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0521816203 - Grammar, Gesture, and Meaning in American Sign Language

Scott K. Liddell

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Grammar, Gesture, and Meaning in American Sign Language

In sign languages of the Deaf, now recognized as fully legitimate human languages, some signs can meaningfully point toward things or can be meaningfully placed in the space ahead of the signer. Such spatial uses of signs are an obligatory part of fluent grammatical signing. There is no parallel for this in vocally produced languages. This book focuses on American Sign Language to examine the grammatical and conceptual significance of these signs. It guides the reader through the various types of directional signs, the types of spatial representations signs are directed toward, how such spatial conceptions can be represented in mental space theory, and the conceptual purposes served by these signs. The book explains how the pointing behavior of signs accomplishes functions that must be accomplished by any language, spoken or signed. It demonstrates a remarkable integration of grammar and gesture in the service of constructing meaning. These results also suggest that our concept of "language" has been much too narrow and that a more comprehensive look at vocally produced languages will reveal the same integration of gestural, gradient, and symbolic elements.

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To Elaine and Claude

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Preface

The recognition that sign languages are real human languages was a watershed event with potentially profound effects, not only in the daily lives of Deaf people, but on an entire set of disciplines related to language and cognition. When William Stokoe (1960) made the original arguments proposing that American Sign Language (ASL) was a real human language, he based his arguments on finding parallels between the abstract grammatical structures of ASL and the types of abstract grammatical structures found in spoken languages. In the four decades since that discovery, sign languages have been analyzed in countries throughout the world. The analyses of ASL and other sign languages demonstrate that sign languages are an incredibly fertile field for research, with potentially far-reaching implications.

There is, however, one major difference between sign languages and vocally produced languages. ASL and all other sign languages I am aware of include significant numbers of signs that can be meaningfully placed or directed in space. One instance of such a directional sign may differ from the next instance of 'the same' sign depending on how the sign is directed or placed in the space ahead of the signer. For example, the verb TELL begins with the index finger in contact with the chin. If the finger moves outward toward the addressee, the verb expresses the meaning 'tell you'. If it moves outward toward a female (non-addressee) present in the room, it expresses the meaning 'tell her'. No one disputes the meaningfulness of this type of directionality.

In the mid-1980s I attempted to write a book chapter describing directional signs in ASL. At that time there were several treatments of spatial phenomena in ASL and I imagined that it would be possible to draw upon these published resources in describing how signs are directed and placed in space. I was unable to write the chapter because, as it turned out, virtually all analyses of how signs are directed in space were based on faulty representations of the sign language data. Specifically, analyses starting in the seventies until the present assume that signers associate entities with a location in space, called a *spatial index* or a *spatial locus*. They further assume that directional signs are subsequently directed toward that spatial index to make reference to the entity associated with it. The assumption that directional signs are physically directed in this way,

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however, is demonstrably false (Liddell 1990). But this assumption served, and continues to serve, as the basis for theoretical analyses of ASL grammar and the grammars of other sign languages. As a result, we do not have grammatical explanations for how directional signs are really used in sign languages.

The fact that directional verbs can be directed toward entities, including physically present people, presents an analytical problem not faced in the analysis of a vocally produced language because the tongue does not meaningfully point at things in the environment as it participates in articulating words. But meaningfully placing or directing the hands in space is a normal and expected part of the everyday use of ASL and other sign languages. The problem, therefore, is to attempt to understand this rule-governed integration of grammar and gesture present in, apparently, all sign languages. One could hardly ask for a more interesting challenge. My attempts to understand directional signs have occupied most of the past fifteen years of my work.

Since meaningful pointing by vocal articulators would not be regarded as part of the spoken language signal, linguistic theory has not developed the mechanisms for dealing with the ASL data. In fact, linguistic theory has developed in ways that are antithetical to the presence of a pointing articulator. For example, consider the popular belief among most linguists that all meaning comes from morphemes, defined as the smallest meaningful symbolic parts of a word. Although pointing is clearly meaningful, it does not lend itself to a morphemic analysis because pointing is indexical, not symbolic. Its significance depends on what the pointing is directed toward.

Further, the direction of a pointing sign is not limited to a predetermined set of possible pointing directions. Since the hand can point in an unlimited number of directions, the range of pointing movements is gradient. Gradient is a problem because the field of linguistics generally defines language so as to exclude not only meaningful gestures but also to exclude meaningful gradient aspects of the speech signal. Compare, for example, the two instances of *long* in (1) and (2).

- (1) That was a long speech.
- (2) That was a loooong speech!

Both (1) and (2) contain an instance of the word *long*. The form of *long* in (2) is produced with a lengthened vowel, represented by the repeated *o*'s. This appears to add an emotional meaning: *I experienced the duration of that speech as long*. The articulation of *long* in (1) and the articulation of *loooong* in (2) can be expected to differ not only in vowel length, but also in pitch as well as loudness and potentially other vocal qualities. These aspects of the production of the word *long* are gradient (Okrent 2002). That is, the difference between the two articulations goes beyond lengthened versus not lengthened. There are gradient differences in length and loudness, and different possible vocal contours and

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vocal qualities that a speaker might employ. A typical analysis of the grammar of the predicate nominal in (2) would observe that *a* functions as a determiner, *long* functions as an adjective, and that *a long speech* constitutes a noun phrase. A typical syntactic analysis of this example would say nothing at all about the intonation.

Intonation can be narrowly defined to refer simply to the rises and falls of the pitch of the voice as a sentence is being produced (Bolinger 1986, Schubiger, n.d., Crystal 1991). It can also be defined more broadly, to include suprasegmental features that include tone, pitch-range and loudness, and possibly rhythmicity and tempo (Crystal 1969, Ladd 1996). Whether intonation should be granted “linguistic” status or not has been the subject of debate for decades. Given its meaningfulness, one might expect that when grammarians analyze English, intonation would play a role in the analysis. However, as a rule, the analysis of grammatical representations in English proceeds without regard to intonation. Intonation is not even transcribed as a normal part of the analysis of the grammatical structure of a sentence. This can be taken as evidence that linguists studying morphology or syntax do not consider intonation to be part of the grammatical structures being analyzed.

Linguists are very concerned with describing the features that distinguish one word from another. In tone languages such as Mandarin or Thai, tone contours distinguish one word from another. In these languages tone is given linguistic status. In such languages, multiple words can be formed from ‘the same’ sequence of consonants and vowels. Such words are nevertheless distinct words with their own meanings and with distinct pronunciations. The different words can be distinguished from one another based on each word’s tone or tones. Similarly, in some languages, the length of vowels can also distinguish one word from another. Thai makes both distinctions. Since vowel length and tone distinguish one word from another in Thai, they are considered to be part of the words themselves. Since tone and vowel length are part of Thai words, the grammar of Thai must include both tone and vowel length, both of which must be considered “linguistic.”

In general, linguists are not as concerned with features distinguishing one *utterance* from another. There is a joke about a linguistics professor explaining to his class that in some languages two negatives can make a positive, as in “He is not unhappy.” The professor then adds that there are no known languages in which two positives can produce a negative. A voice from the back of the class is then heard to say, “Yeah, right!” The joke works because English speakers can easily imagine producing “Yeah, right!” with an intonation that results in an expression of disagreement with what has just been said. If linguists applied the same strict criteria to distinguishing one utterance from another that they apply to distinguishing one word from another, there would be no debate about whether intonation, meaningful gestures, or other gradient phenomena would

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have to be incorporated into an analysis of the meaning being expressed. While linguists analyzing vocally produced languages have been able to ignore both gesture and gradient aspects of the language signal, this cannot be done with ASL. This is because obligatory, gradient, and gestural phenomena in ASL play such a prominent, meaningful role that they cannot be ignored.

In analyzing directional signs in ASL, it was necessary to come to grips with the issue of whether pointing should be considered a legitimate part of the language signal. Additional theoretical issues must be confronted in coming to an understanding of space in sign languages. It is not sufficient merely to describe what the hand, arms, face, and eyes do when signers sign. That is, it is not very helpful merely to note that a signer directs the hand producing a verb toward the empty space to her left while simultaneously gazing in that direction. It is also important to be able to address the conceptual structures that provide the framework for such directional signing. Recent advances in cognitive linguistics have been essential to making progress in this area. Mental space theory has emerged and undergone considerable growth and development during the past two decades (Fauconnier 1985, 1997; Fauconnier and Turner 1996; Turner 1991). In particular, developments in the blending of mental spaces has proved essential in making progress in understanding the conceptual underpinnings of the ASL spatial data. Cognitive grammar (Langacker 1987, 1991, 1999b) has also come into existence and developed during the same time period. Although developed to account for vocal language phenomena, mental space theory and cognitive grammar provide the conceptual elements necessary for understanding directional signs in ASL. These two theories developed independently and each treats different aspects of meaning. The sign language data have caused me to conceive of meaning construction as a process involving mental space mappings of the type proposed in mental space theory built around a central core of grammatically encoded meanings of the type found in cognitive grammar.

The analyses in this book treat directional uses of signs as gradient and gestural phenomena driven by grammar and by meaning construction. Attempting to characterize the use of space in ASL involves an integration of grammar, gesture, and gradient in the process of constructing meaning by means of mental space mappings. The resulting interconnected conceptual structures are the means that ASL, and perhaps spoken languages more generally, use to communicate.

My initial intention in writing this book was to begin with a comprehensive review of existing morphemic treatments of spatial phenomena. It seemed important to describe the problems with existing proposals fully before presenting my own work. By the middle of 2000 I had written chapters consisting of more than one hundred and fifty pages reviewing that work. At that time I discussed my plans for the book with Brita Bergman. She convinced me that it would be very tedious for a potential reader to wade through such an extensive review of

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existing work – especially since the point of the arguments is to demonstrate that the analyses do not successfully account for how signers sign. Based on that conversation I discarded the extensive reviews and restructured the book. As a result, this book presents a new way of looking at ASL and its grammar with only minimal reference to and criticism of previous work. My reviews and criticisms of previous approaches date back to 1988, and readers interested in reading that work can find published reviews of much of it in Liddell (1990, 1994, 1995, 2000a) and Liddell and Metzger (1998). It is my hope that organizing the book in this way will allow the reader to proceed through the new material with relatively few interruptions.

Readers already familiar with American Sign Language and its grammar may skip chapters 1 and 2, and begin reading with chapter 3. Such readers may still find chapter 2 useful as a reference in cases where my treatment of grammatical issues in subsequent chapters differs from currently accepted views. Readers unfamiliar with the grammar of a sign language should not skip chapters 1 and 2. The information in those chapters provides the grammatical background needed to understand subsequent chapters. The treatment of ASL grammar in chapter 2 is purposely extensive since I do not want readers of chapters 3 through 10 to come away with the mistaken view that it is gesture, rather than grammar that is responsible for expressing meaning in ASL. Those chapters attempt to demonstrate that, in ASL, meaning is expressed through the interaction of grammar, gradience, and gesture.

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of several months as I was working through those issues. My thanks also go to Gilles Fauconnier for a number of useful discussions of mental space theory over the past few years.

Finally, I give special thanks to Brita Bergman, who not only initially convinced me to restructure the book, but also made other suggestions that helped me reorganize chapters. She also scrutinized every argument and figure and challenged any analysis needing support. Her insights and her clear thinking have had a very large impact on this book.