become fairly conventional, there is no standard "glossing dictionary" for ASL; thus, it can be difficult to recognize a sign from its gloss. Moreover, the semantic match between the gloss and the sign can be quite poor. For this reason, for all my crucial examples (and wherever else space permits) I have presented a photographic illustration and a semantic description of the sign along with the gloss.

³ There is no standard writing system for ASL, and the proposed writing systems use various combinations of symbols that are not part of the regular alphanumeric set. For convenience in writing, and to keep articles on signed languages accessible to the nonspecialist, many sign linguists use *glosses* to represent signs. The convention is to choose a word of the relevant spoken language to represent the sign in question; the word should have roughly the same meaning as the sign. Glosses are written in capital letters; various additional diacritics have been developed to handle grammatical features of the signed language. The conventions used in this text are outlined in Appendix 1.

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CONCEPTUAL MAPPINGS EXPLAIN ICONICITY AND METAPHOR

Recent years have brought a groundswell of interest in and research on iconicity and metaphor. This book unifies these developments with an approach based on *conceptual mappings*: sets of correspondences between domains of thought and linguistic forms. Each domain or form has some structure (e.g., scenario, participants, shapes, movements), and we can link parts of the structure of one domain to the structure of another. For example, one of ASL's iconic mappings is shown in Figure 3.3: A pair of fingers iconically represents a pair of human legs. The fingers have a structure consisting of two long, thin objects connected at the top; the same is true for the legs. The mapping between the two images links the left finger with the left leg, the right finger with the right leg, and the connection at the hand with the connection at the hips.

For a metaphorical example (given in detail in Chapter Six), consider again the communication examples mentioned above. These examples show us precisely how the domains of *communicating ideas* and *throwing objects* are linked for English speakers: The *idea* corresponds to the *object*; *telling* or *explaining* the idea corresponds to *throwing* the object to someone; and *understanding* the idea corresponds to *catching* the object. Once again, relevant pieces of one domain are "mapped" (to borrow a term from mathematics) onto relevant pieces of the other domain.

These mappings are not random; we do not, for example, map the right fingertip onto the left knee joint or map the process of explaining onto the tossed object. Instead, the mappings used in iconicity and metaphor preserve the part/whole structure of each domain or form. Thus, in iconicity, the parts of the referent are represented by analogous parts of the linguistic form; and in metaphor, on the whole, participants are mapped to participants, relationships are mapped to relationships, and processes are mapped to processes.

As we shall see, mappings give a precise and pithy explanation of how iconic linguistic items can exist and why linguistic metaphors come in groups with consistent patterns. The most popular current linguistic theories, however, have no room to accommodate conceptual mapping in language.

MAPPINGS AND LINGUISTIC THEORY

The most widely accepted linguistic theories are *formalist*, as opposed to *cognitivist* (see also Chapter Two): They treat language as a set of arbitrary symbols that are manipulated according to rules or constraints, arranged in allowable patterns, and assigned meaning by some interpre-

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tation mechanism. These theories usually divide language up into a number of components such as the *lexicon* or word list, the *phonology* or acceptable physical forms, the *syntax* or rules for arranging words in acceptable orders, and the *semantics* or rules for assigning meaning to sentences. Components are seen as *autonomous*; that is, rules for one component do not affect any of the others.

Such a model has no mechanism whereby the semantic component can influence the physical forms of language. It is thus not capable of handling the intimate form-meaning connection in iconic words, signs, and grammatical inflections, nor can it handle other forms of motivation such as metaphor. Cognitivist models of language, on the other hand, are particularly apt for describing networks of conceptual connections and their influence on linguistic forms.

Because iconicity and metaphor pervade signed languages and are not rare in spoken languages, I argue (Chapter Eleven) that an accurate theory of language requires a cognitivist approach or, at the very least, some type of approach that can handle conceptual structure and its impact on language.

A PREVIEW OF THE BOOK

The rest of this book illustrates and expands on the themes that I have brought up here. Chapter Two gives an introduction to the issue of motivation in language and provides some background material on cognitive linguistics. Chapter Three goes in detail through a few examples of linguistic iconicity and outlines the progress of thought on how iconicity functions in ASL. In Chapter Four, I present a theoretical treatment of iconicity, the Analogue-Building Model. Finally, Chapter Five provides a comprehensive survey of types of iconicity in signed and spoken languages.

In Chapter Six, we begin to discuss metaphor. There I give examples of ASL metaphors (and English ones, for comparison) and show how to describe them using mappings; we will see how metaphor and iconicity are linked in signed languages. Chapter Seven demonstrates how different aspects of a single sign can be motivated by different metaphorical and iconic mappings. Chapter Eight looks at four ASL metaphors that all draw on a single concrete domain: the vertical scale. In Chapter Nine, I show how metaphor and iconicity are intertwined with the grammar of ASL, and in particular, ASL's spatial system of verb agreement.

Chapter Ten applies the insights of the previous chapters to an ASL text: "The Treasure," a poem by Ella Mae Lentz. We will see how the poet blends several conventional metaphors involving the vertical scale

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to produce a novel and powerful framing of the struggle to get ASL recognized as a true language.

Finally, the last chapter outlines the implications of this line of inquiry for linguistic theory. Chapter Eleven suggests that metaphor and iconicity account for the remarkable degree of shared grammatical structures in the world's signed languages. Given the omnipresence of metaphor and iconicity in signed languages, and their substantial presence in spoken languages, there is no doubt that linguistic theories must be able to handle them. Theories that cannot accommodate these processes will not be successful in explaining and describing the human language capacity.

CHAPTER TWO

Motivation and Linguistic Theory

ARBITRARY, PREDICTABLE ... OR MOTIVATED?

Let us look at the impact that metaphor and iconicity have on linguistic theory.

As we have seen, iconic linguistic items are related to their meanings through physical resemblance. We should note, however, that there are many different possible iconic representations of a single visual or auditory image; for example, one could represent different parts of the image, use different scales or perspectives, or preserve different levels of detail. As Klima and Bellugi (1979) observed, the signs meaning *tree* in ASL, Danish Sign Language, and Chinese Sign Language are all equally iconic but different in form: in ASL TREE (see Fig. 3.1), the hands and forearms are positioned to resemble a tree growing out of the ground; the Danish equivalent uses the hands to trace the outline of a tree's branches and trunk, top to bottom; and the Chinese sign meaning *tree* uses two curved hands to trace the outline of a tree trunk, from the ground up.

Clearly, the meaning *tree* and the associated visual image do not *determine* the signs' forms, as they are all different – but neither are the forms unrelated to the meaning. Instead, the forms all bear different types of physical resemblance to the image of a tree. The nature of these forms, given their meaning, is neither arbitrary nor predictable but rather *motivated*.¹

¹ ASL does have a system for iconic "representative elements," which are discussed later in detail: the classifier system (see Chapters Three and Five). Within that system, the choice of element for a particular referent and perspective (e.g., a V handshape for a "two-legged" human) is completely determined (that is, signers have a fixed set of choices within that system). My point here is that the system itself is motivated but not determined by the actual shapes of the referents.

MOTIVATION AND LINGUISTIC THEORY

In using the term *motivation*, I intend that two conditions be met: that one can observe a *tendency* rather than a strict rule, and that one can attribute the tendency to some *reason* external to the linguistic system. If there is no general tendency, only a single example, then any number of stories could be told about that example – it could easily be due to chance or to some unusual and idiosyncratic circumstances that would not shed light on other linguistic phenomena; scientific linguists would not wish to base their theories on these cases. But once a pattern exists, one can certainly look for common factors that might cause the pattern: In my data, these might consist of conceptual metaphors, iconicity or physical resemblance, conceptual associations, and so on.

It is actually quite common for linguistic phenomena to be motivated rather than strictly predictable. Spoken language has less iconicity than signed language, but it exhibits many other kinds of motivation in its patterns of form and meaning. For example, individual word roots are usually not iconic (e.g., there is nothing about the form dog to motivate its connection to the meaning "dog"), but their extensions to new meanings, on the whole, are motivated by natural human processes of conceptual association. To continue the example, once the form *dog* has taken on the meaning "dog," there are perfectly good reasons why it is extended to uses like *dogged persistence*: We believe that dogs are patient and persistent, and it is natural and common to use a creature's name to describe an associated characteristic. Nevertheless, we could not have said with certainty that any term meaning "dog" would take on that new meaning. The original form-meaning connection is arbitrary, but the extension to a new meaning is motivated.

As a second example, consider the English word *back*. The original meaning (ca. 1000 A.D.) was "the outer surface of a vertebrate that is nearest to the spine." After a few hundred years, the word began developing meanings such as "the area behind a person or object," prepositional uses such as *in back of the house*, adverbial uses meaning such things as "returning along the same path previously traveled," and verbal uses such as *to back up*. It even came to refer to earlier times, as in *We can't go back to 1900 and change what was done*. All of these extended meanings are motivated. There are good reasons for each extension: The spinal area of a human being is *behind* that person and thus associated with the area behind that person and with the path that the person has traveled to reach a current location; there is a common metaphor where the past is referred to as being behind us. Moreover, English (and other languages) uses these same kinds of extension over and over (cf. *side, front, head*).

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It should be noted that de Saussure (1983 [1915]) used the word *motivation* in a slightly different sense. In all the cases mentioned above, the motivating factor is external to the linguistic system; de Saussure, on the other hand, noted that at times the linguistic system itself can provide powerful motivation for the formation of new items. For example, if a new count noun *brin* were coined, the plural of this noun, *brins*, would be built on the model of myriad other English plurals such as *tins*, *fins*, and *pens*. The existence of a regular pattern for combining morphemes motivates the creation of new meaningful items based on that pattern. This type of motivation is also called *analogy*. Language-internal analogical motivation is a cognitive process that most likely can be shown to emerge from interconnections in neural network structures (cf. Elman et al. 1997); nevertheless, it is not the focus of our discussion. This book will continue to use *motivation* to refer to language-external forces that can influence the nature of linguistic items.

As can be seen, spoken languages are highly motivated. Signed languages use the same kinds of conceptual motivations that spoken languages do – for example, association and metaphor. The main difference is that in addition, many or most basic word roots and inflections are iconically motivated.

THE GOALS OF LINGUISTIC THEORY

If these processes are not completely predictable, should a linguist even be bothering with them? Shouldn't linguists restrict themselves to describing the predictable, rule-governed parts of language? As will be shown, there is a difference of opinion on this matter.

Language and human communication is such a complex area that it is hard to know how to begin studying it. Language is deeply interwoven with our experiences of the world: Our social interactions, our cultural institutions, even our thoughts, are often framed and mediated by language. The structure of language is not easy to discern; there are patterns at many levels, and the boundaries between levels are not clear. In a sea of complex interacting phenomena, where can a scientific inquiry start?

Chomsky (e.g., 1957, 1965, 1981) pioneered an approach to this problem that has dominated the field ever since. The proper area of a linguist's inquiry, he said, is the language user's knowledge of the structures of his or her language. This knowledge consists of a grammar of the language, and the grammar can be modeled as if it were a system of exceptionless rules. Language is to be treated as completely separate from other human cognitive abilities; no factors from outside the linguistic