# Does Spatial Make It Special? On the Grammar of Pointing Signs in American Sign Language

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#### 18.1 Introduction

Pointing is a ubiquitous human communicative behavior. Pointing gestures are a fundamental part of the inventory of nonlinguistic gestures. They accompany spoken language and pick out referents from the physical environment in which a conversation is taking place. They appear early in child development: by their first birthday, children point communicatively. In signed languages, a variety of pointing signs indicate the referents of conversations; those referents can be physically present at the conversation or they can be tied to empty spatial loci that are established for purposes of anaphoric reference (Friedman 1975; Bellugi and Klima 1982). What are these pointing signs? They include deictic points—that is, signs translated as 'me', 'you', 'him', 'her', and so on—as well as certain verbs that are often said to "agree" with the spatial locations associated with the referents of their arguments; see figure 18.1. Although these verbs generally lack the extended index finger of the familiar pointing gesture, they nonetheless point out the location associated with a referent by orienting toward it or by moving toward it or away from it.

A crucial concern in work on the linguistics of signed languages has been an attempt to identify criteria by which we can determine the status of these pointing signs. Are they properly viewed as linguistic entities? Or are they gestures that have much the same status as the gestures that accompany spoken conversations? This was a problem in 1991 when David Perlmutter reviewed Oliver Sacks's (1990) Seeing Voices in the New York Review of Books. Sacks had taken the extensive use of space in pointing signs (notably the verb LOOK-AT) as an indication that sign languages were "new" and "miraculous"—radically different from spoken languages. Perlmutter brought the discussion back down to earth and asked for linguistic evidence bearing on the status of pointing signs. He noted that, on first exposure, one tends to see these pointing signs as being nonlinguistic gestures. After considering evidence from a group of pointing signs—specifically, ASL's system of pronouns—he

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IX(I/me)



IX(you)

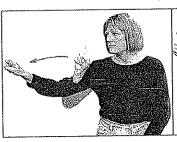


IX(Mary) 'she' (present referent)



IX(right) 'she/he' (non-present referent)

# **ASL Personal Pronouns**



1-ASK-a 'I ask her'



a-ASK-b 'She asks him'



a-ASK-1 'She asks me'

An ASL Agreeing Verb

Figure 18.1
Examples of pointing signs in ASL

concluded that signed languages were much more like spoken languages than Sacks wanted to claim.

We too worried about the linguistic analysis of pointing signs in papers that we separately published in 1990 (Lillo-Martin and Klima 1990; Meier 1990). The status of these signs remains a problem even today. One issue concerns whether researchers have overattributed linguistic status to forms of pointing in signed languages; Liddell (1990, 1995, 2000) has argued that many pointing signs are at least in part gestural. Another issue has been whether pronominal points in ASL exhibit the range of person distinctions typical of spoken languages (Berenz 2002; Lillo-Martin and Klima 1990; McBurney 2002; Meier 1990).

In this chapter we return to the issue of the status of pointing signs. How do we determine whether they are linguistic or gestural? We take as our point of departure the set of criteria that Perlmutter proposed in 1991. Although his discussion was restricted to pronominal points, we will widen our focus to include those verbs that point. We will also propose additional criteria and will review some new evidence. We will conclude—as we did in 1990—that pointing signs are linguistic entities, although we will also acknowledge the close ties between these signs and nonlinguistic gestures.

# 18.2 Properties of Pronominal Systems

Perlmutter's review noted three properties of pronominal systems in spoken languages that seem—at first glance—not to be true of the pronominal pointing signs of ASL. Those properties are (1) the conventionality of pronominal lexical items, (2) the compositionality of pronouns at the phonological level, and (3) the types of morphosemantic distinctions marked by pronouns. Perlmutter argued that, despite the apparent surface differences between signed and spoken languages, pointing signs are indeed linguistic pronouns. In fact, he concluded that there is nothing linguistically special about pointing signs. As we have mentioned, this conclusion is not uniformly accepted. We begin by discussing Perlmutter's first two criteria for the linguistic status of pointing signs, and we add one of our own. Then we turn to Perlmutter's third criterion, which relates to issues that remain problematic.

### 18.2.1 Conventionality

Perlmutter noted that "in oral languages the relation between a word and its meaning is conventional and generally arbitrary" (p. 67). As his use of the adverb generally suggested, there are exceptions. Onomatopoetic words may not be fully arbitrary, but even they are fully conventional within their language; consequently American roosters greet the morning sun with cockadoodle-doo but early-rising Spanish roosters crow kikiriki. In contrast to the necessarily learned pairings of form and meaning that characterize spoken vocabularies, Perlmutter noted that "the pointing gestures that ASL uses as pronouns may seem to be not arbitrary but direct representations of the meaning; they seem understandable with no previous knowledge of the language" (p. 67). Indeed, the pointing signs used as singular pronouns in ASL are virtually identical in form to the pointing gestures that accompany spoken English.

Conventionality is not the exclusive province of linguistic systems; it is also true of

important classes of gestures. For example, the "Hook-'em-Horns" handshape () that George W. Bush produced when the University of Texas band paraded by his viewing stand at his second inauguration is a conventional part of the communicative behavior of everyone associated with the University of Texas at Austin, and is widely recognized even by rival Aggies fans. But in Norway, this gesture apparently has satanic associations and Norwegian viewers of the inaugural parade were shocked to see Bush produce it (Associated Press, January 21, 2005). The same gestural form has very different meanings in Texas and in Norway. How one points is also conventionalized: in their gesturing, the Cuna Indians of Panama favor lip pointing rather than pointing with an extended index finger (Sherzer 1972). The nascent signed language used by deaf individuals on Providence Island in the western Caribbean also uses extensive lip pointing (Washabaugh 1986).

Our question here is this: To what extent are the pointing signs of ASL conventional in form and meaning? Index-finger points in ASL and in nonlinguistic gesture look very similar; thus, the form of the sign ME may be identical to the nonlinguistic gesture by which a hearing speaker refers to himself or herself (see figure 18.1). The same goes for the signs usually translated as 'you' or 'he/him.' The form of these particular signs provides little evidence for the conventionalization of ASL pointing signs. But what about other pointing signs? We will run through some quick evidence suggesting that many ASL pointing signs are indeed conventional.

In his review, Perlmutter noted that possessive pronouns in ASL are conventional in form. These possessive pronouns point, but they do so with the open palm of a flat

hand that has the fingers together (a B-handshape, ...). The palm is oriented to the signer if he or she is the possessor, to the addressee if that person is the possessor, and so on. Like their nonpossessive counterparts, these pronouns are pointing signs. However, the language's choice of a flat hand as a marker of possession is a learned pairing of form and meaning. Other signed languages have made different choices: in Italian Sign Language (LIS), possessive pronouns are distinguished not by their handshape, but by their movement—specifically, by a rotation of the forearm in the direction of the referent (Radutzky 1992).

We can similarly demonstrate that other ASL pronouns are conventional. ASL has a set of pronouns that incorporate number handshapes. The pronoun THREE-OF-US

FOUR-OF-US incorporates the handshape of the sign FOUR ( ). Likewise, FOUR-OF-US incorporates the handshape of the sign FOUR ( ). These pronouns have a systematic, but conventional, association between their component parts and their respective meanings. Although the sign for THREE-OF-US has three extended fingers, it won't do to choose those fingers arbitrarily. The number handshapes used in these pronouns must be those conventionalized in ASL. The common gesture for 'three' used by hearing people in American culture, with the index, middle, and ring

fingers extended (%), is not part of ASL. Rather, the ASL form—used for the number sign THREE and incorporated into the pronoun THREE-OF-US—specifically requires a handshape with the thumb, index finger, and middle finger extended, and with the ring and little fingers closed to the palm.

Further evidence that ASL pronouns are conventional comes from the dual pronouns glossed as 'the two of us', 'the two of them', and 'the two of you'. These pronouns exhibit a back-and-forth movement between locations associated with their two referents. They also exhibit surprising idiosyncrasies in handshape. Given the facts of signs like THREE-OF-US, we would expect that TWO-OF-US and other dual pronouns would display the same handshape as the ASL number sign TWO

(\$\forall{\cong}\$), specifically, the index and middle fingers extended and spread just as in the usual hearing gesture for 'two'. Instead, the dual pronouns have a K-handshape in which the thumb contacts the first segment of the middle finger. This pairing of form and meaning is conventional. In contrast to the ASL sign, the very similar sign TWO-OF-US in British Sign Language (BSL) does indeed show the extended index and middle fingers of the BSL (and ASL) number sign TWO (Cormier 2007).

As we mentioned earlier, there is also a class of verbs in ASL that have a pointing component. These verbs "point" to their subjects and objects by moving (generally) from a spatial locus associated with the subject, to one associated with the object (Fischer and Gough 1978; Meier 1982; Meir 2002; Padden [1983] 1988). We will discuss these verbs here because they make use of the same spatial locations as pronouns, and therefore similar questions can be raised about them.

Like pronouns such as ME, some verbs that point to the locations of their subjects and objects may seem as if they are "natural" gestures that directly represent their intended meanings and are thus not conventional. The verb GIVE is one such sign:

this flat-O-hand sign ( ) has a handshape that looks much like the handshape that an individual would use in the action of giving a small object to another individual; see figure 18.2. The movement path of the verb starts at a location associated with the subject (the agent) and ends at a location associated with the indirect object (the recipient). Here the fact that the verb agrees with the location of subject and indirect



1-GIVE-a 'I give her'

Figure 18.2 The ASL sign GIVE

object—or, stated differently, the fact that the verb points to those locations—might seem an obvious consequence of mimetic enactment and therefore would seem not to be conventional.<sup>1</sup>

However, other much less transparent verbs also participate in agreement. For example, the ASL sign TO-GIFT is an agreement verb. This verb uses an X handshape

The unexpected handshape identifies this verb as being conventional—the sign does not represent its meaning directly, and we certainly would not expect all sign languages to have a verb of giving with this handshape.

The pointing signs that we have discussed thus far are conventional, but we have not demonstrated that the locations to which those signs point are conventionalized. We know of no evidence that the locations to which the signs glossed as 'you' or 'he' or 'she' point are conventional. However, there are other deictic signs that seem to have their origins in pointing but that no longer point clearly. Thus, signs that were once indexic seem now to be deindexicalized, perhaps as a consequence of becoming conventional. This is particularly true of certain plural pronouns. Frishberg (1975, 710) argues that the ASL sign WE was originally formed from "a series of separate thrusts, sometimes as many as five or six, first pointing at one's own chest, than at three or four other persons (real or imagined) and finally at the chest again." In this older form, the indexicality of the sign was clear. The modern sign WE, however, employs a simple index finger touch on the ipsilateral side of the chest, an arced movement, and a touch to the contralateral side of the chest; see figure 18.3. In the modern sign, indexicality is blurred.

Relatedly, Cormier (2007) has observed frequent deindexicalization of various first-person plural pronouns, both in ASL and in BSL. For example, ASL signs such as THREE-OF-US can indicate the approximate spatial location of the refer-



Figure 18.3 The modern ASL sign WE

ents included with the signer. Thus, if those other individuals are on the signer's left (i.e., the contralateral side to a right-handed signer's dominant hand), then the sign THREE-OF-US may also be articulated on the contralateral side. However, many of the first-person plural signs that Cormier elicited did not show the expected spatial location. Instead, many moved to the center of the chest or to the ipsilateral side (i.e., to the right side for a right-handed signer). If the referents were located on the signer's ipsilateral side, the first-person plural sign would often centralize, but would virtually never move to the signer's contralateral side. Cormier attributed this pattern of results to two factors: articulatory ease and/or the neutralization of number marking in favor of first-person marking at the center of the signer's chest.

Consistent with Perlmutter's discussion in 1991, we have demonstrated that crucial aspects of ASL pointing signs are conventional. The formational contrast between possessive and nonpossessive pronouns, the handshapes in number-incorporating pronouns, the form of agreeing verbs that point to locations associated with their subjects and objects, and the plural pronouns that have lost their indexic character are all the basis for an argument that the system of ASL pronouns and agreeing verbs is conventional. Looking across signed languages reveals further evidence. For example, Japanese and Taiwanese Sign Languages (Japan Sign Language Research Institute 1997; Smith and Ting 1979), as well as the Plains Indian Sign Language that was used by hearing groups as a lingua franca (Farnell 1995), all allow points to the nose as a first-person singular pronoun glossed as 'me.' Evidence such as this is convincing proof of the conventional status of specific signed pronouns. Yet, as we argued at the outset, the conventionalization of pointing signs is not a sufficient argument to demonstrate their linguistic status, inasmuch as many nonlinguistic gestures are also conventional. We turn now to the second criterion that Perlmutter suggested.

#### 18.2.2 Compositionality

Perlmutter's review points out that "sentences, phrases, and words in oral languages are compositional: they consist of smaller units combined in different ways to convey different meanings" (p. 67). He argued that ASL pronouns are compositional, by being formed from "the same types of units of which all signs are composed: movement, handshape, and 'orientation'." In this, he was contending that ASL shows what other scholars have called duality of patterning (Hockett 1960). That is, meaningful linguistic symbols—spoken or signed—are built of meaningless units of form.

Nonlinguistic gestures can also be described in terms of their movement, handshape, and orientation. However, most researchers would agree that a phonological level of description is not required for gestures. That is, they can appropriately be considered unanalyzed wholes that lack internal structure. A gesturer can point with an index finger, an elbow, or a pen, among other possibilities, and still convey the same meaning. Hallmarks of a phonological system, exhibited by signs but not gestures, include a limited inventory of building blocks, as well as constraints on the combination of those building blocks. We will argue that ASL pronouns are compositional, although some may not be fully so.

Let's begin with the first-person pronoun ME; this sign is fully compositional. Like the nonpronominal signs CANDY and BORING, it has an index-finger handshape

( ). Its movement is a path movement to contact; such movements to contact also occur in KNOW (a movement to contact at the forehead) and in the sign MOTHER (a repeated movement to contact at the chin). The place of articulation of the sign ME is likewise one of the locations that may occur in nonpronominal signs; the signs HAPPY, FINE, and SORRY all exhibit this same location on the midline of the upper chest.

The handshapes used in ASL pronouns draw from the same inventory of hand-

shapes used for nonpronominal signs. Just as the index (\*) and B (\*)-handshapes are contrastive in the general vocabulary (e.g., the signs WEEK and NICE differ just in the handshape of the dominant hand—an index hand versus a B-hand, respectively), the contrast between an index handshape and B-handshape distinguishes nonpossessive from possessive pronouns. The contrast between a B-hand and an

A-dot handshape (a fisted handshape with the thumb extended, \(\frac{\frac{1}}{\cdot}\)) distinguishes a possessive from a reflexive pronoun. These handshapes are unexceptional in ASL. Many signs have either a B-hand (DEVELOP or MAJOR, as in a college major) or an A-dot handshape (NOT, HELP). In sum, the three handshapes we have been discussing—the index handshape, the B-hand, and the A-dot handshape are contrastive within the system of ASL pronouns and in the ASL vocabulary generally.

However, non-first-person pronouns are problematic for the claim that ASL pronouns are fully compositional. Deictic pronouns glossed as 'you' or 'him' point to locations that are determined by the locations of their referents in the world. Anaphoric pronouns glossed as 'he' or 'she' point to locations that are established by the signer in the signing space (see Lillo-Martin and Klima 1990 for an analysis). As Liddell (2000) has observed, the set of locations to which these signs point are not listable in the phonology of ASL. Moreover, the locations to which these signs point are not contrastive in the general vocabulary of ASL; lexical signs are not distinguished by being articulated on the left versus the right, but a left-right contrast can make all the difference in determining the reference of a pointing sign.

In sum, consistent with Perlmutter's claim, some ASL pronouns are fully compositional phonologically, and others are at least partly so. But the locations indexed by non-first-person pronouns are particularly problematic for this criterion. To be fully compositional, non-first-person pronouns would need to be built of a finite inventory of sublexical units. To the best of our knowledge, these particular ASL pronouns do not meet this criterion.

# 18.2.3 Grammatically Constrained Distribution of Pronouns

Perlmutter did not mention this, but we think a further set of arguments for the grammatical status of pointing signs comes from their syntactic distribution. We will mention a few examples here, knowing that there are more to call on.

Pronouns adhere to the so-called binding conditions that constrain the interpretation of pronominal elements based on their syntactic positions. For example, in English the pronoun helhim can refer to John in the sentence John thinks that he is intelligent, but not in He thinks that John is intelligent, or in John saw him. Constraints similar in spirit, though different in detail, are found across the world's spoken languages. Observations about such coreference possibilities have been the focus of much work in linguistics, and there has been an extended debate concerning the proper characterization of such facts, and whether they are fundamentally syntactic or semantic.

Without going into any of this argumentation, it suffices to notice that ASL pronouns are likewise constrained (Lillo-Martin 1995; Sandler and Lillo-Martin 2006). If what we call pronouns in ASL were completely nonlinguistic, why would native signers consider it to be ungrammatical to use such a gesture with coreference in one syntactic configuration but not another? One explanation for the distribution of ASL pronouns might assume that pointing gestures in general are restricted in exactly the same way as spoken pronouns. However, they are not. The pointing gestures accompanying speech are not required to change form along with anaphoric versus reflexive pronouns (he versus himself). In fact, in certain contexts a pointing gesture helps a spoken pronoun get around the constraints on the interpretation of

pronouns. For example, speaker A might ask, "Who does John support? Does John support Bill?" Speaker B can reply, while producing a pointing gesture toward John, "No, John supports HIM." The fact that ASL pronouns behave more like spokenlanguage pronouns than like the pointing gestures accompanying speech is more evidence of their linguistic status.

In many other ways, pronouns in ASL behave as grammatical elements, serving as verbal arguments and substituting for full noun phrases as in spoken languages. Padden ([1983] 1988) observed that pronouns can participate in a process she called "subject pronoun copy," by which a pronominal copy of the subject of a sentence appears in sentence-final position. This process can put a pronoun, but not a full noun phrase, in the sentence-final position. Such phenomena clearly indicate that ASL pronouns act as true pronouns, despite their surface similarity to spoken-language gestures.

Related arguments can be made about the pointing behavior of agreeing verbs. As verbs, these pointing signs are clearly grammatically constrained; their distribution is like that of other verbs. Furthermore, in many ways the pointing aspect of these verbs interacts with other aspects of grammar. For example, transitive verbs agree with their subject and direct object, while ditransitive verbs agree with their subject and indirect object. The class of verbs that takes agreement is definable by reference to argument structure (Meir 2002). Verbs with agreement participate in nullargument licensing (Lillo-Martin 1986). And the categorization of verbs as agreeing versus "plain" (i.e., as not showing agreement) relates to syntactic structure in several ways. Here we mention two. First, it has long been noted that ASL verbs marked with agreement show a greater flexibility of word order as compared with nonagreeing verbs (Fischer 1975). Second, verbs in Brazilian Sign Language that are marked with agreement show a different pattern with respect to the placement of negative signs as compared to verbs not marked with agreement (Quadros 1999). In that language, a sign for negation can appear in either the preverbal or the sentence-final position with agreeing verbs. With nonagreeing verbs, however, only the sentence-final position is available. How could such patterns be explained if verb agreement were not a syntactic phenomenon?

Finally, another aspect of pointing in verbs is relevant. In some sign languages, though not ASL, a "dummy" sign is used to indicate agreement, alongside an agreeing verb (in some cases) or a plain verb (in more cases). Such signs are sometimes referred to as auxiliary verbs (Smith 1990; Bos 1994; Quadros 1999) or as "Person Agreement Markers" (Rathmann 2000). Dummy signs can be used to point when a verb cannot, but only in very linguistically constrained ways. For example, only certain verbs may be used with the dummy sign, and its order with respect to the verb is constrained (in different ways in different languages).

All of these observations provide much more support for the claim that—despite appearances—signs that point have full linguistic status, parallel to their spoken-language equivalents.

# 18.2.4 Grammatical Distinctions Marked by Pronouns

Finally, Perlmutter observed that oral-language pronouns mark grammatical distinctions such as person, number, gender, and case, though pronominal systems vary as to which distinctions are made in which languages. As he summarized, some of these grammatical distinctions are also differentiated in ASL. For example, plurals are marked in ASL by adding an arc movement, although ASL is different from English (but not from certain other spoken languages) in that it marks dual as well as singular and plural (and as we noted above, it has number incorporation for several other forms). ASL also distinguishes inclusive and exclusive first-person plural forms, although these may exhibit subtle differences from their spoken-language counterparts (Cormier 2005).

The finding that pointing signs in ASL—and in at least some other sign languages-mark case by distinguishing possessives from nonpossessives is, as noted earlier, indisputable. The same goes for the observation that sign languages mark number in several ways (see Rathmann and Mathur 2002). However, there are complications that arise when we consider the grammatical distinctions marked by pointing signs as compared with spoken-language pronouns. The set of grammatical distinctions marked by pointing signs is not wholly identical to what we find in spoken languages. In contrast to the diversity of pronominal systems in spoken languages (McBurney 2002), sign languages do not seem to mark case other than possessive, although Irit Meir argues that an oblique case-marked pronoun has emerged in Israeli Sign Language (Meir 2003), and that ISL agreeing verbs mark dative case through the direction of facing (Meir 2002). More intriguingly, the "pointing" of verb agreement gives a clear priority to objects (and in particular, indirect objects) over subjects; manual marking of object agreement is obligatory, whereas subject agreement always seems optional (if the verb permits it at all). This last observation has yet to be fully explained.

Most problematic of all is the question of person marking. Perlmutter stated that "orientation of the hand indicates the first, second, or third person" (p. 67), but the system is not quite so straightforward. First person can be identified through the locus of the signer; pointing to one's own chest produces a first-person form. As Meier (1990) argued, the first-person plural forms WE and OUR have no ready morphological analysis by which they can be construed as consisting of a first-person pronoun and a plural marker, nor do these signs indexically indicate who besides the signer is being referred to. Therefore, these idiosyncratic forms constitute strong

arguments for the grammatical marking of first person in ASL. Furthermore, the fact that the first-person singular form exhibits particular properties in so-called role-playing contexts also is an argument for the first-person grammatical distinction (Meier 1990; Lillo-Martin 1995).

However, the status of the distinction between second and third person is much more controversial, as we suggested earlier in this chapter. The movement path of a pointing sign translated into English as 'you' is determined by the addressee's location in space; moreover, the set of locations that may be indicated by a point to the addressee overlaps with the locations that may be indicated by a point that is directed to a nonaddressed participant in a conversation and that would be translated as 'him' or 'her'. This logic suggests that the articulatory cues that show us where a point points—that is, cues such as the precise movement direction, palm orientation, and spatial location—are not fixed linguistically and are instead determined by the location that a referent physically occupies (Meier 1990; Liddell 2000).

This leads to two ways in which sign-language pointing signs are different from spoken-language pronouns or verbs. First, there is a grammatical difference between first and non-first person, but not between second and third person. This analysis has been adopted not only for ASL (Meier 1990), but also for such other signed languages as Taiwanese (Smith 1990) and Danish (Engberg-Pedersen 1993). In contrast, the second- versus third-person distinction is a universal of the pronoun systems of spoken languages (Forchheimer 1953) that has just one apparent counterexample in Qawesqar, an Alacalufan language of Chile (Cysouw 2003). Consequently, the apparent absence of this distinction in sign languages is worthy of note.

Second, although only one non-first-person pronoun is lexically distinguished, the language is clearly capable of differentiating more than just a single non-first-person referent within a conversation. Signers can discuss multiple non-first-person referents by pointing to different locations in space, and because the signer maintains the association between a referent and a location, unambiguous interpretations result.

This latter property of sign languages may constitute one of the reasons for Sacks to claim in his book (following Poizner, Klima, and Bellugi 1987) that sign employs a spatial grammar. Perlmutter questioned this claim at length (p. 69), asking, "What is 'spatial grammar'?" As he showed, Sacks "provides no basis for the claim that sign language grammars are fundamentally different from those of oral languages."

In large part, we agree: the fundamental similarities between sign-language grammars and spoken-language grammars are impressive and important. However, we find the problem of non-first-person pointing signs to be, in fact, evidence of an equally important difference between signed and spoken languages. These signs appear to combine word and gesture within a single form. Non-first-person pointing signs can be compared to speakers simultaneously pointing at a real or imagined referent while they produce a spoken word. One can readily imagine such a situation, as

when a speaker explains—clearly and unambiguously with the aid of gestures—that "I voted for her, not her." The sign-language pronouns themselves do both jobs at once. For this reason, researchers have analyzed the pronouns as making contact with the gestural system, in one way or another (Meier 2002a, 2002b; Lillo-Martin 2002; Rathmann and Mathur 2002; see also Liddell 2000).

#### 18.3 Concluding Remarks

Perlmutter's review concluded that "although Sacks has performed a valuable service in introducing the general reader to the linguistic-cultural view of deafness, much of what he says about ASL is seriously flawed" (p. 72). Not only did Perlmutter discuss properties of ASL pronouns, but he also mentioned a range of other characteristics of ASL grammar, as well as a number of intriguing neurological studies of the basis in the brain for sign language. He took great issue with Sacks's hyperbole in interpreting these findings as evidence that signers—in Sacks's words—use "a new and extraordinarily sophisticated way of representing space." Perlmutter agreed with Sacks that "sign is indeed a miracle," but only insofar as speech is miraculous too.

We agree that what is most fascinating about sign language is what is also fascinating about language in general: the characteristics that we as humans must possess in virtue of the fact that we possess language. But as practicing sign linguists, we think that there is something special about sign language, something that the field of linguistics could not know if sign languages were not part of the data to be explained. Taking seriously both the similarities and the differences between signed and spoken languages will bring us farthest in our exploration of the nature of language. We thank David Perlmutter for his role in teaching us this.

#### Notes

We thank Bernice Hecker, Tracy Chen, and Hyun-Jong Hahm for discussions of issues raised in this chapter. Thanks also go to ASL sign models Doreen Simons-Marques and Brenda Scherz. Thomas Hanke provided the handshape drawings; the figures are copyright Diane Lillo-Martin. Finally we thank an anonymous reviewer for very helpful comments.

1. In its usage, the sign GIVE is not nearly as transparent as its form would suggest. For example, the sign can be used to refer to instances of giving objects of various shapes and sizes, such as apples, bottles, or cows. The handshape by which one would transfer a bottle to another person is not the handshape of the sign.

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# Hypothesis A/Hypothesis B

Linguistic Explorations in Honor of David M. Perlmutter

Donna B. Gerdts, John C. Moore, and Maria Polinsky, editors

The MIT Press Cambridge, Massachusetts London, England

