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1996

**PERSON AND DEIXIS
IN BRAZILIAN SIGN LANGUAGE**

by

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B.S. (University of California, Berkeley) 1982

M.A. (University of California, Berkeley) 1986

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Linguistics

in the

GRADUATE DIVISION

of the

UNIVERSITY OF CALIFORNIA, BERKELEY

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1996

Person and Deixis in Brazilian Sign Language

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by

Norine Frances Berenz

To Kweli, who was there all the time.

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Typographic and Notational Conventions

The typographic conventions employed in the text are these. Besides titles of books, italic type is used for mentions of words and for first use of technical terms (repeated where it seems necessary to improve readability of the text). Bold type indicates that that word in a sequence takes stress. Single quotes are used for glosses and double quotes for quotation or when I am hedging on a use I put a term to. Underlining is intended to call attention to the part of an example specially relevant to the discussion. I have preserved the typographic conventions of the source in quoted material, which therefore may differ from my own. These, I hope, will be interpretable in context.

Following common practice in sign language studies, glosses for signs are presented in upper case letters. However, I use small caps to distinguish sign glosses from the names of sign languages, which may be given as a series of three upper case letters -- ASL (American Sign Language), Brazilian Sign Language (LSB), SSL (Swedish Sign Language), etc. A hyphen is used to connect several words when no single English word renders the meaning of the sign, ex. LSB CAN'T-DO; a plus symbol between two words indicates a compound sign, ex. LSB MALE+SHORT 'boy'. Glosses for fingerspelled LSB loansigns are rendered in Portuguese in small caps with the extension *-fs* and followed by the closest English equivalent in parentheses and single quotes; example, TODOS-*fs* ('all'). Eyegaze direction, where transcribed, is indicated by an overline above the gloss, as are a number of other nonmanual elements which are simultaneous with the manual component. Bracketing with *l* or *r* subscripts indicates that the sequence was signed from a position left or

right, respectively, of the signer's neutral position. (The convention of shifting out of the neutral position will be discussed in section 3.4.2 and again in sections 4.2.2.3.1 and 4.2.2.3.3., from which the following example is taken.)

(4.8) gaze forward
 YESTERDAY I SEE ANN
gaze right
 I [I YOU LOOK-FOR [M: durational]]
gaze left
neg
 r ["well" HIDE I] r
gaze forward
topic neg
 I WANT AVOID NO

'Yesterday I saw Ann. (Ann:) "I've been looking for you." (Me:) "Well, I haven't been hiding." I wasn't trying to avoid (her).'

In this example, "*well*" represents a nonmanual element -- here, a shrug with up-turned and open hands -- the status of which as linguistic or gestural is not yet certain. The identities of the reported signers are given in parentheses since these are contextually determined and not asserted. The object of the verb AVOID is also interpretable from context.

Acknowledgements

This study owes much to my committee members: Charles Fillmore, whose early work on deixis continues to provide crucial insights; John Gumperz, from whom I learned the importance of looking at language in the context of social interaction; Leanne Hinton, whose commitment to turn linguistics to the service of the research community inspires me to try to do the same; and my advisor Eve Sweetser, whose careful and copious comments on draft after draft challenged me always to think more deeply and write more clearly.

I thank Judy Kegl and Thom Huebner, who reviewed earlier drafts of the work and gave valuable comments. I gained much from long discussions with both Judy and Nancy Frishberg. I am grateful to Tony Moy, who did data collection with me early on and gave generously of his time on many later occasions.

I am indebted to Lucinda Ferreira Brito, who introduced me to Brazilian Sign Language; to Tanya Amara Felipe, who invited me to join the team developing teaching materials for the language; to Emeli Marques C. Leite, who provided information about the history of the Brazilian Deaf community; to Lanúcia Quintanilha, who allowed me to video-record in the classrooms of the Centro Educacional dos Surdos Pilar Velazquez; to the officers and staff of the Federação Nacional da Educação e Integração dos Surdos for their assistance; and to the members of the Brazilian Deaf community for their generosity and patience -- especially Myrna S. Monteiro and Moacyr Russo Leão Filho. I owe a special debt to Nelson Pimenta de Castro, whose skills as a Brazilian Sign Language teacher,

language consultant, and colleague have contributed immeasurably to this work.

My fieldwork experience was enriched by the hospitality of Alzira Macedo and Maria Luiza Braga. Diane Grosklaus saved me any number of times when my ignorance of local language and customs might have been fatal. At home, Esme Hecht, Alexis Watts, and John McBride, in taking on some of my personal responsibilities, freed me to fulfill my professional ones. Meryl Siegal gave me courage to keep on when the task of dissertation writing seemed overwhelming, and Judy Zeiger's friendship was consistently a great support.

I thank the Association of Women in Science, Phi Beta Kappa, and the University of California for funding preliminary studies; the Tinker Foundation for travel grants; the Wenner-Gren Foundation for Anthropological Research (#5454) and the National Science Foundation (#DBS-9214764) for funding fieldwork; the American Association of University Women and the Mellon Foundation for funding the writing.

Finally, I want to thank my mother Mercedes Leineweber, who kindled in me a love for language study.

1. Background

1.1 An overview of the work to be presented

Previous studies of person deixis in sign languages present analyses of the domain which differ significantly from analyses of person deixis in spoken languages. Although a wide variety of personal pronoun systems is attested in the hundreds of spoken languages, all grammaticize the conversational roles of *sender* and *recipient* in first and second person pronouns, respectively (Benveniste 1971, Lyons 1977). Sign languages have appeared to violate this linguistic universal.

Ahlgren (1990) claims that Swedish Sign Language has no personal pronouns, Lillo-Martin and Klima (1990) claim that American Sign Language (ASL) has a single pronoun which they call a personal pronoun even though the notion of *person* nowhere figures in their analysis, Meier (1990) claims that ASL encodes only the conversational role of sender, Engberg-Pedersen (1993a) makes the same claim for Danish Sign Language. It is now widely accepted among sign language linguists that only the sender and not the recipient is grammaticized (e.g. Padden 1990, Liddell 1994). These analyses raise the possibility that communicative modality has a crucial impact on the development of personal pronoun systems.

Contrary to the prevailing wisdom, I argue that at least ASL and Brazilian Sign Language (Língua de Sinais Brasileira: LSB) encode the conversational roles of both sender and recipient. Further, I argue that, as regards the LSB personal pronoun system, a third person pronoun, distinguishable from the demonstratives, is identifiable as the formational and semantic intersection of the not-first/not-second. I make my counter-arguments to the earlier analyses on the grounds that they (and others to be

reviewed in the following chapters) fail to recognize the members of the respective personal pronoun systems in part, and to varying degrees, because they do not thoroughly base analysis on the semantics of person deixis and in part because they do not determine the set-internal regularities of the systems on the level of phonology.¹ Without this foundation, the analyses are aberrant not only with respect to expectations about the configuration of personal pronoun systems in natural languages but also in terms of the phonology of the particular sign language under analysis. This is to say that the forms proposed for the pronouns in these analyses do not conform to the phonological constraints established for the rest of the lexicon.

My claims about ASL derive from my detailed critical reanalysis of published sources, which takes into account the insights about person deixis to be found in the extensive literature available on the topic and places the personal pronoun forms firmly alongside lexical signs within the phonological bounds of the language. My claims about LSB are based on my own research which includes two years of fieldwork in the Brazilian Deaf community and ten additional months of collaboration with a deaf Brazilian researcher native in LSB during his residency in the United States. The study to be presented here is the result of my investigation of the several grammatical systems and a variety of rhetorical practices for making deictic reference and maintaining coreference in connected discourse.

In spoken languages, these referential tasks are accomplished largely through the use of pronouns of at least two kinds: demonstratives, such as

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¹ While not fully equivalent, spoken languages also show regularities of form in sets of deictic words. An English example is: *me/we/he/she*. Examples from Portuguese include *nós/vós* ('we/you-pl'), *aqui/alí/ali* ('here/there/yonder'), *cá/lá* ('here/there'). For LSB spatial deictics, in section 3.3.3, and for ASL and LSB personal pronouns, in sections 4.2.2.2 and 4.2.2.3, I make the argument that the forms are not analogic as has been claimed but differentiated internally with respect to their category.

‘this’ and ‘that,’ and personal pronouns, such as ‘I’ and ‘you.’ Although they differ in the particulars, spoken languages studied so far have these means of making reference, no matter that they are from different language families or geographical regions of the world, or that they fall into different broad types with respect to their grammars. The question, then, for sign language specialists is: Do sign languages fit the generalizations about deictic person reference based on spoken languages?

This problem has confounded analysts since serious linguistic work on sign languages began more than three decades ago. I build on the previous work to develop a model which better accounts for the data. With this model, I identify the form-meaning relationships between and among the referential systems and practices of LSB. By re-examining arguments laid out by other analysts, I show that the model can be profitably applied to ASL as well. The model I propose gives superior results, both because it handles the data better and because it is more consonant with what we have come to know about human cognitive and social potentialities.

In chapter 2, I review the literature relevant to deixis in general and person deixis in particular. I look at this literature, based as it is on understandings that have arisen from the study of spoken languages, through the lens of sign language linguistics to see what theoretical underpinnings it provides which are extensible to sign languages. In chapter 3, I consider analyses of deictic reference in sign languages which focus on phonetic form. In chapter 4, I consider analyses which take a semantic approach, and I propose the body coordinates model. I note the contributions previous analysts have made to the debate about person deixis and also expose the flaws in their arguments. Because it has been most broadly studied, analyses of ASL dominate the discussion. Nevertheless, I bring in

LSB data for purposes of comparison, as well as relevant material from other sign languages. In chapter 5, I present the LSB system in its own right. The presentation differs conceptually from other related work in that I attempt to cover the full range of person deictic and anaphoric terms. My conviction is that the earlier analyses suffered from the fact that they deal with too narrow a slice of the domain of person deixis. Analyses tended to focus on singular subject/object forms and sometimes even more narrowly on those for nonparticipant referents, yet the conclusions were generalized to the full system. In chapter 6, I turn the lens around to examine the implications of my analysis -- and of sign language research as a subarea of linguistics -- for theories of deixis in general.

In the rest of this chapter, I provide some historical background on sign language research (section 1.2) and on the Brazilian Deaf community and LSB (section 1.3). With respect to the first topic, I further refer the interested reader to the International Bibliography of Sign Language (Joachim & Prillwitz 1993) for a listing of the many sources of additional information; with respect to the second topic, the information I present is compiled from the very few sources currently available. The reader who wants to know more on this topic must await the chroniclers who are sure to emerge as the community's awareness of itself and of its cultural and linguistic place within the larger Brazilian society increases.

1.2 A capsule history of sign language research

Sign language research has come some distance since its inception in 1960 with the publication of William Stokoe's article, *Sign Language Structure*. It would not be hyperbole to say that Stokoe's treatment of American Sign Language (ASL) as a true language, equivalent to but

different from English, was greeted with hoots of derision. The idea was received with ambivalence even within the American Deaf community, which felt chagrined to find its “secret” language exposed to public scrutiny. Sign language was at the time, and to some degree continues to be today, a source of conflict for many deaf people who cherish it as “God’s greatest gift to the deaf”² while, at the same time, regarding it as a degraded form of English.

Stokoe, then a professor of English at Gallaudet University in Washington, DC., had observed the deaf students signing and identified aspects of their communicative behavior which were essentially comparable to elements found in oral languages. For the first time in that seminal work and later in the *Dictionary of American Sign Language on Linguistic Principles* (1965), it was shown that, rather than being merely a random collection of iconic gestures, signs are composed of a limited set of phonological primes (i.e. primes of physical formation structure) which do not themselves encode meaning. This is to say, ASL, like oral languages, was shown to be organized into patterns of contrasts both on the level of form and the level of meaning.

Now in the mid-1990’s, sign language research is taking its rightful place beside other subareas such as American Indianist or Southeast Asian linguistics, as the empirical base of linguistics is broadening from a focus limited to a few language families whose study has dominated the discipline to a wider scope of work that treats a greater diversity of linguistic types. Papers on sign languages are no longer presented only at specialist conferences, no longer published only in obscure journals or circulated from hand to hand. Sign language data have been analyzed at all levels of

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² As George Veditz, then president of the National Association of the Deaf, called it in a 1918 speech recorded on film.

linguistic inquiry, from formal grammar paradigms to the socio- and psycholinguistic. For example, sign language data have informed current debates in phonology (Brentari 1990, Corina 1990, Liddell & Johnson 1989, Perlmutter 1990, Sandler 1989, Wilbur 1990) and language acquisition (Goldin-Meadow & Morford 1990, Mayberry & Eichen 1991, Pettito 1986). Studies of ASL have been adapted to other sign languages and original work is now underway all around the world. (Researchers currently working in the field include Ahlgren and Wallin in Sweden; Kyle, Woll, and Brennan in Britain; Pizzuto and Radutsky in Italy; Felipe, Piantá, and Ferreira Brito in Brazil; Pietrosevoli in Venezuela; Massone in Argentina; Adamo in Chile; Behares in Uruguay; Collins-Ahlgren in New Zealand; Martinez in the Philippines; Engberg-Pedersen in Denmark; Greftegreff in Norway; Boyes-Braem in Switzerland -- to name but a few.)

Despite this activity, much remains to be done and many misconceptions are still in place, even among specialists in domains in which language issues are central. The still unresolved question about the status of ASL with respect to college language requirements is one example.³ The argument that it does not have a literature weakens as video-recording augments the traditional live performance by making available an ever-increasing store of Deaf literary works in a variety of genres (American Heritage: The Deaf Perspective Series 1984, Poetry in Motion from Sign Media, ASL Literature from DawnSignPress, and others).

Still, many otherwise thoughtful people hold unexamined notions about sign languages. Among these, two of the most common are that sign

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³ At this writing, 16 states accord ASL official recognition, and legislation is pending in three other states. However, in these states as well as in states for which no legislation addresses the issue, policies vary widely and not all educational jurisdictions treat ASL as equivalent to other languages.

language is universal and that sign languages are directly derivative of their coterminous oral languages. Despite the fact that each of these notions logically excludes the other, it is not uncommon for intelligent people to hold both simultaneously. Similarly, it has not been uncommon for people to simultaneously hold the two notions that sign language is merely an unordered collection of gestures, transparent as to meaning, and that sign language is impossible for a hearing person to learn; it would seem that the one contraindicates the other.

Despite the growing body of convincing evidence emerging from numerous well-designed and rigorously carried out studies supporting Stokoe's 1960 claim, there is still some distance to go before the linguistic status of sign languages becomes unequivocal. In English, the word *language* has broad applications, moving from true languages like English to metaphorical extensions of the word like *computer language* or *body language*, where there is no claim intended that these entities are *language* in the strict sense. The polysemy of the term in common usage has led to an obfuscation of the claim for the linguistic status of ASL. Charles Fillmore (personal communication) recounts an incident in which an eminent psychologist and presumably thoughtful person, as he completed a lecture in which his characterization of human language excluded sign languages, was approached by an ASL specialist who took the lecturer to task for the narrowness of his construal. The eminent psychologist readily and graciously conceded the point and the sign language linguist walked away satisfied. Whereupon the eminent psychologist turned to Fillmore and said, "What's all the fuss? After all, we talk about bird language, bee language, the language of flowers..."

While the struggle for the recognition of the linguistic status of ASL is yet to be fully resolved, the situation of LSB is even more difficult. By way of comparison, consider the concept *language* within the Brazilian context. In Portuguese, a similar terminological confusion exists, but with a Latin twist. There are two lexemes *língua* and *linguagem*, the first of which is properly used only for exemplars of true languages: *língua portuguesa*, *língua inglesa*, etc. It is the usage of the second which causes a problem. For it is *linguagem* that applies to the systems of communication extant among birds, bees, and computer hackers, but *linguagem* again is *language* with a capital L, that is to say, language in the sense of the general cognitive ability for creating, acquiring, and using linguistic systems that we credit only to our own species, the general conceptual construct that subsumes the peculiarities of particular instances of *língua*. One of the first tasks of sign language research in Brazil has been to wean the public away from the facile application of the term *linguagem* in reference to the sign language of the Brazilian deaf. Because, while LSB partakes of the notion of *linguagem* to the same degree as does Portuguese, English, French, and other well-known and uncontroversial members of the category *língua*, it needs be emphasized that LSB is not *linguagem* in the sense of generalized communication system, and it is indeed a proper exemplar of the first term, *língua*.

In fact, in Brazil the appellation *Linguagem de Sinais* is an advance over the commonly used term *mímica* that, like its English cognate form *mime*, conveys the sense of an imitation or copy of some object or action, more of a theatrical performance than a linguistic one. To refer to the sign language in this way is to presuppose that it is not even comparable to bird language and bee language, which are *linguagem*. The term *mímica* is still in widespread use, even among the deaf themselves, who learn it from some of

the hearing professionals -- doctors, educators, audiologists, and speech therapists -- who serve the deaf and whose authoritative voice ignores or overwhelms the linguistic findings. But these linguistic findings, as they become known to the deaf, support their intuition that their mode of communication is real language and thus serve to embolden them to make their own voice heard on the subject.

To date, the Deaf community has not settled on a common term to name its language. The old, familiar *mímica* is falling into disuse, and *Linguagem de Sinais* is more frequently seen in print than in conversation. Two other candidates are *Língua de Sinais dos Centros Urbanos do Brasil* (LSCB) and LIBRAS, an acronym of *Língua Brasileira de Sinais*. These two labels were each offered by hearing professionals. The former was suggested by Lucinda Ferreira Brito, the first Brazilian linguist to work extensively on sign language in Brazil. Her research also brought her into contact with a second, unrelated sign language used among the Urubu-Kaapor, an indigenous group living in the Brazilian Amazon. This language Ferreira Brito designated *Língua de Sinais do Urubu-Kaapor* (LSKB). The fact that there exists in Brazil this other sign language is little known among the urban deaf and, even when known, has little direct impact on them. Primarily for this reason, the name LSCB (and its English translation) has never been used outside the academic context of research and writing. The second term, LIBRAS, was coined by Marta Ciccone, a speech therapist and educator. This name has gained wide acceptance among the deaf, to the extent that its fingerspelled form shows evidence of *nativization* into the sign language system (i.e. the forms of the individual letters are no longer delineated and the transitions between them are subsumed into a characteristic movement).

Among some Deaf, the name LIBRAS has come to identify a simplified variant of the sign language, a kind of *foreigner talk*. This is because the name can be associated with early attempts to systematize teaching practice, a Brazilian counterpart to American systems like SEE (Signing Exact English, Signing Essential English⁴). While SEE is imposed on deaf students by well-meaning educators, usually hearing, LIBRAS (in the narrower sense of the simplified variant) is imposed on hearing students by well-meaning instructors, usually deaf. Oftentimes, the instructors are themselves late learners of the sign language. Because of an assumption that sign language instructors should know Portuguese, many of the long-time deaf instructors have had significant exposure to Portuguese. They are, then, Portuguese-dominant bilinguals (or semi-bilinguals, considering that they often have only partial control over each of the two languages). Either consciously or unconsciously, they have incorporated neologisms and non-native grammatical structures into the form of the sign language they teach to hearing people. This variant shows a number of features which set it apart from the form the deaf use among themselves.⁵

To give a flavor of the foreigner talk variant, I offer here a few examples of neologisms and Portuguese-influenced grammatical structures. Regarding the former, two strategies are employed to create substitutes for

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⁴ As the names suggest, these systems combine ASL signs and English grammar. The expectation was that the combination would facilitate the learning of English by deaf children and simplify the learning of a visual mode of communication for their hearing families and teachers. The results, so far, have been disappointing.

⁵ A few forms with origins in this language contact situation are gaining currency among some deaf, particularly younger people who are introduced to them by hearing adults (e.g. parents, teachers, speech therapists), who have learned them from deaf people utilizing the foreigner talk variant. For a humorous and thought-provoking view of a similar situation in the U.S., see Ben Bahan's story "A night of living terror" (1989), a satirical prediction of the impact of the English calques on communication within the American Deaf community. See also Lucas and Valli (1992) for an analysis of the language contact situation in the United States between ASL and English.

fingerspelled loansigns because it is generally held that hearing people cannot fingerspell, either receptively or productively. The first strategy relies on complexes of signs to replace the fingerspelled loansigns, e.g.: HISTORY+OLD+VISIT-TO-SEE+HOUSE in place of MUSEU-fs ('museum'), CHEESE+ROUND-FLAT-OBJECT in place of PIZZA-fs. This is not to say that LSB does not have compounds natively, but rather that this mechanism for creating new signs is employed to invent signs specifically for use in language contact situations. The second strategy substitutes initialized signs: e.g., [S-hand held upright in neutral space rotates slightly twice] in place of SOGRA-fs ('mother-in-law'), which begins with the S-hand upright in neutral space, then rotates smoothly inward as the medial letters are articulated to the final A-hand position. With respect to non-native grammatical structures in LIBRAS, an example is the use of a lexical intensifier MUCH in a verb phrase rather than the modulation of the verb for intensive aspect. LIBRAS also exhibits a simplified use of space to indicate subject/object relations, as well as a reduction in the use of classifiers. Like other contact languages, the form of the neologisms and the use of non-native grammatical structures vary across signers and even across utterances of a single signer.

I am using the name *Língua de Sinais Brasileira* (LSB) in the work presented here because it is the preferred usage among the Deaf colleagues with whom I work. Time will tell which of the above, or perhaps some term I have yet to encounter, becomes the name of choice of the community as a whole.⁶

There is an LSB sign which can be glossed SIGN-LANGUAGE: two 5-hands held upright, facing each other at chest height, move forward from the

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⁶ The situation has been further complicated by recent efforts to gain official recognition for the sign language under the name LIBRAS. While all support the campaign, it has been undertaken before consensus on the name emerges from the Deaf community.

signer's body in alternating circles in two vertical planes several inches apart, one on either side of the midline of the body. In a sense, this is the name of the language and the other terms are merely means to refer to it in Portuguese. That this is a noun, and therefore a possible name, is likely since it differs from another sign which could be glossed TO-USE-SIGN-LANGUAGE, which modifies the form already described by adding the internal movement, finger-wiggle. It will be noted by those familiar with ASL that these signs differ from their ASL counterparts, and that the ASL signs differ from the fingerspelling ASL-fs. (Cf. Padden & Humphries 1988 on the various labels for the sign language of the American Deaf.) SIGN-LANGUAGE can refer to other sign languages, in which case, then, the sign PORTUGUESE specifies the sign language of Brazil (and either ENGLISH or AMERICAN the sign language of the United States).⁷ SIGN-LANGUAGE unmodified means the sign language of the Brazilian Deaf. This is in keeping with the practice common to populations with limited social interaction with other languages whose name for their own language is simply the word for 'language' in that language.⁸

1.3 The Brazilian context⁹

As with many other Deaf communities, our knowledge of the history of the Brazilian Deaf community and of the development of LSB is incomplete. Early reports to the colonial government assert that the incidence of deafness in Brazil was quite high. Official efforts made at the time to confirm this

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⁷ See also Kegl et al (In press.) for a discussion of the process the Nicaraguan Deaf community engaged in to determine a name for the sign language there, and Deuchar (1995) for mention of the process through which British Sign Language got its name.

⁸ In parallel fashion, I have observed some Brazilian deaf signers using the sign PORTUGUESE to mean any spoken language.

⁹ Historical information presented here is based on 19th century documents archived at INES in Rio de Janeiro, Brazil, except as noted.

assertion were unsuccessful. Whatever the truth may be, by the mid-1800's it came to the Emperor's attention that there was a substantial number of deaf boys in the streets of Rio de Janeiro whose disruptive behavior was drawing public notice. It was determined that a school should be established where they could receive instruction and their energies could be constructively channeled. The mandate of the school was to provide the boys with skills that would be of service to the Emperor. Deaf girls, evidently, were thought not to require schooling since they stayed at home with their families and caused no glaring social problems.

To this end, a deaf teacher from Paris, Padre Huet -- some records list his given name as Eduardo, others as Ernesto -- was invited to establish the first public school for the deaf in Brazil in 1857, the National Institute for the Education of the Deaf (Instituto Nacional da Educação de Surdos: INES). The original site of the school was in the city's downtown area but within a few years it moved to its present location in a quieter though still very urban neighborhood called Laranjeiras. A sprawling pink stucco building with flagstone-paved courtyard and tree-shaded grounds, INES serves as the de facto cultural center of the Brazilian Deaf.

For more than a century, INES was primarily a residential school. From all over Brazil, students came with a wide variety of idiosyncratic sign systems which they had been using among their familiars. Once there, they encountered in the dorms, corridors, and grounds of the school -- if not in the classrooms -- the sign language that was developing out of the meeting of Huet's Old French Sign Language with whatever signs and grammatical structures already existed in the sign system(s) Brazilian deaf were using before 1857. The students encountered this creole sign language and likely

they helped to shape it.¹⁰ Returning to their home regions, they spread the language throughout much of Brazil. INES has also long had a teacher training program, so it is possible that hearing teachers picked up the sign language as well, and disseminated it to their schools.

Documents archived in the library at INES indicate that teaching practice was pragmatic and that an oral-only approach was not official policy, even after the Milan Conference of 1880, when that policy was widely implemented in Europe. This is not to claim that INES used a bilingual, simultaneous communication, or sign-only approach; on this point, the written record is noncommittal. Perhaps it was only the familial relationship between Portuguese and French that led the Emperor to employ a French-trained teacher rather than someone from the more rigidly oralist German or British traditions. Given what is known about the French method (i.e. that it exploited the students' capacity for manual communication), we can assume that signs had their pedagogical place, at least in the early days. Today's teachers recall hearing that in the old days some teachers knew signs, although nothing is known about how they may have used such knowledge in their teaching practice. Nevertheless, there is evidence that a negative attitude towards signing became commonplace at INES in the years after Milan, whether by accident or design, and that oralism took a strong hold on teaching practice. Among many deaf who have attended the school over the last 50 years, stories abound of students who were disciplined by their teachers for signing.

Much of what is said about the past is speculative; what is certain is that in the mid-1990's very few teachers have any level of competence in LSB.

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¹⁰ Although no records exist detailing the emergence of LSB, we may suppose that the process was similar to that of Nicaraguan Sign Language discussed in Senghas (1995).

Fortunately this may be changing, as there seems to be a growing interest in learning the language. This is not to say that we are coming full circle, enjoying a return to a deaf-led or -determined educational practice. Deaf people are effectively shut out of the teaching profession due to certification requirements for proficiency in Portuguese. One irony is that adherence to the Portuguese proficiency requirement (for prospective deaf teachers) seems to be more strictly observed in deaf schools than in hearing schools. In an effort to bridge the communication gap between deaf students and their hearing teachers, sign language courses are now being offered at INES on a voluntary basis (available also to the hearing families of the deaf students). However, these courses are not taught by regular faculty but by outside instructors, usually deaf, who are hired on special contract.

It was not until the latter half of the twentieth century that girls were admitted to INES and only within the last decade that the program has been extended to offer secondary school certification. These changes removed two significant obstacles to deaf Brazilians' fuller participation in national life. More recently, with the economic argument for mainstreaming gaining momentum in Brazil as it has in the United States, the continued existence of INES is jeopardized by a proposed withdrawal of government support. The threat of the loss of its cultural center provides a rallying point for the Deaf community and thus may serve as the issue around which the community finally finds its political voice. A number of grassroots movements are forming to lobby against closure of the school and to press for recognition of the sign language as the appropriate vehicle of instruction for deaf students.¹¹

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¹¹ It is interesting to note that the initial impetus for political action aimed at gaining official recognition for LSB came from a deaf theater group, Companhia Surda do Teatro of Rio de Janeiro. In the US, the National Theater of the Deaf, while not engaging in direct political action, has done much to enhance the status of ASL by bringing it to the attention of hearing

Besides INES in Rio de Janeiro, there are two other large schools for the deaf, both private, which influence the community and its language. One, Santa Terezinha in São Paulo, Brazil's major industrial and commercial center, served primarily girls from its founding in 1929 until 1970.¹² While no scholarly work is available which examines the question of gender differences in LSB, the educational situation suggests that there might be interesting variation along this parameter.¹³ It should be borne in mind that Brazil, like other Latin societies, restricts the movement of girls and women more than that of boys and men. This is particularly important when one considers that the deaf social world operates outside the limits of the family in the case of the deaf child of a hearing family and the Deaf community is not a *community on the ground*, established within the geographical bounds of a particular neighborhood. The other school, Concordia, founded in 1966 in Porto Alegre in the far south of Brazil, receives substantial funding from an American philanthropic organization and its teachers often are trained by American educators.¹⁴ For this reason, the Porto Alegre regional variant of LSB shows influence from ASL.

Aside from these three large schools, there are dozens of small private schools throughout the country, many of them founded and administered by

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Americans. It seems appropriate that actors, among whom the effective use of language is a conscious goal, would readily recognize the necessity for a language to be effectively used.

¹² In its first four decades, Santa Terezinha operated as a residential school, and had only a very few boys as day students. It was the first school for the deaf in the state of São Paulo and, like INES, it drew students from a wide geographical area. After 1970, as additional facilities opened to educate deaf children, Santa Terezinha shifted to serving a more localized population as a day school, with the result that shortly the population of girls to boys was more balanced. (This information comes from an interview with Sister Marta M. Barbosa of Santa Terezinha, published in *GELES*, no. 5, 1990.)

¹³ For some months in 1991-92 I worked with a deaf sister and brother, native in LSB. The woman had attended Santa Terezinha's. The two did show differences in their usage but the data are insufficient for determining whether these differences are evidence of genderlects or are merely idiolectal.

¹⁴ Information about Concordia is based on Warth Raymann and Warth (1981).

hearing parents of deaf children, as well as a number of municipal schools which offer special programs. There is no coordinated educational policy, although a heavily oralist approach has now been replaced at some sites by Total Communication in the form of simultaneous communication with signs and Portuguese.¹⁵ Bilingualism has won a few proponents but suffers from the absence of trained personnel and materials. Many deaf children receive no specialized attention. They quite literally sit out their school years in hearing classrooms, or simply are not schooled at all.

Little official information is available about either education or other indicators of socio-economic status of the deaf population. Even the proportion of deaf to the population as a whole and the number of deaf whose primary language is LSB are matters of conjecture. It can only be deduced from the serious health care and educational problems Brazil faces that there exists a significant deaf population whose life chances are severely restricted by an education that fails to prepare them adequately for a fiercely competitive job market. My own observations support this conclusion.

With the growing awareness of the pivotal role played by communication in providing citizens access to crucial information and resources, an understanding of the importance of the sign language for the Deaf community is slowly emerging, both within that community and in the larger Brazilian society. Besides the courses taught at INES, sign language classes are offered in some municipal schools, as well as at a number of universities (Universidade Federal do Rio de Janeiro, Universidade Federal da Santa Maria, and intermittently at Universidade Federal da Bahia), where they are taught as extension courses due to the fact that the

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¹⁵ In Brazil, as elsewhere in Latin America, Total Communication is generally realized as Sim Com.

instructors do not hold the requisite degrees and therefore cannot be regular faculty. The university courses are open to any interested student, not just to the families of the deaf and the providers of relevant professional services.

Until 1993 sign language instructors worked without methodology, training, or teaching materials, with the single exception of an instructor who had some guidance from a linguist.¹⁶ Instructors taught sign-for-word correspondences from lists of Portuguese words. The especially creative instructor might provide a number of example sentences containing the target item in order to familiarize students with the semantic range of the sign, which could differ significantly from the Portuguese word that provides the source of the sign gloss. Example sentences may also have provided a glimpse at the grammar of the sign language, which is typologically distinct from that of Portuguese. More often, these differences were left unremarked. The result was that hearing families and service providers, even interpreters, were gaining some skill in a signed language not actually used in the Deaf community. Materials are now being developed which aim to teach the authentic sign language and not the pidginized variant most hearing people encountered in the traditional courses.

At the forefront of this effort is a research group housed at the National Federation for the Education and Integration of the Deaf (Federação Nacional da Educação e Integração de Surdos: FENEIS), the only deaf advocacy group currently active on a national scale in Brazil. Headquartered in Rio de Janeiro, FENEIS has moved aggressively into the area of sign

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¹⁶ The exception was Myrna Salerno Monteiro at the Universidade Federal do Rio de Janeiro (UFRJ), and the linguist was Lucinda Ferreira Brito. A set of lessons had been devised by the first sign language instructor at UFRJ, Jose Roberto Cruz, who taught for a period of time in the late 1980's. These lessons introduced groups of related signs in conjunction with grammatical structures. This was an advance over the usual sign-for-word method but still unsatisfactory. Moreover, other sign language teachers had no access to these materials so they had no influence on teaching practice in general.

language teaching, offering not only a range of levels of instruction in the language itself but also training workshops for instructors in order to familiarize them with the new methodology that draws on insights from the fields of second language acquisition and foreign language teaching. The research group is also working on the development of interpreter training, covering professional ethics as well as technique.¹⁷ These language issues are central to deaf advocacy.

The commitment to present the grammar and lexicon of LSB validates the language by approaching it as a language in its own right, independent of Portuguese, in the same way that English, French, and so forth are different from but comparable to Portuguese. The commitment to LSB carries with it the need to describe its structure fully and explicitly, as we would describe that of any other language. We have a long way yet to go to reach this goal. Some pioneering work is being done by Ferreira Brito, primarily in semantics, and by Felipe and Piantá in syntax.

In undertaking the task, we simultaneously draw on and contribute to parallel efforts unfolding around the world aimed at explicating sign language grammars. We are part of a collectivity of sign language researchers who feed back insights to other theorists working on all levels of linguistic systems. We who are working on Brazilian Sign Language, like sign language specialists elsewhere, have made greater headway thus far in answering challenges to the validity of sign languages as proper objects of linguistic inquiry than we have towards winning a place for sign languages in deaf schools either as a medium or an object of instruction.

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¹⁷ The linguist associated with this effort is Tanya Amara Felipe. The driving force behind the effort is Nelson Pimenta de Castro.

Research can and perhaps should return something to the individuals and communities studied. Sign language specialists in particular incur an obligation to see the promise of deaf education fulfilled, to be collaborators in re-establishing a deaf-led and deaf-determined educational practice based on the reality that deaf children have most ready access to knowledge, at least in their early years, through a natural sign language. The signing that caught Stokoe's eye and engaged his interest back in the 1950s was observed in informal settings of casual conversation. This has been the rule for sign languages in the post-Milan century. With a new century (and a new millennium) approaching in which Deaf people assert political force, sign language specialists have a part to play in bringing sign languages back into the classrooms.

It is to be hoped that sign languages will return to the classrooms not only as the medium of instruction but also as objects of study in their own right. Language teachers recognize the crucial part that students' metalinguistic understanding of their own language plays in successful outcomes of second or foreign language learning. Deaf students rarely are given the opportunity to look at their sign language analytically. Yet, because sign languages are not written, these students must master what is for them a foreign language in order to gain access to the world's store of knowledge and information, contained in written materials, (from great literature to captions on the evening news).

The concept of *person* and its instantiation in deictic reference is a cognitively complex category (Jakobson 1957). Lyons (1975), through his hypothetical *Quasi-English*, shows that English -- or any other language -- could get along without such a category. Still, the category is always among those proposed as linguistically universal. Through the category of person,

language users linguistically position themselves in their social world. Thus, it becomes important that deaf students be explicitly aware of the grammatical distinctions and social constraints on uses found in their sign languages in order to be able to transfer that knowledge to the task of second language learning. Study of their sign languages can also serve to foster and support the elaboration of linguistic expression in the sign language that can enhance cognitive development. It is with this in mind, as well as an intent to contribute to our understanding of sign language grammars and of the workings of deictic categories in general, that the current work was undertaken.

2. The semantics of deixis

2.1 Introduction

Lyons notes that the term *deixis* “comes from a Greek word meaning ‘pointing’ or ‘indicating’” (1977:636). Earlier grammarians, such as Brugmann and Delbrück, cited by Bühler (1982), recognized the relationship between nonlinguistic pointing by means of the extended index finger or other gestures and “pointing” by linguistic means, such as the demonstrative adverbs (‘here’ and ‘there’) and pronouns (‘this’ and ‘that’).

Although deixis is universal to natural languages, its analysis has proved to be a challenge for linguists as well as for philosophers of language, and not solely because deictic phenomena are themselves complex, involving as they do syntax, semantics, and pragmatics. Terminological inconsistencies abound, some of which have theoretical implications. In the hope of minimizing confusion, I begin this chapter with a discussion of terms central to the topic.

Fillmore defines *deixis* as “the name given to those formal properties of utterances which are determined by, and which are interpreted by knowing, certain aspects of the communication act in which the utterances in question have a role” (1971:219). By this definition, deixis is seen to crucially involve formal properties. Such a stipulation limits the range of “deictic” linguistic data to more manageable proportions than would be so under the broader sense of the term employed by Bar-Hillel (1970), whereby ninety percent of natural language usage is estimated to be deictic. Fillmore (1982:36) draws on a contrast between primary and derived senses of linguistic expressions to differentiate between the real members of the category *deixis* and the occasional visitor, this latter being what he calls

deixis by default. The term labels the deictic use of basically nondeictic expressions. As Fillmore explains it, “[U]nder the circumstances of their use, it is only the communication act setting which can provide the grounding or the ‘reference points’ that are needed for their interpretation. The expressions themselves, however, freely take other reference points in other contexts.”¹⁸

Lyons’ view accords well with Fillmore’s narrow construal of the domain proper. He specifies that deixis refers to “the function of personal and demonstrative pronouns, of tense and of a variety of other grammatical and lexical features which relate utterances to the spatiotemporal co-ordinates of the act of utterance” (1977:636). Among formal properties must be personal and demonstrative pronouns, tense and other grammatical and lexical features, while among certain aspects of the communication act must be spatiotemporal co-ordinates.

Levinson echoes earlier analysts but focuses on the pragmatic aspects of the topic. He says that “deixis concerns the ways in which languages encode or grammaticize features of the context of utterance or speech event and thus also concerns ways in which the interpretation of utterances depends on the analysis of that context of utterance” (1983:54), noting that the grammatical category of deixis will probably be found to straddle the semantics/pragmatics border. He defines a context as “a set of pragmatic indices, coordinates, or reference points ... for speakers, addressees, times of utterance, places of utterances, indicated objects, and whatever else is needed” (p.58). Despite the “whatever else,” this conceptualization begins to

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¹⁸ An example of deixis by default is, “They’re up front.” Here, *front* takes the location of the speaker as its ground. With this ground, *front* is used deictically. An example of *front* in its primary, i.e. nondeictic, use is, “The children are in front of the building.” Here, the location of the building provides the ground. This distinction should become clearer as the discussion in this chapter develops.

delineate the idea of the deictic space, be it physical or textual. It suggests that the relevant contextual phenomena are listable.

Levinson's conceptualization recalls Bar-Hillel's work (1970), in which declarative sentences (i.e. utterances) plus linguistic descriptions of the context, taken together, are *judgments*. These judgments are claimed to be appropriate material for truth conditional semantics. Bar-Hillel, like Levinson, is assuming that context can be described at some level of detail that is sufficient and not open-ended. Yet, the philosophical enterprise of reducing linguistic expressions containing deictics to context-independent expressions amenable to truth conditional semantics has been largely unsuccessful. In contrast, the task of linguistic analysis -- to capture the way deictic expressions are used, and to derive from that data a theory of deixis -- has generated some valuable, if still incomplete, insights.

The traditional deictic categories are *time*, *place* or *space*, and *person*. The first of these takes the moment of the conversation as the point of reference for the felicitous use of temporal adverbs such as 'now' and 'then' and verbal tenses such as *past* and *future*. The second takes the location of the conversation as the point of reference for the felicitous use of spatial adverbs such as 'here' and 'there,' demonstratives such as 'this' and 'that,' and verbs such as 'come' and 'go.' The third is primarily concerned with the *sender* and the *recipient* of the linguistic communication, the 'I' and the 'you,' respectively.

2.1.1 Deixis vs. indexicality

Bar-Hillel's observation goes beyond these conceptual limits, calling attention to the fact that language in use is contextualized within the conversation and the conversational setting and is largely interpretable in terms of situational factors arising from the one or the other. *Indexicality*

may be useful as a cover term for the relationship between linguistic elements and these factors. While this term is often used as a synonym for deixis (e.g. Levinson 1983; Trask 1995), Lyons makes a distinction between the two, defining indexicality “as a particular kind of deixis: namely, as deixis insofar as it is relevant to the determination of the propositional meaning of utterances” (1981:229).

For Lyons, then, deixis subsumes indexicality. To say that indexicals are the subset of deictics relevant to the determination of propositional meaning is to assume that some deictics are not relevant. Surely, participant roles¹⁹ within the spatiotemporal context, the concerns of the three traditional deictic categories, are relevant. Perhaps Lyons intends to exclude matters of *social deixis*, a less well-delimited category. Social deixis concerns “that aspect of sentences which reflect or establish or are determined by certain realities of the social situation in which the speech act occurs” (Fillmore 1975:76). If this is Lyons’ intent, then indexicality does not cover indirect speech acts and other politeness phenomena, social registers such as *foreigner talk* and *baby talk*, and elevated vocabulary such as *domicile* for ‘home’ and *sup* for ‘eat (the evening meal)’ -- all of which fall under the rubric of social deixis. These must be a large part of the ninety percent of language usage that is understood in terms of the conversational context. Most are not directly relevant to the determination of propositional meaning, but all contribute to interpretation. It may be desirable to limit the use of the term indexicality to formal properties, as Fillmore does with deixis, and to disallow other types of contextualization such as the voice quality contrasts which distinguish official announcements from ordinary talk (see Gumperz

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¹⁹ Participant roles are those of the *sender* and the *recipient*, the ‘I’ and the ‘you’ of a conversation. Other referents fall into the nonparticipant category. The differences between the participants and the nonparticipants will be discussed in section 2.4.

1982:161-2).²⁰ However, to restrict the use of the term to only those deictics which are relevant to the determination of propositional meaning makes it do too little theoretical work.

It seems that Silverstein (1976) sees the hyponymy between the two as the reverse of that in Lyons' proposal. He holds that everything that anchors the utterance to its setting is indexical, but just those linguistic items and functions are deictic which deal with the spatiotemporal relationships of participants in the speech event. This formulation is preferable because it captures the fact that interpretation goes beyond the determination of propositional meaning. Yet it is not so much that phenomena we could call *deictic* are a subset of phenomena we could call *indexical* as it is that there is a difference in kind between the two.

For example, to say that "members ... linguistically index their co-membership in a social group" (Rymes 1996) is to see the use of deictics (e.g. personal pronouns) as social action. Deixis and indexicality, on this view, are cover terms under which some of the same phenomena are examined, but from qualitatively different perspectives. There is no hyponymy between the two, but only overlap of the phenomena analyzed. Under the alternate conception of indexicality, more of the ninety percent of language usage that is anchored to the setting can be treated, as the analyst develops theoretical underpinnings that elucidate the relationship between usage and setting.

2.1.2 Deixis vs. anaphora

The term *deixis* enters into another morass of terminological confusion with the term *anaphora*. On the one hand, the two terms stand in a

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²⁰ While this may be similar to foreigner talk and baby talk in that all exhibit prosodic features which differ from those typical of ordinary conversation, the two social registers also have characteristic lexical choices and/or predictable syntactic simplifications. The features which cue the shift from announcement to ordinary talk are perhaps less amenable to generalization.

mother/daughter relationship in that anaphora is derivative of more basic forms of deixis. Lyons says that “[a]naphora involves the transference of what are basically deictic, and more specifically spatial, notions to the temporal dimension of the context of utterance and the reinterpretation of deictic existence in terms of what might be called textual existence” (1975:81). Bühler claims that in anaphora “the deictic moment ... is intimately bound up with specific grammatical functions” (1982:20).²¹

For Bühler, anaphora is a kind of deixis, defined generally enough to include reference to a previously introduced antecedent, to a linguistic expression or chunk of discourse itself, or to the propositional content, these last two being what later writers have called *text deixis* or *discourse deixis* (e.g. Lyons 1977; Levinson 1983). Bühler's definition of anaphora does not require that the anaphor be coreferential with any specific portion of the linguistic structure of the text, but only that its reference be understood in terms of the text.

On the other hand, deixis and anaphora stand in a sister relationship. Benveniste (1971) differentiates the two by characterizing the former as referring to phenomena whose interpretation relies on the perception of elements of the conversational setting and the latter as referring to phenomena which belong to the syntax of a language.

Gensler's (1977) dispute with the characterization of anaphora as a matter of syntax does not alter the sister relationship between deixis and anaphora. He argues for a frame semantic analysis of anaphora, which Bühler's broad characterization of the phenomenon does not rule out, as Benveniste's does. He presents a diverse set of example sentences wherein a

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²¹ Bühler (1982) is an English translation from the German, originally published in 1934. It is among the earliest and still most influential treatises on the topic.

syntactic relationship of coreference between the pronoun and an antecedent is by no means straightforward. His evidence is, in part, that semantic considerations of gender and number over-ride syntactic ones in conversational use (in contrast to the written medium). Further, where syntactic criteria hold, Gensler reasons, they can be subsumed under a frame semantic analysis in that the frame allows a wide variety of associations to be brought in, including those that have to do with lexical entries of vocabulary items. Thus, even where the pronoun agrees with its antecedent, this can be explained in frame-semantic terms.²²

A semantic frame may include information about participant roles and the spatial and temporal setting, but there is no restriction that the information be derivable from perception. Therefore, even if anaphora is nonsyntactic, as Gensler claims, the distinction between the kinds of information which give rise to deictic reference and those which give rise to anaphoric reference can be maintained, and with it, the sister relationship between deixis and anaphora.

Two terms related to deixis -- deictics and deictic -- and two terms related to anaphora -- anaphors and anaphoric -- subdivide the domain(s) along different lines. Levinson (1983) cautions against mixing what he identifies as three distinct levels: (1) the concept, (2) relevant terms, and (3) uses. Deixis is the name of the phenomenon most broadly construed and anaphora is the name for the reinterpretation of it in terms of the text (level 1). Particular terms (level 2) are associated with each and called deictics (e.g. 'I' and 'you') or anaphors (e.g. 'he' and 'she') depending on which use, deictic or anaphoric (level 3), is basic to them. The set of terms deixis, deictics, and deictic contrast with the set of terms anaphora, anaphors, and anaphoric in

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²² Hankamer and Sag (1976) make a related argument.

that interpretation of exemplars of the former relies on perception while interpretation of exemplars of the latter relies on syntax (or semantics). However, all of these taken together fall under the overarching category *deixis*.

The first and second person pronouns, demonstratives, and spatial and temporal adverbs are generally held to be deictic terms; the third person pronouns are generally held to be anaphors. With respect to uses, Bühler holds that third person pronouns are deictic words limited to anaphoric use. Silverstein (1976) claims that third person pronouns can be used deictically as well as anaphorically. Lyons (1977) maintains that not only can a single term function deictically in one utterance and anaphorically in another, but within an utterance a single term can function both deictically and anaphorically at the same time. The possibility of dual use is not difficult to understand in a multi-level analysis: deixis understood as a general phenomenon, actualized by certain linguistic terms or by other linguistic expressions in deictic usage; and anaphora understood as derivative of deixis, actualized by a subset of the set of linguistic terms relevant to deixis generally.

An example of a deictic term used anaphorically is the spatial adverb in Levinson's example, "I was born in London and I've lived there ever since" (1983:67). *There* is used deictically to locate the speaker outside London. To be convinced of this, contrast Levinson's example with, "I was born in London and I've lived here ever since," or "I was born in London, where I've lived ever since." The *here* example locates the speaker in London, and the *where* example is neutral with respect to the speaker's current location. Each of the three (*there*, *here*, and *where*) is used anaphorically in that its full interpretation draws on a syntactic relationship of coreference with its

antecedent *London*. It remains categorically a deictic term, however, because its basic use is deictic, as in this exchange, where there is no antecedent expression that can be associated with the adverb: “Have you seen my pen?” “It’s right there.” When the deictic term is used anaphorically, its deictic function remains. That is, the nonbasic use does not cancel out the basic use.

Fillmore (1971:226) has an example that he says is used only anaphorically. Having just arrived at a place which had recently been talked about, the speaker exclaims, “We’re there!” The spatial deictic adverb corefers to the same entity as the previously named place and thus is used anaphorically, but it does not locate the speaker outside that place, as would be expected with deictic use. I would argue that the deictic use of *there* remains in that it simultaneously brings up not only the idea of the previously named place but also the idea of being at the previous location outside that place where the previous utterance was made. It is with respect to that previous location that the term is used deictically.

An example of an anaphor used deictically is the following. With the shared expectation of the imminent arrival of someone, one interlocutor can ask another, “Is she here yet?” even though no linguistic expression has introduced the referent and in so doing provided the antecedent to the pronoun. There need be no physical evidence (as input to perception) which grounds the utterance in the conversational setting and in so doing provides a kind of nonlinguistic “antecedent” for a coreferential pronoun. Although the pronoun can be used deictically, its basic use is anaphoric, as in “Mary is the top student in the class because she works hardest.” In this example, there is a syntactic relationship of coreference between the pronoun and its antecedent, *Mary*. An anaphor used deictically is marked by the fact that its

interpretation relies heavily upon context and the sharing of presuppositions by the conversational participants.

For an anaphor used deictically, the anaphoric function does not remain. That is, a deictic term can be used deictically and anaphorically at the same time -- in fact, it must be so if it is used anaphorically at all. An anaphor can be used either anaphorically or deictically but not both at the same time, except in the sense that every use of an anaphor is deictic since it locates the referent outside the conversational interaction (for further discussion of this point, see section 2.3).²³ This insight differs somewhat from Lyons' characterization of the phenomena in that the single term that can function deictically in one utterance and anaphorically in another must be an anaphor, and the single term that can function both deictically and anaphorically at the same time must be a deictic.

2.1.3 Deixis differently subdivided

Bühler (1982:18) brings up the topic of the relationship between deictic linguistic items and pointing gestures when he addresses "[t]he question of whether from the beginning the demonstratives were always and by necessity tied to pointing gestures when referring to what was currently perceivable." He concludes that "they still are today and could never have been and can never be any different." He lists the relevant gestures as: "the finger gesture, other optical or acoustic cues, situational indices or conventional aids of interpretation." He goes on to say that "any deictic word without such [gesture] is running blind to its meaning. It would give us a sphere, an environment which is not sufficient to find what is referred to." Anderson

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²³ Alternatively context and shared presuppositions, taken as part of the semantic frame, may be sufficient cause to consider all uses of third person pronouns anaphoric. In this case, the distinction is between situationally-established coreference and linguistically-established co-reference.

and Keenan (1985) include mention of third person pronouns with co-occurring ostensive gesture in their discussion of deixis, but they stop short of drawing conclusions about the role of gesture as regards the establishment of reference. The closeness of the relationship is evoked by Lyons as well when he notes the etymology of the term deixis in “a Greek word meaning ‘pointing’ or ‘indicating’” (1977:636). The two proposals I review in the following sections explore the relationship between deictic words and some of the “pointing gestures.” Each presents a model which incorporates distinctions based on the co-occurrence of word and gesture.

2.1.3.1 Gestural vs. symbolic vs. anaphoric uses

Fillmore (1975:40-41) proposes that deictic expressions can be used in one or more of three different ways which he calls *gestural*, *symbolic*, and *anaphoric*. Anaphoric is that use of an expression “which can be correctly interpreted by knowing what other portion of the same discourse the expression is coreferential with.” This definition is close to the traditional, syntactically-based one, although it may be like Bühler’s in permitting a wider range of antecedents. In this section, however, I will focus on the two uses which Fillmore first introduced in 1971.

Gestural use is that use of a deictic expression “which ... can be properly interpreted only by somebody who is monitoring some physical aspects of the communication situation.” What one must monitor is usually the speaker, who is accompanying his utterance with a “gesture or demonstration of some sort.” Symbolic is that use of a deictic expression “whose interpretation involves merely knowing certain aspects of the communication situation, whether this knowledge comes by current perception or not.” Several examples illustrate the distinction (1975:41).

Gestural: “I want you to put it there.”

Symbolic: (telephone inquiry) "Is Johnny there?"

Gestural: "... this finger ..."

Symbolic: "... this campus ..." (uttered while present on the campus)

Fillmore explores gestural use of personal pronouns only in the earlier article (1971:223). The examples in that text show that the manual component which accompanies the spatial deictics is for the person deictics supplemented or replaced by a vocal gesture. The (slightly adapted) example with the first person pronoun is shown in the following pair of two-part sequences. Gestural and symbolic uses are distinguished by differing prosodic patterns: stress on *I* in the gestural use and stress on *would* in the symbolic use, the latter being the unmarked pattern.

Gestural: "Would somebody like more beer?" "I would."

Symbolic: "Would you like more beer?" "(Yes,) I would."

This is not a straightforward matter of contrastive stress; the communicative intent need not be to set oneself up against another.²⁴ The rhetorical effect is more 'I, among the group,' than 'I, not others.'

In languages like Portuguese, where overt pronouns are often omitted, the presence of the subject pronoun is enough to signal gestural use. Symbolic use would have to be understood as pertaining to a reliance on the stem-final pronominal element of the verb to indicate the first person subject. To stress the overt pronoun would be to add another interactional dimension to the communicative act (an attitude of impatience or arrogance or the like on the part of the respondent), as the following three two-part examples show.

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²⁴ Contrastive stress and gestural use are not equivalent, although Fillmore's second person pronoun example suggests that they are related. The gestural examples with spatial deictics do not require vocal gesture.

Symbolic: "Quer mais chopp?" ²⁵	"Quero." ²⁶
want more beer	want-1sg
Gestural: "Alguém quer mais chopp?"	"Eu quero."
anyone want more beer	I want-1sg
Gestural (plus contrast): "Alguém quer mais chopp?"	" Eu quero."

The gestural use is purely deictic. The pronoun serves not only to reference the speaker but also, on the interactional level, to get the attention of the addressee (i.e. the previous speaker). The symbolic use straddles the boundary between deictic use and anaphoric use to the extent that deictic use is seen as focusing the addressee's attention and anaphoric use is seen as sustaining the addressee's attention (Ehlich 1982). Given the (actual or understood) 'you' of the question, the respondent can assume that information about his presence is active in his interlocutor's attentional state. Thus, symbolic use is the appropriate choice. Yet, on the syntactic level, the 'you' of the question cannot be the antecedent for the (actual or understood) 'I' of the answer so the two are not formally in a relationship of coreference. This can be better understood if we consider what the relationship would be between the 'you' of a question and the 'I' of an answer if the respondent were not the one intended by the questioner. Each would be using the pronoun correctly but the two pronouns would not corefer to a single entity.

Fillmore's example of gestural use of the second person pronoun has both manual and vocal gesture. "I want **you**, **you**, and **you** to go there with me," a manual pointing gesture accompanying each articulation of the second person pronoun. This appears to be contrastive stress as well as gestural use

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²⁵ Typically, the question has no overt second person pronoun even though the verb form does not have an element to distinguish between second and third person. Another option is the use of a phonological reduction of the second person pronoun *você* to its second syllable. Thus reduced, the form is homophonous with the impersonal pronoun *se*, and, again, second person would be indistinguishable from third person on the level of the sound signal. Contextual cues are usually sufficient to disambiguate reference to second or third person.

²⁶ Typically, *sim* ('yes') does not accompany the answer to a yes/no question. When it does, its use is emphatic.

since, in the usual circumstances under which a sentence such as this is uttered, there would be other individuals present and attending to the talk who might have been addressed and were not merely overlooked.²⁷ Gestural use alone does not require both the manual and the vocal gesture.

An example of manual gesture only is shown in (a) below, and an example of vocal gesture only is shown in (b).

(a) (simultaneously pointing to the addressee and uttering a phonologically reduced “do you” [dj]) “D’y wanna go?”

(b) (in a discussion about several possible events two friends might attend, one says to the other) “What do **you** want to do?”

In these two cases, the gestural use of the second person pronoun serves to focus the addressee’s attention upon the referent (i.e. himself) rather than to contrast one referent with another possible referent.

There are additional complexities for gestural use of pronouns other than the first person singular in that attention is called not only to the referent(s) of the pronoun but to the speaker -- perhaps foremost and certainly first. With this codicil, Fillmore’s generalization about deictic words permitting gestural use holds for all of the personal pronouns (of English and perhaps for the subject and oblique pronouns of Portuguese).

Interestingly, the spatial deictics and the personal pronouns exhibit different preferences for visual or acoustic cues as the accompanying gesture. Spatial deictic words seem to favor gesture realized as visual cues. The only gestural use of a spatial deictic which relies solely on acoustic cues is the response, “Here,” to the question, “Where are you?” Person deictic words seem to favor gesture realized as acoustic cues.²⁸ The third person pronoun,

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²⁷ The notion of *audience* is relevant here but will not be examined in detail until section 2.4.

²⁸ This is consonant with the distinction Bühler draws between the adverb ‘here’ and the pronoun ‘I,’ which will be discussed in section 2.3.

true to its demonstrative roots (Bühler 1982; Lyons 1977), patterns more closely with the spatial deictics than with the person deictics. Of the time deictics, Fillmore comments that only *now* allows gestural use. To which I would add that the gesture is usually realized as acoustic cues. Where both visual and acoustic cues are co-present with the deictic word, the communicative intent seems to be to combine gestural use with contrastive stress or emphasis.

The distinction between gestural and symbolic uses shows that the “look here” quality Bühler sees as characteristic of deictics (1982:17) may be less salient in some cases. No gesture -- manual, vocal, or other -- need accompany the symbolic use of *I*, for instance. Nor does such a use require that the addressee (attempt to) identify the speaker on the basis of personal features of the articulatory signal. The addressee has already identified the speaker and is (presumably) attending to his talk. For sign languages as well, not every form that takes a pointing handshape is intended to draw the addressee’s attention; some only sustain that attention. The form is independent of its use; as a linguistic item, a sign language pronoun is no longer directly deictic, no longer a “pointing-at” something.²⁹

2.1.3.2 Gestural and symbolic vs. anaphoric and non-anaphoric uses

Adapting Fillmore's work, Levinson (1983:65-68) divides the domain of uses into deictic and non-deictic. Deictic use is subdivided into gestural and symbolic; non-deictic into anaphoric and non-anaphoric. Gestural, symbolic and anaphoric have the same definitions as Fillmore gave them so they require no further explanation here. The impersonal use of the second

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²⁹ Greftegreff (1992) argues that many signs whose forms include the pointing handshape are better analyzed as deictic points to particular objects. Although an interesting hypothesis, it fails to convince. I provide counter-arguments in section 4.3 and in section 5.3.1.

person pronoun -- as in, "You can never tell what sex they are nowadays" -- is given as an example of a non-deictic, non-anaphoric use.

The dissimilarity of Fillmore's and Levinson's characterizations of anaphoric use is not merely terminological. On the theoretical level, Levinson is categorizing anaphoric use as non-deictic whereas Fillmore considers it to be deictic. The difference between the two positions is that Fillmore's draws on the overarching concept of *deixis*, while Levinson's draws on a sister relationship between deictic and non-deictic uses (and, thus, an "avuncular" relationship between deictic and anaphoric), using deictic in its narrow sense as excluding the anaphoric. Levinson's model works for English because all the relevant words have a single basic use so that classification of the word's category as *deictic term* or *anaphor* is straightforward. Other languages are not so easy.

Fillmore (1971:228) cites an example from Russian of a distal time deictic adverb *togda* ('at that time'), which must be used anaphorically. Heath (1980) reports that the Australian language Nunggubuyu has a demonstrative pronoun that must be used anaphorically. This pronoun locates the referent with respect to the speaker but at the same time is obligatorily coreferential with an antecedent expression. LSB has a spatial deictic adverb that must be used anaphorically. This adverb locates the referent away from the signer but is obligatorily coreferential with an antecedent in the same phrase.³⁰ Thus, the metric for determining category membership by a single basic use cannot be applied to these forms. Fillmore's analysis is better because it does not disallow a deictic term to be simultaneously an anaphor.

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³⁰ For a discussion of the two cases, see section 5.3.1.1.2.

In this early work (1971, 1975), Fillmore does not specifically treat non-deictic, non-anaphoric uses. However, in a subsequent version of the discussion of deixis, he observes that “prototypically deictic [elements] may also have non-deictic uses” (1982:35-36). Although he does not discuss personal pronouns, impersonal *you* seems to be just such a use. Adding this piece, his analysis divides the domain between uses of deictic elements that are deictic and those that are non-deictic. The deictic category divides into gestural, symbolic, and anaphoric uses. The non-deictic category divides into solely non-deictic uses and non-deictic, non-anaphoric uses.

The impersonal *you* is a better example of a solely non-deictic use than of a non-deictic, non-anaphoric use because *you* has no formal anaphoric properties (Silverstein 1976). This being so, it makes no sense to say that a use of *you* is non-anaphoric.³¹ All linguistic items that have no anaphoric properties are as non-anaphoric as the impersonal *you*. An anaphor is

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³¹ What would be worth reporting is a use of ‘you’ that is anaphoric. Perhaps such an argument can be put forth for those languages like Portuguese which mark gender on all nominals and most pronominals. The periphrastic formal (in the social sense of formality) addressee terms *o senhor* and *a senhora* are considered to be second person (Thomas 1974:26). Since they encode gender, this feature enters into the interpretation of who is being referred to among the possible referents present in the conversational setting. If the referent of the pronoun were previously referred to in the discourse, that previous reference may provide the antecedent to a use of the pronoun which would then be arguably anaphoric. The marking of formality and gender would certainly aid interpretation of written reports of conversations where perceptual cues were no longer available.

Although the linguistic historian knows that the periphrastic pronouns are formally third person, such knowledge is pertinent more to a diachronic description of the pronoun system than to a synchronic one. Many Brazilians, even the well-educated, would find incomprehensible the claim that these pronouns are not second person forms. Very few would countenance the claim that the now informal *você* is also a third person form, although it is so diachronically. *Você* may be the subject of a second person verb form and commonly is co-indexed with a second person possessive, as in: *Você perdeu teu livro?* Moreover, its status as formally third person is due to the fact that it derives from a noun. As a pronoun, it has always had second person rhetorical force.

The Brazilians’ conception of the Portuguese pronoun system is based on patterns of use. The situation has parallels with the English one. In English, there is a gap in the paradigm in the marking of a number distinction on the second person. The ordinary (American) English speaker, to the extent he considers the matter, must think that the missing term is the second person plural. Evidence for this is the periphrastic *you all* and *you guys*.

necessarily a deictic term under a conception of the domain which takes *deixis* to be the overarching category, but a deictic term is not an anaphor. The relationship is not reciprocal. Non-deictic, non-anaphoric use may be exemplified by atypical uses of anaphors, e.g. third person pronouns.³² In the sentence, “The beginning of love: there is no them,” *them* cannot be coreferential with *there* because expletive *there* has no semantic features. This is also not a mention as opposed to a use of *them* since it draws on semantics and the set-internal contrasts of the personal pronoun system (specifically *them* equals the ‘not-us’ and *us* equals the ‘you-and-I’).

Levinson makes an important contribution to an understanding of uses by explicitly identifying the non-deictic as a category and, further, by identifying the non-anaphoric as a subcategory of non-deictic. It fills in a gap where relevant data were not treated in Fillmore’s model. Analysis of these data demonstrate how far a use of a deictic term, in the broad sense, can diverge from its prototypical use. However, the reinterpretation I suggest is more consonant with the facts.

Another interesting aspect of Levinson’s analysis is his discussion of the combination of gestural and anaphoric uses. The example he provides is the following (p.67).

I cut a finger: this one.

He says that, “*this one* refers to whatever *a finger* refers to, but simultaneously must be accompanied by the presentation of the relevant finger.” I have no quibble with the claim that *this one* is a gestural use, but I am not convinced that it has an anaphoric relationship to *a finger*, given that

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³² Levinson’s examples (p.66) include demonstratives which, although basically deictic in their use, can simultaneously be used anaphorically. In this they differ from *you*. Given that their basic use is deictic, however, the demonstratives are less good as exemplars of non-deictic, non-anaphoric use than is a third person pronoun, whose basic use is anaphoric.

no individual finger is privileged as being the “relevant” one. Perhaps *one* is an instance of text deixis.

Levinson says of *discourse*, or *text*, *deixis* that it “concerns the use of expressions within some utterance to refer to some portion of the discourse that contains that utterance” (p.85). Text deixis and anaphora are not always easy to distinguish, as Levinson himself warns. However, consider the following example.

Every time I use that machine, I cut a finger. Yesterday, this one;
today, this one.

The difference between Levinson’s example and mine is that the context of his weights interpretation in favor of an understanding of the two expressions as referring to the same extralinguistic object. Even in his example, though, *this* does more than merely refer back to an antecedent; it linguistically narrows the reference from the “possible fingers” to the “relevant finger,” as presentation of the cut finger does gesturally. The relationship between the indefinite noun phrase and the noun phrase containing the demonstrative seems to me to be more like the (b) case than the (a) case below.

(a) A panhandler came up to me on the street yesterday. This one was really aggressive.

(b) (Looking over the wares of a Telegraph Avenue street vendor) I’m looking for a present for a friend. Maybe a ring. ... I’d like this one.

The noun phrase *a panhandler* is syntactically indefinite but semantically specific so that the noun phrase *this one* can corefer to the same entity. The noun phrase *a ring* is syntactically indefinite and semantically nonspecific so the coreference relationship between it and *this one* is problematic.

In his discussion of the *pronouns of laziness*, Levinson observes, “One could perhaps say that the pronoun here refers successfully *via* a discourse-

deictic reference to a prior NP" (p.87). He repeats a well-known sentence which has such a pronoun:

The man who gave his paycheck to his wife was wiser than the man who gave *it* to his mistress.

and he comments that "*it* is not co-referential with *his paycheck*, but refers to what a repetition of that NP would have referred to" (p.87). That seems to be the case with the finger examples; *one* stands in for *finger* and *this* is a gestural use without being anaphoric.³³

Levinson gives another example which better instantiates his claim about the combination of gestural and anaphoric uses.

He's not the Duke, he is. He's the butler. (p.65) (Italics Levinson's.)

He does not discuss the example beyond identifying it as a gestural use and only that. Yet, it is likely that this utterance would be a second part of a conversational exchange. The first part must have included an assertion or presupposition by a previous speaker that a certain individual was the Duke.³⁴ As a second part, it raises questions about the coreference relations between the three tokens of the third person pronoun and what must be two tokens of the phrase *the Duke*.

The example brings up issues about proper reference and successful reference which have consequences for the analysis of anaphoric use. The two pronominal references to the actual butler (the first and third tokens), who had been erroneously supposed to be the Duke, are gestural and anaphoric if they share a coreference relationship with a token of the phrase

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³³ Alternatively, an analysis based on Gensler's (1977) notion *nonsyntactic anaphora* may be a better explanation for the relationship between the two noun phrases than either Levinson's or mine. The point of my challenge to Levinson's analysis of the example is that it is not a good exemplar of the phenomenon. A better can be had, and in fact he provides a better one.

³⁴ If the actual butler had been misidentified as the Duke by the use of a proper name belonging to the actual Duke rather than by his title, the situation is more complicated. It is still ultimately resolvable in the way I suggest.

the Duke in a first part. That first token of *the Duke* would be improper but successful reference since the interlocutor was able to identify the referential object of the phrase. But the single third person pronoun which has as its referential object the actual Duke may also be gestural and anaphoric if it can be said to have a coreference relationship with the second token of *the Duke*. It is likely that the first token of the *Duke* brought up in the interlocutor's mind both the idea of the fictive and the idea of the real Duke. Clearly, he had in mind the same referential object for both his own utterance of *the Duke* and his second utterance of *he*. And this is true whether or not he himself is right about the Duke's identity.

Vocal gestures such as pitch and loudness shifts (which Levinson probably intends the use of italics to represent) should count as acoustic cues among Bühler's "pointing gestures." Yet, the acoustic cues in Levinson's example would be insufficient for indicating which of two present male nonparticipants is being referred to; visual cues such as eyegaze (as Levinson notes) or "pointing" with the eyebrows or chin are required. Eliminating the complications introduced by having two possible present referential objects would show that vocal gesture alone can be a cue for a gestural use of the third person pronoun, as the following personal anecdote demonstrates.

Early on in my residency in Brazil, I was chatting with a colleague in the parking lot of a large and prestigious urban university while we awaited a third person who would join us for the ride home. I took passing notice of an older and elegantly dressed black man, parked near us in an expensive car, also obviously waiting for someone. At the time, I was still hopeful about the possibility that race in Brazil was not a significant obstacle to material success. Without giving it much thought, I assumed the man was someone's husband, father, or friend. Then, as a middle-aged female professor came

along, my colleague said, gazing at the woman approaching and not to the man in the car, "It's so nice that Maria has a chauffeur to drive her home." To which I responded (only as internal dialogue, however), "*He's* the chauffeur!" -- with my attention drawn not to the woman but to the man whose dapper clothing now revealed itself, upon more careful inspection, to be a liveryman's uniform.

The example supports Levinson's claim that gestural use -- here only (imagined) vocal gesture -- can combine with anaphoric use, without some of the doubts raised by the other examples. Levinson gives no examples of the combination of symbolic and anaphoric uses. A closer look at what gestural use entails explains the asymmetry.

Gestural and symbolic uses entail expectations about the addressee's attentional state. With gestural use, the speaker presupposes that the addressee's level of attention is not sufficiently focused for the successful accomplishment of the purposes of the referential task at hand. In symbolic use, the speaker presupposes that the addressee's level of attention is sufficient. Here, linguistic items from one (traditional) category (deictics in the narrow sense of demonstratives, etc.) are mixed with the attentional aspect typical to the other (traditional) category (anaphors). Anaphors used in situations where the addressee's level of attention is already sufficient result in anaphora (either syntactic or nonsyntactic) so there is no need to speak of the symbolic use of anaphors.

As mentioned above, in the earlier version of Fillmore's discussion of gestural and symbolic uses, he does not include anaphoric as a sister to the other two. In fact, having introduced the terms gestural and symbolic, he then speaks of the "gestural/nongestural distinction" (1971:224) and, again, of "basic symbolic use" being "non-gestural" (1971:227). Here, the presence of

visual or acoustic cues is seen to contrast with their absence, but no grammatical distinction seems to hinge on the contrast. The three-way version of the contrast (1975) seems to intend a grammatical distinction.

Gestural and symbolic uses appear to be orthogonal to the traditional deictic categories, linked as they are to the speaker's assessment of the addressee's attentional state. They are relevant at the discourse level but not at the semantic or syntactic levels. Given this, both typologies of uses reviewed here may be "mixing apples with oranges" in positing a sister relationship (or, perhaps more accurately, a cousin relationship in the Levinson model) between gestural and symbolic, on the one hand, anaphoric and (in the Levinson model) nonanaphoric, on the other hand. What is most provocative about the typologies is that they frame the question of the relationship between gesture and deictic word in linguistic terms. Until the implications for the theory of deixis of the co-occurrence of gesture and linguistic item have been more fully delineated, the relationship between the two -- i.e. broadly linguistic or merely communicative -- remains unclear.

2.1.3.3 Gesture and language

I have discussed these several distinctions of the deictic uses that Fillmore and Levinson propose at considerable length because they reveal details of the relationship between language and gesture which are not, even now, well understood.³⁵ In face-to-face conversational exchanges,³⁶ most

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³⁵ There is increasing interest in gesture as an object of study, some of which examines the co-production of gesture and language (e.g. Clark 1996; Kendon 1995; McNeill 1992). In section 3.3, I discuss sign languages and gesture in terms of a classification system for gesture proposed by Ekman and Friesen.

³⁶ Typical features of conversation may be changing under the influence of modern communication technology. Still, to abandon the notion that conversation is characteristically face-to-face seems premature. Even if/when face-to-face conversation is no longer typical, it will leave behind residual effects. As Lyons observes, "There is much in the structure of languages which can only be explained on the assumption that they have developed for communication in face-to-face interaction" (1977:637).

speakers' "pointing gestures" are in the visual channel. Since their linguistic modality is vocal-auditory, there is little confusion between what is gesture and what is language.

The preference for the visual channel for the gestural component of the co-production of gesture and linguistic item may be due to the greater acuity of vision, compared to audition, for recognizing gradations (Coulter 1993). Visual cues can exploit the three-dimensionality of the visually-perceived world. A noise, on the other hand, may lead the hearer to its source, but it cannot subsequently guide him to specific other directions.

As Bühler says, the purpose of the gestural component is to narrow to a unique referent the field of possible referents evoked by the deictic word. The preference for the visual gesture, however, is stronger for nonparticipant referents. The gesture co-produced with the first and second person pronouns, as the examples in section 2.1.3.1 show, may be acoustic cues. When the "pointing gestures" are acoustic, the boundary between gesture and language is less certain. Co-production of gesture and word becomes co-articulation, where the two are merged into one. Are vocal gestures which differentiate between deictic uses linguistic or merely communicative?

Sign languages, in contrast to spoken languages, are articulated in the visual channel. Vocal gestures which chance to co-occur with signs are not acoustic cues. They may co-occur incidentally with linguistically meaningful mouth movements, without themselves being communicative; or they may be only accidental. Because of the perceptual needs of deaf people, any gesture co-produced with a linguistic item must be in the same channel, the visual channel. The ASL researcher Scott Liddell claims that "[t]he need to gesture while producing language has been met in sign languages by ... combin[ing] the two" (1996:166). Although I disagree with Liddell on the details (see

section 3.3.3 and section 4.3), his hypothesis merits consideration. A challenge to sign language linguists is to confirm or disconfirm the generalization that deictic terms require accompanying gesture in some situations. As noted above, with a single channel for gesture and language, the boundary between the two is hard to establish. This challenge has been taken up by many sign language linguists in their efforts to account for deictic person reference. Several of the most influential analyses will be critiqued in chapters 3 and 4.

2.2 The development of the notion of deixis

Semanticists note that deictic words, taking the expression in its broader sense to include anaphors, differ from other words in important ways. Bühler (1982) advances what he calls a two-field theory of language: the *symbolic field* in which naming words³⁷ receive their complete and precise meaning, and the *deictic field* in which deictic words receive their full and precise meaning. The translation of Bühler is only partial and does not include his discussion of the symbolic field. As for the deictic field, he explains it as a coordinate system with an *origo* at the intersection of the coordinates. Located in the origo are 'I,' a *sender marker*, 'now,' a *moment marker*, 'here,' a *place marker*. Several systems of positional coordinates are identified, each associated with a region of the body: eye, head, chest, and pelvis. These several coordinate systems are relevant for different concepts,

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³⁷ "Naming words" is the expression used in the translation of Bühler. I deduce from the fact that the term *noun* is not used here that the category "naming words" is intended more broadly. A distinction is sometimes made between the terms *lexical* and *deictic* which parallels to some degree the dichotomy of symbol and signal. Yet deictic words, as members of the lexicon, are also lexical in that sense. Proper names are not treated in the translated text, beyond the mention that they are naming words. Their status is unique, however, since they, like deictics, refer but do not denote -- at least in the typical case nowadays where a Smith no longer works with metals.

and can be more or less explicitly encoded in the grammars and lexicons of different languages.

Bühler distinguishes naming words from deictic words by means of their functions: naming words function as *symbols*, deictic words as *signals*. The distinction he makes between the two is that symbols denote but signals only refer. He claims that the main and original functions of the first and second person pronouns are not to denote *sender* and *receiver*, respectively, but only to refer to these role holders. Following Brugmann (no specific citation given), Bühler reminds us that the personal pronouns “do not denote an object according to its specific quality,” remarking that grammatical gender of third person “is a matter of Indoeuropean languages and goes beyond the topic of deictics proper.”

It could be said that it is through a specific descriptive quality that tokens of naming words lead us to their referents and through a location strategy based in the positional coordinates that deictic words lead us to their referents. But, to the extent that the location strategy uses semantic notions such as *person*, *place*, *time*, *number* and *gender* symbolic aspects are also present in deictic words. This insight will be taken up in section 2.3.

The complexity of deictic words, straddling as they do the divide between symbol and signal, is addressed by Jakobson (1957). Following the philosopher Peirce, Jakobson divides linguistic items into *symbol*, *index*,³⁸ and *icon*. Icons are “those signs where the perceivable properties of the sign vehicle itself have isomorphism (up to identity) with those of the entity

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³⁸ This use of the term differs from the social action sense given in the above comparison of the terms *indexicality* and *deixis*, as should become clear in the definition to follow in the text.

signaled.”^{39,40} Indices (or indexes) are “those signs where the occurrence of a sign vehicle token bears a connection of understood spatiotemporal contiguity to the occurrence of the entity signaled.” Symbols are “a residual class of signs, where neither physical similarity nor contextual contiguity hold between sign vehicle and entity signaled.” Symbol here has the same value as for Bühler, index is equivalent to Bühler’s signal, and icon introduces a third category. An example of an icon is the representation of a dog’s barking as *bow wow*. An example of the kind of lexeme found in sign languages that is often thought of -- perhaps mistakenly -- as being iconic is the LSB sign HOUSE, [B_>B_< x ·],⁴¹ whose two flat-hands making contact with each other at the pads of the fingertips may be seen to represent the peaked roof of a house.

Much has been made of the apparent iconicity of sign languages (e.g. DeMatteo 1977; Mandel 1977). Historical studies (e.g. Frishberg 1975; Radutzky 1989) and language acquisition studies (e.g. Bernstein 1980; Meier 1987), among others, show iconicity to be a less salient feature of the linguistic systems of sign languages than it may seem. An additional comment on the LSB example is that buildings in Brazil, including residential ones, are typically not peaked-roofed but flat-roofed. (If not flat-roofed, where would you put the water tank?) This being so, the iconicity of the sign, to the extent it is perceived as such by signers, draws on a typification of the referential object which differs from the referential object typical to the Brazilian context in exactly the feature captured by the icon. It

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³⁹ The definitions are taken from Silverstein (1976), whose work builds on both Peirce and Jakobson.

⁴⁰ *Sign* in this usage does not refer to the lexical items of sign languages ; *signal* in this usage differs from Bühler’s usage, as should be obvious.

⁴¹ To represent the signs, I use a modified Stokoe notation adapted from the one developed by Mandel (1993). See Appendix A.

is perfectly felicitous and completely unremarkable to say, using the sign HOUSE, “The (flat) roof of my house needs repairs.” It is far from a foregone conclusion that the LSB-acquiring deaf child has enough experience of peaked-roofed houses, either personally or vicariously (since “reading” to the child using picture books, which may depict peak-roofed houses, is not a common practice), to find any isomorphism at all between the sign and its meaning. Sign language lexicons may turn out to have many fewer iconic entries than has been presumed. The concepts *metaphoricity* and *metonymy* may prove to be more fruitful for analyzing signs (Wilcox 1993; Taub, in progress). However, this debate will not be addressed further in the present study since deictics do not fall within its purview.

Although Bühler categorizes deictics as signals distinct from symbols, Jakobson says they are “duplex signs” because they combine index and symbol. While the encoding of spatiotemporal contiguity is the hallmark of deixis, at the same time the division of the domain into semantic categories (e.g. *place* and *time*) shows a reliance on specific qualities, as would be expected of symbols. We might want to say, then, that the distinction between naming words and deictic words is the absence of the deictic function in the former.⁴²

Fillmore (1975) says that deictic words and nondeictic words differ in that only the latter tend to permit gestural use. The difference in behavior between the two types of words seems to be related to the categories *index* (or *signal*) and *symbol*, with the deictic words, as duplex signs, able to be weighted toward one category or the other, depending on use.

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⁴² Since Silverstein (1976) calls symbols a “residue category,” defining the category in terms of what it is not is justified.

Jakobson calls the duplex signs *shifters*, a term adopted from Jespersen. The term highlights the function of deictics in moving the talk between various conversational poles, e.g. from the 'now,' 'here,' and 'I' of one interlocutor to the 'now,' 'here,' and 'I' of another. Jakobson explains shifters as "a linguistic item that cannot be defined without reference to the message" (p.2) and again, as categories implying "reference to the speech event" (p.3). Silverstein elaborates further, "[S]hifters ... are a mechanism in which there is no abstract system of propositional equivalence relations, but only the rules of use which specify the relationship of actual referent of the sign token to the other variables of the context..." (1976:25).

Arguing against Husserl, who thought that the peculiarity of personal pronouns lay in their lack of constant meaning, Jakobson points out that the first person pronoun means⁴³ the sender and the second person pronoun means the addressee of a given message, and that that meaning remains constant whether the first person is *I*, *ego*, *ich*, etc. The pronouns contrast with proper names, in that the latter mean the person who is assigned the name, whoever that person may be. Proper names encode no constant of meaning. The meaning of the pronouns, on the other hand, is constant; it is their interpretation which varies.⁴⁴

Arguing against Humboldt, who thought that personal pronouns were on the most elementary and primitive stratum of language, Jakobson insists that they are a complex category. He notes that studies of acquisition and of language loss through aphasia support this claim.

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⁴³ I take Jakobson here to be using *means* in the sense that Bühler uses *refers to* in contrast to *denotes*.

⁴⁴ *Interpretation*, as I intend it here, is equivalent to Bühler's "full meaning." The distinction that philosophers make between *semantic reference* and *speaker reference* is related (Donnellan 1978) in that the semantics of *person* and of particular participant roles are constant, but the individual being referred to is determined by the speaker's intent in uttering the pronoun.

Pettito's study of personal pronoun acquisition in ASL (1986) shows that the claim holds true for a sign language as well. She argues convincingly that the relationship between the point (the configuration of the hand with the index finger extended and the other fingers curled into the palm) and its referential object (the nonlinguistic entity referred to) is not direct but is mediated by linguistic convention. This is to say that the communicative intent of the pointing is encoded in language, partaking of the system of contrasts of ASL on the levels of both form and meaning.

The children whose acquisition Pettito followed showed similar developmental patterns to those of children acquiring spoken languages. They passed through the expected stages (e.g. the *one-word stage*, where single lexical items are articulated with communicative intent, and the *two-word stage*, where two lexical items are articulated between which grammatical relations hold, such as verb-object or modifier-noun), and they did so at the expected ages. The acquisition of pronouns by Pettito's subjects mirrored the complexity of the category also seen in hearing children's pronoun acquisition. Despite the phonological simplicity common to pronoun forms in many languages, pronoun use is always complex. Recognizing the complexity of usage, adults often avoid pronouns in their conversations with young children. One of the hallmarks of *motherese* is the substitution of nouns for pronouns, as for example when a mother addresses her child saying, "Mommy wants Jimmy to drink his milk." The deaf mothers in Pettito's study used this strategy. Pettito recorded the deaf children's developmental progress beginning with nonlinguistic pointing, followed by a stage where pointing behavior to people drops out of the children's communications, to the stage where it reappears as part of the linguistic system of ASL.

Most telling for its implications about ASL deictic person reference is the pronoun reversal error observed in the deaf children's developmental pattern. The pronoun reversal error is the failure of the language learner to understand shifting reference between addresser and addressee. Shifting reference is the property of deictic words to move the deictic center between participants in a conversation so that 'I' and 'here' used by different participants refer to each in his turn, while 'you' and 'there' used by different participants refer to the interlocutor of each in his turn. This is a particularly significant error in sign languages given the apparent (and apparently superficial) relationship between nonlinguistic pointing and the relevant signs. Documenting this error among deaf children acquiring ASL is evidence that it is not the form itself which is difficult to perform, given that the deaf children's communicative behavior included pointing gestures in the earliest stages, as does that of hearing children acquiring spoken languages. Rather, it is the linguistic convention which governs the use of pronouns that is difficult to learn, in signed languages as in spoken languages. Pettito's evidence, then, establishes the fact that certain forms function as shifters in signed languages just as certain forms function as shifters in spoken languages (although she did not frame her conclusion in these particular terms).

Pettito compared the acquisition of these signs with personal pronoun acquisition data for spoken languages and found similar patterns, but her argument was not conclusive with respect to the specific linguistic category of the signs. She did not address the issue of what kind of shifter was being acquired, assuming that because the signs functioned in ways similar to the personal pronouns of spoken languages their identity with personal pronouns was not in doubt. The data were not examined with a view to determining

which deictic category the forms belong to. That question will be addressed in chapter 4.

Analysis of deictic phenomena is more complex for sign languages than it is for spoken languages. This is due to the fact that, instead of sound displays as a means for encoding deictic notions, sign languages use visual displays in linguistic space, and they do this in physical space. One might guess that analysis would thus be simplified; the reality is just the opposite. The superimposition of deictic space on linguistic space on physical space results in such complexity that it is difficult to keep a clear view with respect to the different levels of space in order to draw valid generalizations about linguistic structure of sign languages. (Sound is also used in physical space but (linguistic) sound mediates the relationship between physical space and deictic space as encoded in the language, and so serves to keep the different levels of space distinct.)

Linguists ignorant of the systematicity and conventionality of form-meaning relations in sign languages have peremptorily denied the linguistic status of sign languages, in part because of the ubiquity of “pointing.” The similarities between nonlinguistic deictic pointing and the signs for making deictic reference have been viewed as particularly damning evidence. Linguists familiar with the grammars of sign languages have thus been concerned to establish the linguistic status of deictic signs.

The analysis of pronouns, in particular, figures prominently in linguistic studies of deixis in sign languages. The argument about whether or not sign languages can be said to have personal pronouns has taken many forms. In the next section, I will examine the distinction between personal pronouns and demonstratives as it is made in the semantics literature based

on spoken languages. A good understanding of this distinction grounds the arguments and counter-arguments that will be presented in later chapters.

2.3 Personal pronouns vs. demonstrative adverbs and pronouns

I begin with a review of the relationship between personal pronouns and demonstrative, or spatial deictic, adverbs, examining what aspects of form, meaning, and use are shared across categories, as well as the criteria which separate one category from the other. Following that, I will turn to a comparison of spatial deictic adverbs and demonstrative pronouns. Finally, I will consider the relationship between demonstrative pronouns and personal pronouns.

Focusing analysis specifically on the speaker, Bühler emphasizes the close relationship between the sender marker ('I') and the place marker ('here'), noting that the sound source is the speaker and at the same time is located at the speaker.

The deictic word 'here' get its full meaning as a position signal from the 'origin quality' of voice sound, and 'I' gets its full meaning as an 'individual signal' from the personal characteristics of the voice sound. (1982:13)

This distinction is exemplified in question-response sequences like

A: Who is it?   B: Me.

where B expects that A can identify him on the basis of voice quality, and

A: Where are you?   B: Here.

where B expects that A can locate him on the basis of directionality of the signal. The same physical phenomena of origin quality and of voice quality are equally present in each case; what differs is which of the two is "presupposed," which "asserted."

It follows from the close relationship of the two signals, Bühler says, that the functions of 'here' and 'I' as deictic words are, to some extent, the same. In support of this claim, he gives the example of the Armenian suffix -s, which can mean either 'here' or 'I,' and notes that a possible source of both *ego* and *hic* in Latin is Proto-Indo-European *gho.

Intermediate between the "extremes" of personal pronouns and spatial deictic adverbs lie the demonstrative pronouns. Lyons (1977) notes that, in a number of languages, the forms of the members of the set of spatial deictic adverbs are the same as the forms of the members of the set of demonstratives. In such cases, pronominal use is distinguished from adverbial use depending on the intended referent: if an object is being referenced, the form is interpreted as a demonstrative pronoun; if a place is being referenced, the form is interpreted as a locative (i.e. spatial) adverb. Lyons also notes the similarity between pro-nominals and pro-locatives, and the difficulty in distinguishing between the two, in the earliest utterances of children. This is related to the ambiguity of ostensive definition, i.e. pointing, which Lyons, like Bühler, holds has given rise to all locative deictics (adverbs and pronouns).

With respect to the relationship between personal pronouns and demonstrative pronouns, Bühler quotes from the grammar of Brugmann and Delbrück.

The third person pronouns ... are, one could say, demonstrative pronouns with substantive function, which refer to what is being talked about, what has been said or will immediately be said in discourse (hence deictic words in anaphoric use)... But the "I" and "you" pronouns also seem at least partially to have once been demonstratives... (p.16).⁴⁵

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⁴⁵ Since no explanation of the expression "substantive function" is given in the text, I surmise that what is intended is a contrast between a predicative function and a substantive,

Bühler supports this demonstrative-origins hypothesis.

Notions of *location* or *place*, of *entity*, and of *person* are needed to make the three-way distinction between spatial deictic adverbs, demonstratives, and personal pronouns. *Place* hypostatized becomes *entity*, sentient *entity* becomes *person*. Looked at in this way, deictic adverbs are intended to identify their referents by focusing the receiver's attention on locational features of a portion of the communication setting (physical or textual), demonstratives are intended to identify their referents by focusing the receiver's attention on locational features of an entity within the communication setting, and personal pronouns are intended to identify their referents by focusing the receiver's attention on personal features of an individual at some location within the communication setting.⁴⁶

This is a gradual shift in focus, a progression, wherein *person* might be thought to emerge out of *place* through the intermediary level of *entity*. The close relationship between adverbial locative deictics and pronominal locative deictics is widely recognized; the relationship between pronominal locative deictics and personal pronouns is less well understood. Thus, while it has

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or nominal, function. The demonstratives might be thought to predicate a location with respect to an entity. The third person pronoun makes no such predication.

⁴⁶ Bühler does not explain how the contrast between the "origin quality" (=locational features) and the "personal characteristics" (=personal features) which differentiate 'here' from 'I,' can be extended to the comparable terms relevant to the addressee or to those relevant to the nonparticipant. This contrast seems to be unique to first person. In the absence of Bühler's own explicit explanation, I infer that the extension of locational features is a two-step process: (1) the hearer identifies the source of the linguistic signal, then (2) plots the location of the nonfirst referent along a dimension of the positional coordinates as indicated by the spatial relation encoded in the deictic term uttered. For nonfirst personal pronouns that encode nondeictic descriptive features like semantic gender, those could be personal features. More generally, though, "full meaning," which I take to be equivalent to interpretation, must derive from an interaction between the sender signaling the conversational role of the referent relative to himself (by means of a personal pronoun) and situational factors including the sender's physical orientation (in terms of the various body coordinates Bühler proposes) within the interactional setting. For example, eyegaze towards a particular individual in the setting accompanying the utterance of 'you' provides the input to "full meaning."

been said (focusing on the *location* feature) that personal pronouns are weak demonstratives in that *location* plays only a small part in their meaning, it might also be said (focusing on the *entity* feature) that demonstratives are weak personal pronouns in that they lack true *person* contrasts.

Interestingly, Levinson (1983:72) says that demonstrative pronouns show overlapping organization between the categories of place deixis and person deixis. Given that demonstratives are third person only by default, it is not clear to me that it is appropriate to extend the category *person* to them. They stand at some mid-point between adverbial locative deictics and personal pronouns. *Person* entails *entity* but not the reverse. Just that quality (consciousness?) is not being attributed to referential objects of demonstratives that is definitive of the class of entities categorized as *person*. For this reason, to refer to a human being by means of a demonstrative is marked in languages like English, as this much-cited example shows.

*That married my sister.⁴⁷

The demonstrative ancestry of the third person pronoun is not sufficient grounds for extending to its forebears the salient feature of its adoptive family.

Lyons (1977) discusses two ways in which objects can be identified by means of referring expressions: by locating the object or by describing it. He claims that either or both of these ways can be encoded in the demonstrative and personal pronoun systems of different languages. It is unfortunate that Lyons neither elaborates this point nor cites representative examples since it would seem that locating is definitive of demonstratives, and indicating personal characteristics, certainly a kind of describing, is definitive of

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⁴⁷ The distinction here may be broader than deixis. The *that* vs. *he/she* contrast is also found between *what* and *who*, although there are quite a number of contexts which permit *what*, and many fewer *that* permit that in reference to a human being.

personal pronouns.⁴⁸ Where both ways are encoded in a system, relative weight of one way over the other in picking out referents would be criterial in determining to which category an item belongs. Lyons does characterize the contrast in English between *this* and *he* as ‘the one here’ and ‘the male one,’ respectively. This characterization shows that, for English at least, locational features are most salient for the demonstrative pronoun and descriptive features for the third person pronoun. Similarly, the essential criterion I use in later chapters for the categorization of sign language forms as either demonstratives or personal pronouns is the relative salience of locational features and conversational role.

2.4 Participant roles and the nonparticipant

While the notions of *place*, *entity*, and *person* are relevant to distinguishing between the three sets of deictics (adverbs, demonstratives, and personal pronouns), set-internal distinctions of all three rely on the notion of *spatial* or *proximity relations*. That claim is uncontroversial as regards the locative deictics but has been little explored with respect to the personal pronouns. The Brugmann and Delbrück quote cited above, in which demonstrative origins are hypothesized for all three personal pronouns, supports the claim. Only Fillmore, however, makes it explicit.

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⁴⁸ Lyons does not expressly stipulate whether the intent of his use of the word *object* is to include the participants of the conversation, the ‘I’ and the ‘you,’ but the generality of his prose would suggest so. Bühler would certainly question the idea that the conversational roles are “described” by the pronouns which refer to them. However, we can reconcile Lyons with Bühler on this point if we take the display of the personal characteristics of the signal (what Bühler calls “voice sound” but which I prefer to frame more generally here so as not to disinclude sign language phenomena) attendant upon the utterance of the first and second person pronouns as, loosely speaking, a kind of description, then those personal characteristic can be seen to play a role in the personal pronouns which refer to the participant roles. They do this directly in the case of the first person pronoun. The role they play in the case of second person pronouns is more complicated, but this is in keeping with the assertion Silverstein (1976) makes about the second person pronoun being the “most creative.” That assertion will be discussed in section 2.4.

Fillmore (1971:222) suggests that, parallel to the spatial deictics 'here' and 'there' and the temporal deictics 'now' and 'then,' *proximal* and *distal* also serve to differentiate between the person deictics 'I' and 'you.' Given that some languages have three-term spatial deictic systems which take the addressee's location as *medial* in relation to the speaker's location, it may be better to say that the contrast is *proximal / nonproximal*. The personal pronouns and the locative deictics, then, would fall into the same pattern. More is at stake here than a mere terminological issue because the power of the notion of *spatial relation* as criterial for distinguishing the set-internal differences would be weakened by inconsistencies across the three deictic categories. With this alteration, Fillmore's suggestion can provide a uniform approach for understanding subcategorical distinctions within the three traditional deictic categories that seems to be both intuitively correct and empirically justifiable. Unfortunately, elaboration of the idea has been limited, in the main, to work on multiple nonparticipant terms.

An exception to that limitation can be found in Lyons' discussion of *empathetic* deixis which can be seen to take the addressee as nonproximal. The discussion also shows the relevance and parallelism of spatial notions for the set-internal contrasts of the three deictic categories *person*, *space*, and *time*.

[W]e would draw attention to what we will call *empathetic* deixis and its role in anaphoric reference. It frequently happens that 'this' is selected rather than 'that,' 'here' rather than 'there,' and 'now' rather than 'then,' when the speaker is personally involved with the entity, situation or place to which he is referring or is identifying himself with the attitude or viewpoint of the addressee. (1977:677)⁴⁹

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⁴⁹ Empathetic deixis can be found as well in deictic reference which is not anaphoric. (See R. Lakoff 1974.)

We can infer from this passage that the addressee is, in the typical communication situation, categorically nonproximal. That default is necessary for the speaker's choice of proximal terms as a display of his identification with the viewpoint of the addressee to have its rhetorical power. With this choice -- in effect, reversing the "polarity" of the proximity feature of the second person pronoun, the speaker temporarily extends his own status to the addressee.

The speaker's unique status as categorically proximal is consonant with the *first/nonfirst* distinction, by which is meant the special status of the *first person* vis à vis the *second person*. A distinction between *self* and *other* has been shown in anthropological and psychological work to play a significant role in cognition. Thus, it might be expected that the distinction would be found to have linguistic reflexes. Casagrande (1966), following Hallowell (1955), claims that the generic function of language is to provide linguistic means for orienting the individual to the culturally constituted world he apprehends, and that one of the basic orientations is *self/other*. The *first/nonfirst* distinction is a linguistic reflex of this basic orientation.

To this point, I have been using the terms *participant* and *nonparticipant* without explicitly grounding them in the domain of deixis. In the following, I will review the features which set *first person* apart from *second person* -- the first/nonfirst distinction-- and these two participants apart from *third person*, the nonparticipant -- participant/nonparticipant distinction.

Benveniste (1971) observes that there is an opposition between the I-person and the non-I-person, or the subjective person and the nonsubjective person, and that 'you' is dependent upon 'I.' He calls this opposition the *correlation of subjectivity*.

This crucial insight, originating with Benveniste and further elaborated by Silverstein (1976), has important implications for sign language analyses. Yet, to the extent it enters into the debate about the configuration of personal pronoun systems, it is misapplied to set the first person apart from the second and third persons. In fact, Benveniste is dividing *person* into the 'I' (=first person) and the 'not-I' (=second person). The *nonperson* or nonparticipant (=third person) does not enter into his argument at this point.

What Benveniste's insight gives us to understand is that the speaker by the act of address actually calls the addressee into being (as a conversational role). While the speaker enjoys existence under his own efforts, not so the addressee. With every utterance of 'I' the speaker makes overt his presence in the speech act; the addressee has no such power, for as soon as he opens his mouth to speak, he is no longer addressee. It can be argued that the addressee is also indispensable, yet his presence may be asserted (as is the case when utterances include use of the second person pronoun or a vocative) or only presupposed (as is the case when utterances do not include use of the second person pronoun or a vocative). Whether asserted or presupposed, it falls to the speaker to make that assertion or presupposition.

Some otherwise careful work on sign language pronouns has looked for the anchorage of the form-meaning relationship of the second person pronoun in the individual himself who happens to stand in the role of addressee of a given utterance at a given moment. Failing to find the requisite systematicity of form and meaning, the conclusion is drawn that the conversational participant role of *addressee* has not been grammaticized as a

second person pronoun (Meier 1990; Engberg-Pedersen 1993a).⁵⁰ The correlation of subjectivity reminds us that only the speaker can be the source of the form-meaning relationship. With this in mind, the search for a second person pronoun form is simplified and can be successful, as my arguments in chapter 4 show.

In support of the *first / nonfirst* distinction, as the correlation of subjectivity is also known, Benveniste notes that pluralization of first person pronouns, but not second and third, differs conceptually and, in many languages, formally from pluralization of nouns. First person plural does not in the normal case refer to multiple current speakers but is instead a junction of first with second or third or both. Second person plural, on the other hand, can either refer to multiple addressees or it can be a junction of second and third person. Benveniste calls these combinations of more than a single person category *amplified person*. He says that only the nonperson, that is, the third person, always admits of a true plural.

What is equally remarkable but unremarked (by Benveniste, but see the discussion of Silverstein below) is that first and second person plurals are more similar than different since each can admit of a true plural but commonly encodes *amplified person*. In this, the two contrast with the third person plural, which never encodes amplified person.

Although Benveniste does not draw on the plural facts to support the distinction he makes between the first and second persons, on the one hand, and the third person, on the other, he marshals an impressive array of other facts to support his claim.

He asserts that personal pronouns are not a unitary class.

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⁵⁰ For a detailed critique of these analyses, see section 4.2.2.3.

Some belong to the syntax of a language, others are characteristic of what we shall call “instances of discourse,” that is, the discrete and always unique acts by which the language is actualized in speech by a speaker. (p.218)

Here, Benveniste can be seen to enlarge upon Bühler’s observation that specific grammatical functions (i.e. coreference) pertain to anaphora.

Although no detailed exposition of this dichotomy follows his assertion, we can understand the first group to be anaphors (i.e. third person pronouns) and the second to be deictics (i.e. first and second person pronouns).

While Bühler emphasizes the inherently nondenotative nature of personal pronouns and focuses his discussion on first and second person, he does not explicitly separate out third person from the set. Benveniste concurs with Bühler’s analysis of first and second person but he contrasts them very strongly with third person. He labels this opposition the *correlation of personality*.

It must be seen that the ordinary definition of the personal pronouns as containing three terms, *I*, *you* and *he*, simply destroys the notion of “person.” “Person” belongs only to *I/you* and is lacking in *he*. (p.218)

He also calls attention to empirical evidence of the heterogeneity of the person category, citing examples from genetically unrelated languages. To take just one,

In Caucasian of the northwest ... the personal signs for the two first persons have a constant and regular form, but for the third person there are many signs and quite a number of difficulties. (p.198)

Several characteristics distinguishing first and second from third are given: one vs. infinity -- “the ‘I’ who states, the ‘you’ to whom ‘I’ addresses himself are unique each time... ‘he’ can be an infinite number of subjects -- or none”; ‘I’ and ‘you,’ but not ‘he,’ are reversible; “‘third person’ is the only one by which a *thing* is predicated verbally.” Benveniste notes that *third person*

“admit(s) a sometimes rather large number of pronominal or demonstrative variants.”

The focus of both Bühler and Jakobson is on the first person category; they make the distinction between the participants and the nonparticipant, then leave it at that. Not so Benveniste. Having recognized the uniqueness of first person, Benveniste emphasizes the distinction between the participants and the nonparticipant. He rails against the wrong-headedness of including third person with the personal pronouns. His criteria for setting the third person pronoun apart from first and second person pronouns can be applied to sign language data as readily as to the spoken language data from which he drew them. Sign language specialists would do well to heed his words. Considerable confusion has arisen in sign language linguistics from attempts to treat the pronouns as if they were a unitary class (e.g. Lillo-Martin & Klima 1990).

Lyons (1968) also recognizes the centrality of the first/nonfirst distinction. He says that the primary distinction is between *first* and *not first*, the distinction between *second* and *third* being secondary. The grammatical persons can be represented as *first* = (+ ego), *second* = (- ego, + tu), *third* = (- ego, - tu). Lyons does not clarify what he means by “primary” and “secondary,” leaving it to the reader to infer whether he intends that the first/nonfirst distinction is logically primary to the participant/nonparticipant distinction, chronologically primary, of primary importance, or some combination of these. However, it is unarguable that Lyons is categorizing both first and second persons as positive members of the *person* category, as against third person, which is negatively defined in terms of the first two. He does not even mention the first/nonfirst distinction in his most comprehensive

work (1977), where he focuses instead on the participant/nonparticipant distinction.

Lyons (1977) distinguishes the participant roles of *speaker* and *hearer* -- first and second person, respectively -- from the nonparticipant third person category, observing that in the typical conversational situation the participants are necessarily present, necessarily definite, and necessarily human, as against third person referents, which may be proximate⁵¹ or not, definite or not, human or not. On consideration of both semantic and syntactic evidence, he concludes that first and second person are positive members of the category of *person*, while third person is negatively defined.

It is not clear what Lyons means in saying that the third person can be definite or not, at least as far as the independent personal pronouns are concerned. Although with respect to verbal concord⁵² and for noun phrases, if they are third person, this may be the case, the relationship between third person (independent) personal pronouns and the definite article has been widely noted, by Lyons himself as well as a number of other writers. Perhaps what is meant is that third person can be *specific* or not. That is, 'he' may or may not refer to a particular referential object. In terms of specificity -- if not definiteness, the third person pronoun differs from first and second person pronouns (aside from the nondeictic, non-anaphoric use of 'you,' which is also nonspecific).

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⁵¹ I take *proximal* (Fillmore's term) and *proximate* (Lyons' term) to be referentially equivalent in the texts under discussion here.

⁵² It should be pointed out that *person* in the sense of verbal concord is likely derivative of its use with the personal pronouns. Only in this sense can third person be definite or not -- specifically, it is definite when the third person pronoun (or a demonstrative pronoun or a definite lexical NP) is the subject of the verb and indefinite when an indefinite pronoun (or indefinite lexical NP) is the subject of the verb. The indefinite pronouns as a group do not encode the feature *person*, only those compounds with *body* or *one* (but not two word collocations with *one*, e.g. *anyone* vs. *any one*). But then these are not, strictly speaking, personal pronouns. *One* is, after all, the impersonal pronoun in some uses.

Lyons' juxtaposition of present and proximate is also somewhat problematical. The term encodes different notions, yet it is not clear what he holds the relationship between the two to be. Proximity is relevant to a trajectory out from some orienting point; presence, on the other hand, is relevant to some delimited area. While the presence of proximate referential objects can be presumed, the (non)presence of nonproximate referential objects is determined by the particular language and/or within the communication setting.

The juxtaposition is all the more misleading because Lyons seems to be confusing categorical features of the pronouns with situational features of use. It is not that the third person pronoun in one usage is marked *proximate* and in another usage marked *nonproximate*. Rather, in terms of the conversational setting, the actual referents of the third person pronoun may or may not be located within some bounds understood to be proximal. The referential object of the third person pronoun, in contrast to those of first and second person pronouns, exists outside the conversational interaction in the sense that it does not partake of the interaction. Its actual presence within or proximity to the conversational setting is irrelevant to the person category. Thus, the third person pronoun is not marked for these semantic features *proximity* and *presence*-- either positively or negatively.

As regards proximity, Lyons himself says as much when he cites the historical relationship between demonstrative pronouns and third person pronouns in the Romance and Germanic languages, noting that classical Latin did not have a third person pronoun but only demonstratives. (He also mentions that a number of modern languages do not have third person pronouns.) With respect to English, Lyons claims that

English ... developed from a system in which there were no third-person pronouns as such ... but a set of two demonstratives, each of which had three genders and each of which could be used either pronominally or adjectivally. ...

Looked at from a diachronic point of view, then,... the third-person personal pronouns are demonstrative pronouns, distinguished with respect to gender and number, but ... unmarked for proximity. (p.647)

The English third person pronoun, then, contrasts with the demonstrative pronouns in that the third person pronoun is unmarked for the locational feature *proximity*. It should be borne in mind, in view of Fillmore's suggestion about spatial relations pertaining between the first and second persons, that marking for proximity is implicit on these pronouns, relative to the demonstratives. The spatial relations between the referential objects of the first and second person pronouns is an artifact of the (typical) communication setting itself rather than a grammaticization of a feature of that setting.

In later work (1981), Lyons makes the distinction between *pure* and *impure* deixis. By way of example, he points to the difference between English first and second person pronouns (which he says are pure deixis) as opposed to third person, which is impure deixis because it includes the notion of gender. *Impure deixis* includes "distinctions based upon properties of the referent which have nothing to do with his, her or its spatiotemporal location or role in the locutionary act" (p.233). Lyons comments on the wide variety of properties encoded in the gender systems of different languages -- among them, in addition to the sex of the referent, sortal categorization as human, animal or inanimate, shape, size, texture or edibility.

One wonders if perhaps the gendered third person pronouns typical of Indo-European languages have biased analyses of sign language

nonparticipant forms. The sign language forms are pure deixis. A meaning like *nonfirst-nonsecond* may seem insufficient to be credibly the appropriate semantics of a form. Yet, Maya and other non-Indo-European languages have third person pronouns that are also pure deixis.

Silverstein (1976) describes third person pronouns as “anaphoric devices that obviate the need for repetition of a full, lexically-complex referring noun phrase,” true substitutes. (Mentions of *third person* are set off by quotes here as in Jakobson.) Yet, Silverstein also says that usage of the third person pronoun can be deictic as well as anaphoric. The deictic usage would likely follow the pattern of gestural and symbolic uses (see sections 2.1.3.1 and 2.1.3.2 above) .

He interprets the evidence from plurals differently than did Benveniste and Lyons, using it to support the distinction between the participants of the speech event and the nonparticipant rather than the first/nonfirst distinction. His analysis of third person reaches the same conclusion as did Benveniste -- that the third person plural is always a summing up of like entities -- but he does so by different means. He looks to the syntax rather than to the semantics of participant roles. He stipulates that pluralization is accomplished through the rules of anaphora wherein the semantic number specification is derived from the noun phrase the pronoun replaces. The other kind of plurality, “the summing up of individual semantically established entities,” he allows is possible for first, second, or third person pronominal plurals.

The distinction between anaphora and semantically established entities with respect to pluralization recalls Benveniste’s insight that personal pronouns are not a unitary class, since some belong to the syntax of a language, others to discourse. However, given that the coreference

relationship between the anaphor and its antecedent may established on the basis of semantic features (in those languages which have semantic gender), it would be better to state the distinction as a contrast between grammatically established entities and contextually established entities. I will use these expressions in the rest of the discussion.

Silverstein's analysis of plurals seems to assume that pluralization will deal exclusively with either grammatically established or contextually established entities, but not with a combination of the two. Yet some instances of first person plural will refer, in addition to the sender, to nonparticipants, some of whom are established grammatically. In those cases, first person plural is not simply the summing up of contextually established entities (and, in fact, frequently does include grammatically established referents). This observation holds as well for second and third person. Consider the following.

- (a) My buddies and I created quite a stir at the party last night. We really enjoyed ourselves.
- (b) You and your buddies created quite a stir at the party last night. I guess you really enjoyed yourselves.
- (c) (nodding toward sleeping roommate) He and his buddies created quite a stir at the party last night. They really enjoyed themselves.

The (a) and (b) examples are both a combination of different participant roles, Benveniste's *amplified person*, and the summing up of entities established in the two different ways Silverstein suggests. The (c) example, is not amplified person but it is the summing up of entities established in two different ways. Thus, it would seem that by Silverstein's criterion third person does not differ from first and second in always being a summing up of like entities.

It does happen as well, of course, that first and second person can a summing up of like entities in Benveniste's sense (i.e. not amplified person)

and in Silverstein's (i.e. all contextually established entities). First person plural usages in choral recitation may be so. More common are second person plural usage addressed to audiences where it is not possible to single out an individual as the intended referent and thus relegate the others present to the status of attending nonparticipants. These two usages are more (as in the case of first person reference) or less (as in the case of second person reference) atypical, however. The peculiarity of the deictic usage of the third person pronoun is evidenced by the need for some extralinguistic accompaniment (like nodding). This seems to be a matter of typicality rather than grammaticality and highlights the need to distinguish between deictic vs. anaphoric terms and deictic vs. anaphoric usage.

These pluralization facts pertain to English; other languages may treat the various combinations of referents differently. Lyons (1968) notes that the Russian translation of the English sentence, "John and I arrived," is literally equivalent to the English sentence, "We with John arrived." Hanks (1990) shows a similar phenomenon in Maya, except that the Maya utterance is a composite subject of first and second: "We with you arrived." Here is an interesting area for crosslinguistic comparisons.

Anderson and Keenan (1985) survey a wide range of language types with respect to the grammaticization of deictic categories. The authors remark that the formal relationship in a number of languages between what seem to be third person pronouns and pronouns which are clearly demonstratives is especially evident with respect to inanimates. It is not, of course, mere coincidence that this convergence is found just where the semantic feature *person* is least salient.

Whether or not it is useful analytically to take the notion of *spatial relation* as criterial for distinguishing between first and nonfirst pronouns or

between participant and nonparticipant pronouns (as discussed in section 2.3), Anderson and Keenan present a substantial body of evidence for the centrality of spatial notions within the nonparticipant pronoun category. For example, in Kwakwaka'waka there is no neutral third person form unmarked for deixis. The discussion about the fourth and fifth person pronouns of several North American Indian languages recalls that these personal pronoun systems encode the spatial notions *proximate* and *obviative*, whether these be directly reflective of physical space or metaphoric extensions reflective of speakers' attitudes.

The fact that spatial relations are explicitly encoded on members of what is formally a personal pronoun set is evidence against citing the presence or absence of a notion of *spatial relation* as criterial for determining the status of a pronoun. In these cases, it would seem that the presence or absence of the feature *person* is criterial. If the hierarchy I developed in section 2.3 is correct, it would contribute to an explanation of these data. It will be recalled that in that hierarchy, *spatial relations* were relevant to set-internal differences, but set-external differences were located along an axis between *place* and *person*.

In addition to the suggestion that spatial relations are relevant to set-internal differences in all three of the traditional deictic categories, Fillmore proposed a somewhat different conceptualization of person deixis than the traditional one. Early on, he divided deixis into the three traditional categories, but later (1975:76) he subsumed person deixis into the category of *social deixis*. Within person deixis, he proposed three subcategories: *speaker*, *addressee*, and *audience*. The first two terms have their expected meanings; the third is defined as "a person who may be part of the conversational group but who is not a member of the speaker/addressee pair." Thus, "[o]ther

individuals referred to in sentences can be identified negatively with respect to these three categories as being ... somebody who is neither speaker nor addressee nor audience" (p.40).

The difference between *audience* and what we might call *non-attending nonparticipants* seems to me to be on a different level, with respect to English, from the difference between *speaker* and *addressee*, on the one hand, and *audience*, on the other. An example of *audience* as a deictic category is the prohibition (for at least some American English speakers) against referring to an attending nonparticipant by means of a third person pronoun, particularly for the first reference (p.80). It seems, though, that here and elsewhere *audience* might be relevant to social deixis generally without being relevant to person deixis, a matter of appropriateness rather than grammaticality.⁵³ A consideration of *audience* affects utterances in areas not directly related to the notion of *person*, among these, social register (e.g. formal lecture, casual conversation) and phonology (e.g. baby talk). Of course, to the extent that, in a given language, reflexes of the audience category are found in grammatical person, *audience* can be said to be a category of person deixis for that language. I present data in chapter 5 which shows LSB to be such a language.

Levinson's (1983) characterization of person deixis and his definitions of first, second, and third person are consistent with those already discussed.⁵⁴ What differs in this work is the elaboration of a range of conversational roles beyond those traditionally included in the domain. Building on Goffman, Levinson proposes a finer set of distinctions, among

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⁵³ The discussion of *lateral speech acts* in Clark and Carlson (1982) shows speakers' awareness of and attunement to the presence in the conversational setting of others not the addressee.

⁵⁴ Levinson differs from Fillmore (1975) but concurs with Lyons (1977) in seeing person deixis as a category independent of social deixis.

them: spokesman and source, recipient and target, overhearers and bystanders. He proposes dichotomies such as unratified versus ratified participants and addressed versus non-addressed participants. Hanks (1990) questions whether these distinctions properly fall within the domain of linguistics. This may depend upon how linguistics is delimited; such distinctions surely fall within the purview of pragmatics. Hanks' doubts are likely about the grammaticization of the distinctions. As Levinson suggests, that is a matter for empirical investigation.

Levinson lists first and second person pronouns but not third person among the prototypical or focal exemplars of deixis, and he notes that third person is a negative member of the category of person deixis. However, his analysis differs from Benveniste's and Lyons' in including the third person pronoun as encoding a participant role. I do not see the justification for this inclusion. The set of personal pronouns is not equivalent to the set of participant roles. The set of participant roles may include *audience* or other nonspeaker/nonaddressee participants insofar as these roles are grammaticized for a particular language. A category that is defined only negatively, such as third person, cannot encode a participant role. Perhaps to say that person deixis encodes the participant roles of the (true) *persons* of the discourse appears to be a circular definition:. But this, it seems to me, is the appropriate definition. Those languages which have generalized *person* from the participant roles of speaker and addressee to include nonparticipant referents can be said to have third person pronouns -- a matter of grammatical category, but that is not to say that third person pronouns reference participants.

Levinson takes the notion of *participant* beyond the bounds established by Benveniste and Lyons. In his analysis, the term no longer means the roles

relevant to the act of address alone but encompasses the pantheon of characters (such as those listed above) who may people the conversational setting. Several of the distinctions he proposes provide insight into the *role shift* device in sign languages. These will be investigated at length in the following chapters. Levinson's work provides provocative lines of inquiry for sign language specialists to pursue, yet it has so far received scarce attention.

2.5 Deictic projection

Levinson (1983:64) explains a phenomenon noted by both Fillmore and Lyons.

There are also various derivative usages [of deictic words], in which the deictic expressions are used in ways that shift this deictic center [i.e. the intersection of the 'here,' 'now,' and 'I' of the sender] to other participants, *or indeed to protagonists in narratives....* (Italics mine.)

Fillmore called it *point of view* (1975:44, 83-5; 1982:38) and Lyons called it *deictic projection* (1977:579).

This same conversational strategy (not recognized as such) has been called *role shift* in the sign language linguistics literature. It has posed special problems to the elucidation of sign language referential practice because analysts have attempted to treat it as simply pronominalization (e.g. Kegl 1976, 1977, 1978; Lillo-Martin & Klima 1990). Role shift will be discussed at length in chapters 3 and 4.

2.6 Relevance of the theoretical notions to the present study

In this chapter, I have set out a body of knowledge which will ground the rest of the discussion. With a foundation provided by theoretical insights based on spoken languages, we turn in the following chapters to an examination of analyses that have been presented for sign language personal pronoun systems, analyses which seem not to have considered this body of

literature on the semantics of deixis. Sign language research, informed by the insights based on spoken language data, will return to the field of semantics substantiation of the claims, demonstrating that the phenomena are independent of influences of communicative modality, vocal-auditory or gestural-visual. That is my larger goal in developing this work.

Crucially, I will show that the notions of *deixis* and *indexicality*, *deictic* and *anaphoric*, *gestural* and *symbolic* are as necessary to analysis of sign languages as to spoken languages. I will argue that demonstratives and personal pronouns are separate grammatical categories in sign languages as in spoken languages. I will provide evidence that distinctions such as first/nonfirst and participant/nonparticipant are to be found in sign languages as well as spoken languages.

Levinson remarked that deixis straddles the semantics/pragmatics border. It is even more interesting than that because it is also relevant to syntax. In chapter 3, we will consider those analyses that have taken a syntactic perspective to determine if they are consistent with the expectations about the interface of syntax with the semantics/pragmatics border of deixis.

3. Form-based analyses of sign language pronouns

3.1 Pointing or points

Pointing behavior is ubiquitous in conversation among signers. Some pointing may be simply gestural, but some is clearly linguistic. Evidence of linguistic status is found not only in stable form-meaning correspondences, but also in the componentiality of the signs. That is, some signs which involve pointing can be input to modulations of form that also affect signs with handshapes other than the extended index finger. The alterations in meaning are equivalent and predictable. An example of a pointing sign is the ASL sign THINK, [u G_t ^x]. In the *incessant* inflection (Appendix B, figure 3.1), index finger contact at the forehead becomes an iteration of short, tense movements to contact. Similarly, WORK, [s A_b ^x ·], a non-pointing sign, replaces the contact at the wrist with an iteration of short, tense movements to contact. In both cases, the meaning is 'to X incessantly.'

Some pointing behavior in the sign stream serves to call attention to particular entities, much in the way of spoken language pronouns. That alone, however, is not proof of the existence of a linguistic category of pronouns. Hand-in-hand with the question of the legitimacy of the claim that sign languages have such a category is the question of how many formal distinctions are required to account for the data.

Thus, to provide an adequate account of pronominals in sign languages has been a challenge to linguistic description. A glance at many of the popular sign language dictionaries⁵⁵ available in general bookstores would

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⁵⁵ Sign language dictionaries are bilingual or trilingual dictionaries that treat a sign language and one or more oral language. To date, there are no dictionaries that provide definitions of signs in signs, nor are there bilingual dictionaries that use the lexical items of one sign language to translate the lexical items of another sign language. This is due, in part, to the fact that there is no orthography for sign languages, although there are a number of notation systems which may some day be modified to serve orthographic purposes.

lead the reader to conclude that there is little or no difference between the two, as these excerpts show.

Sternberg 1987: **I** *pron.* (The natural sign.) The signer points to himself (p.191); **you** *pron. sing.* (The natural sign.) The signer points to the person he is addressing (p.446); **he** *pron.* (Pointing at a male.) The male prefix sign is made... The right index finger then points at an imaginary male. If in context the gender is clear, the prefix sign is usually omitted (p.178). (Parenthetical comments in the original.)⁵⁶

A notable exception to this generalization is the *Dictionary of American Sign Language on Linguistic Principles* (DASL), which categorizes ASL forms with respect to a limited set of features that seek to capture the meaningful contrasts of the language, as these excerpts show.⁵⁷

Stokoe et al 1976: [ ] G_t X N *me* , I (p.193)
G_f [< , >] N *he, she, you, they* (p.63)

The DASL approaches the relationship between American Sign Language and English as do bilingual dictionaries in general, providing a pronunciation or, more properly, articulation guide in which the inventory of phonological contrasts of the one language, ASL, is explicated through reference to forms familiar to speakers of the other language, English. The difference between the DASL and oral language/oral language bilingual dictionaries is that the forms familiar to English speakers do not make reference to English phonemes, as they would, say, in a Portuguese/English dictionary (for English-speakers), where it might be noted that the

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Sign-for-sign and meaning-in-signs on-line dictionaries are possible, given multimedia computer technology, but the storage needs are considerable so that costs are prohibitive.

⁵⁶ The Sternberg dictionary is representative of the genre of popular dictionaries. What is arguable is whether it is a good exemplar of an ASL dictionary. It is in the former capacity and not the latter that I present the excerpt.

⁵⁷ Stokoe notation here is adapted to ASCII characters, following Mandel's system. All is standard Stokoe except for the orientation subscripts to the handshape symbols: f = from, t = to. In these entries, the orientation is with respect to the frontal plane of the signer's body. (See Appendix A.) The articulation of these signs will be described shortly in the text.

Portuguese *open e* is approximately the *e* in the English word *red*. The DASL articulatory guide is composed of descriptions in English of visually discernible features. (See Appendix A.) This difference is not peculiar to the representation of ASL for English speakers but general to such presentations at the interface of languages that rely on vision and those that rely on audition.

These visually discernible features -- the set of sublexical contrasts or, we might say, the phonemes of ASL -- are each assigned a symbol which falls into one of three major subsets: (1) *tab*, the location of the sign, (2) *dez*, the handshape, (3) *sig*, the movement. For example, compare the sign MY/MINE⁵⁸, [[ ] B ^x], where the tab symbol is [ ] which means 'torso,' dez is B = 'flat hand,' sig is x = 'touch,' with the sign PLEASE, [[ ] B ^{x@}], where @ = 'circular action,' or with the sign FINE, [[ ] 5 ^x], where 5 = 'spread hand.' The entries given above for the personal pronouns indicate 'torso, index hand (to), touch' for the first person and 'zero tab' (the space in front of the signer's body indicated by the absence of a symbol in the tab position), 'index hand (from), leftward movement or rightward movement' for the nonfirst person. Torso, zero tab, flat hand, spread hand, index hand, touch, circular action, leftward movement, and rightward movement are visually discernible features.

Following the introduction of articulatory equivalences between ASL and English, individual entries for the lexical items of ASL are presented in terms of the set-internal contrasts of its own phonology. All entries have at least one value from each of the three major subsets, as well as symbols for additional articulatory detail -- most commonly, handshape orientation (e.g. 'from' or 'to'). The grammatical category of the sign is noted and the sign's English equivalent is provided. Some entries include usage notes, often

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⁵⁸ The gloss for signs will be written in small capitals.

necessarily quite lengthy, which detail the semantic and/or pragmatic non-isomorphism between the ASL sign and the English gloss, and some offer explanations in English to assist the reader in producing or identifying the sign. The entry for the nonfirst person pronoun goes on to say that “sig direction is continuously variable over the space in front of the signer.” That is, the dictionary treats the ASL nonfirst person pronoun as having all the spatial options of nonlinguistic pointing. Thus, even the DASL, despite its remarkable advances over other sign language dictionaries, leaves the reader with the impression that a distinction between the lexical form of the personal pronouns and ostensive gesture is at best murky.

A number of linguists working on sign languages have taken up the challenge to provide an adequate linguistic description of personal pronouns. Beginning in the 1970's and continuing into the 1990's, the debate has centered in large measure on the question of the role of points in space. Are these points in space themselves pronouns, with the index hand functioning only as a device for focusing the addressee's attention on the particular instance of pronominal reference relevant at a given moment in a discourse (Friedman 1975, 1976; Edge & Hermann 1977)? Or is the pointing hand alone the pronoun, with points in space associated with it as referential indices (Lacy 1973, 1974; O'Malley 1975⁵⁹), perhaps through a discourse-level mechanism (Lillo-Martin & Klima 1990)? The points-alone hypotheses and the handshape-alone hypotheses propose forms that are phonologically aberrant since these descriptions of the pronouns do not utilize values from the three major subsets, yet no mention is made of this deviation from the

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⁵⁹ The studies from the 1970's are summarized by Wilbur (1979).

norm.^{60,61} A different analysis suggests that the combination of the point in space as agreement marker and either the G-hand, the B-hand, or the A-hand (= fist with extended thumb), as deictic marker, constitutes an index to a full noun phrase or to a pronoun and that the pronoun itself is neither the point in space nor the handshape (Kegl 1976, 1977, 1978, 1985).⁶²

3.2 Kegl: Body Pronoun Model

Kegl calls attention to the fact that more is involved in ASL pronouns than merely points in space, whatever their function. Consider these verb forms: on the phonetic level, the direction of hand motion of LOOK-AT can be seen to orient toward the upper face of the (present or nonpresent) patient, FEED to the lower face, GIVE to the chest. Moreover, within each of these verb forms, there is some variability with respect to the height at which the hand motion is performed depending on real or imagined heights of the agents and patients. Thus, there is no single location consistently associated with the same referent. To account for this, Kegl proposes a form she calls the *body pronoun*, a morphological marker based on a conceptualization of the human body. There are three variants: the signer body pronoun (SBP), the real body pronoun (RBP), and the projected body pronoun (PBP).

The body pronoun as morphological marker is part of a complex which also includes agreement marker (the point in space) and deictic marker (the handshape, e.g. G-hand). The resulting sign has morphological complexity

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⁶⁰ In recent years a number of theoretical models have been applied to phonological description of sign languages. All of these treat the sign as phonologically complex (e.g. Brentari 1990; Liddell & Johnson 1989; Perlmutter 1990; Sandler 1989).

⁶¹ See the brief discussion in section 3.2 for a possible parallel with underspecified forms for classifiers.

⁶² Edge and Hermann's analysis includes as proforms, in addition to locations or points in space, markers which can be of two types: "articulated markers," now generally referred to as classifiers. and body markers. The analysis combines indexing, i.e. pointing, with a location or a marker, but the model is not elaborated as fully as Kegl's.

but the variants of the body pronoun itself are not decomposable into constituent phonological features. Thus, the form is still unique with respect to the most of the rest of the lexicon. Elsewhere Kegl has argued for the *semantic perspicuity* of ASL, a claim that “there is a near one-to-one mapping (isomorphism) between its surface structure and its semantic structure” (Gee & Kegl 1982). Perhaps this notion can be stretched to account for a pronoun that takes the human body as its form. There are similarities between the body pronoun and ASL classifiers, given that both specify a semantically motivated *dez* (to appropriate Stokoe’s term to a broader use and avoid the now more common *hand configuration* or *handshape*, which would be too restrictive here) as an element of a surface sign for which the parameters of place of articulation and of movement have to be filled in. Although not stated as such, the body pronoun seems to be a type of classifier for human beings.⁶³ The selectional restriction for human being might motivate considering it to be a personal pronoun.

This is to take the Stokoean notion that locations on the signer’s body (Kegl’s SBP) are relevant to phonological descriptions of signs and extend that status to the bodies of others present in the conversational setting (RBP). The DASL entry cited above for the nonfirst personal pronoun takes the position in the conversational setting of present referents to be phonologically relevant with respect to the movement prime, but does not accord the bodies of present referents phonological status. The third variant (PBP), used to make reference to the nonpresent, is a projection of the

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⁶³ The ASL curriculum *Signing Naturally* includes among the classifiers two types which use the signer’s upper body to represent activity of the upper body: one, the body classifier, where the upper part of the body “enacts” a verb, such as waving the arm, and another, the instrument classifier, which represents the handling of particular objects, such as pouring from a pitcher. These classifiers seem to be conceptually and formationally similar to Kegl’s signer body pronoun.

signer's own body into the space in front and usually to the side of the signer. In each case, the body pronoun only provides targets to which the signer's hand orients. These variants can be part of verb complexes or occur in combination with the deictic marker and the agreement marker.

The model allows RBP to make reference to addressee or present nonparticipants, SBP to addresser or nonpresent nonparticipants but not to addressee or present nonparticipants, except in extreme cases (Kegl, personal communication), PBP to nonpresent nonparticipants. The set-internal contrasts, then, do not appeal to notions traditionally criterial for grammatical person: the sender vs. the receiver and those two persons of the conversation vs. the nonperson, in other words, the first/nonfirst and the participant/nonparticipant distinctions respectively. There is no discussion about whether the pronouns function deictically or anaphorically.

3.2.1 Body pronouns and the semantics of *person*

Although Kegl does not critically examine the role of grammatical person with respect to the mechanism for making pronominal reference she proposes, clearly there is here a common-sense notion of the embodied person. Because grammatical person must find its origin in a common-sense notion of person, we can look to the body pronoun variants to see if properties relevant to the semantics of grammatical person emerge. Referential objects of RBP in the normal case are necessarily present, definite, and human, while referential objects of PBP need not be.⁶⁴ This is not equivalent to the distinction between participants and nonparticipants since present nonparticipants can be referred to by RBP, but it does suggest this distinction since present nonparticipants are potential addressees, as nonpresent

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⁶⁴ Kegl (personal communication) reports that the back of a present person (RBP) can be used to make reference to a nonpresent person, but these are exceptional cases..

nonparticipants are not. My use here of *nonparticipant* is consistent with the meaning of the term in as it is understood in traditional semantics (Benveniste 1971, Bühler 1982, Lyons 1977), which contrasts participants, i.e. the addresser and the addressee, with nonparticipants. Work in pragmatics introduces the category *nonaddressed participant* (Goffman 1975, Levinson 1983) for persons present in the environment but not addressed. This notion of participant specifies that the person be attending to the talk, but RBP requires only that the person be present. Broadening the notion of participant in this way, the RBP may be seen to encode a nonfirst person category of participants, as opposed to PBP, which encodes the nonparticipant. SBP is harder to account for since it can refer to both the most central participant -- the sender -- and the most peripheral nonparticipant -- a nonpresent entity.

Kegl states that neither RBP nor PBP can refer to the signer, which if the constraint holds could be seen to be consonant with the first/nonfirst distinction. Yet she gives an example where a signer produces a structure in which she first uses SBP to represent herself as subject/agent and PBP to represent a nonpresent referent as object/patient, then uses SBP to represent the patient and possibly PBP to represent herself. While the verb (PUT-EARRINGS-ON) in the second instance might be analyzed as an agentless passive, such an analysis would seem to go against a basic claim Kegl is making: that height variability of particular verb complexes is motivated by the body pronoun. If the model does not permit agentless passives, the example may be counter-evidence to the assertion that PBP cannot make reference to the signer. With references to the signer included, PBP covers the same range of referential objects as SBP. If we make a more abstract conceptualization of the signer as sender, PBP references could be explained

by noting that there is a disjunction between the signer as a character in the example and as the current sender. Perhaps the constraint should be that PBP cannot refer to the current sender. The best explanation may be that the second instance has an unspecified agent subject, i.e. 'Someone put earrings on her,'⁶⁵ and the association between the current sender and the agent-subject is made by implicature. In this case, it could be argued that the grammatical subject is not the signer.⁶⁶

As for the absence of RBP references to the signer, this seems to be a different matter. There is no denying that sign language pronouns have their origins in pointing gestures. The debate about the status of pronouns involves evaluation of evidence that these gestures have been transformed into linguistic objects. That transformation includes the ability to undergo conventional modulations of the form, modulations which also affect other lexical signs. Yet, like many signs which retain vestiges of their iconic (or indexic) origins, pronouns have not moved so far away from nonlinguistic pointing as to have completely obscured their word-to-world relationship.

If agentless passive or unspecified subject is adequate explanation of the above example, RBP and PBP stand together against SBP. But PBP and SBP stand together against RBP in that they both, but not RBP, can make reference to nonpresent entities (and possibly to the signer). The former conjunction fits nicely within the first/nonfirst distinction, but I know of no discussion of the latter. The absence of explicit mention of such a conjunction

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⁶⁵ Although this pronoun is not an instance of a first person pronominal reference in the context of the current conversation, it may be so in the context of the reported event. See the discussion in section 3.4.2. This issue will be taken up in section 4.3.

⁶⁶ Kegl (personal communication) confirms that this is the correct analysis. However, Lillo-Martin and Klima (1990) provide an example where the signer unarguably makes reference to himself by what in Kegl's analysis would be PBP. This example would seem to require the explanation of a disjunction between the signer as character and as current sender. The example is discussed in some detail in section 3.4.3.

notwithstanding, Brazilian Portuguese shows a parallel phenomenon exemplified in a spoken language. There is in colloquial Brazilian Portuguese a pronominal usage of the sequence of article and noun, *a gente*, which can refer to first or third person but not second (except in a first plural inclusive reading). It is as if the vagueness masks the reality that the sender as sender assumes a kind of authority vis à vis the receiver. A similar situation pertains in French, where *on* (formally an indefinite third person pronoun) can be either indefinite third person or first person in the same way as Brazilian Portuguese *a gente*. Brazilian Portuguese and French, then, have forms which join first and third person reference but exclude second person in a way somewhat similar to SBP and PBP.

As Kegl delineates its role within the verb complex, SBP figures in every instantiation of what have been called *body anchor verbs*, that is, those verbs whose place of articulation is the signer's body (e.g. THINK, [u G ^x], is invariably articulated at the signer's temple, no matter who the subject referent is). In this, SBP makes reference to the full set of grammatical persons and does so both deictically and anaphorically. Leaving aside the use of SBP in body anchor verbs, the prohibition against the signer standing in (so to speak) for other people present in the environment may not be inviolable. It is not far-fetched to imagine situations where the signer wishes to provide a descriptively rich rendering of an event in which the addressee took part and in such a case would use SBP with this objective. This may be one of the extreme cases Kegl had in mind.

Other factors besides the signer's stance with respect to the content are relevant to the use of SBP. Kegl notes that the use of SBP for reference to the nonpresent signals a greater sense of intimacy with the referential object than do other means available for establishing coreference relations. Perhaps

this aspect plays a part in the avoidance of SBP for reference to persons present in the environment as well; it may be an interactionally delicate matter to assume such intimacy. If A wants to tell B that yesterday A saw B walking down the street looking sad, A can either use the lexical signs WALK and SAD as part of a sign sequence or convey the same information by a conventional facial expression which carries the meaning 'sadly' and is co-articulated with the verb. The latter case, using SBP, would be interactionally more loaded. Engberg-Pedersen (1992) calls this use of facial expression *shifted attribution of expressive elements*. The SBP form attributes the feeling to the referential object rather than merely reporting the addresser's impression, an attribution a present referent might well take exception to. (It is also decidedly odd in spoken languages to pronounce on the emotional or physical state of one's addressee: e.g. *?"You're sad," vs. "You look sad.")

Pronominal address in spoken languages is also a task of a socially delicate nature. Spanish attests the use of a morphologically third person form derived from an honorific (*usted* < *vossa mercê*) for formal second person pronominal address. The Portuguese situation is still more complicated. First, a morphologically third person form emerged (*você* < *vossa mercê*) for second person formal, then *você* replaced *tu* as the familiar form and another periphrastic third person form was drafted to be the formal second person pronoun (*o senhor/a senhora*). In practice, many Brazilians go to great lengths to avoid choosing a pronominal address form at all, loaded as such a choice is with connotations of social status, familiarity or deference, and age relations pertaining between speaker and addressee.

In sum, one morphologically third person form (*a gente*) has first or third person rhetorical force; another morphologically third person form has

second or third person rhetorical force (*o senhor/a senhora*); and a third form, which is historically third-person, has only second person rhetorical force (*você*). Grammatically, all distinctions are leveled; agreement with these forms is all third person (even in the case of the now purely second person *você*, at least in standard Portuguese). Interpretation is context-dependent.

It is not the grammar which motivates the recruitment of third person forms for first and second person reference in French or Brazilian Portuguese; rather it is aspects of the social situation of language use. Similarly in ASL, constraints on occurrences of the several categories of referential object appropriate to each of the variants of the body pronoun seem to find explanation more in the situation than in the grammar.

In its earliest conceptualization, PBP subsumed pronominal references to addressee. We can find intellectual roots for this projected body pronoun in Benveniste (1971) with the *correlation of subjectivity*, which points out that the 'you' is dependent upon the 'I' -- it is the 'I' who, by the act of address, calls the 'you' into being, and in Bühler (1982), in the discussion of the "conscious, experienced body feeling representation of the other." By way of example of Bühler's insight, take the sentence, "It's behind you, on your left," uttered in a setting where the interlocutors are facing each other. The addresser has to be able to substitute a representation of the body experience of the addressee for his own in order to locate an object "behind ... left" when from his perspective it is "in front ... right." Whether the body representation is of the addressee, another person present in the environment, or a nonpresent person, the addresser's task would be about the same. In this sense, then, RBP is a kind of PBP distinguished only by its usage being deictic, and the two contrast with SBP, which -- being physically coterminous with the addresser -- is not a projection. Kegl's earliest model, then, was

coherent with the expectations for pronominal person reference of both Bühler and Benveniste, except for the significant divergence seen in the fact that (nonfirst person) deixis would be derivative of anaphora -- a suggestion the semanticists unequivocally reject.

3.2.2 Body pronouns and body shift

In one sense, a reference to any entity other than the current sender (as current sender) is a projection of the current sender since the only real-world constant in talk is that it emanates from a given source in a particular conventional role. From this position, even references to self outside the role of current sender are projections. Kegl's conceptualization of SBP does not differentiate reference to current sender from references to other entities (including the individual who is the current sender but at a remove from the current time and place). It is rather in another aspect of the system that this distinction is captured, the device called *body shift* which marks a disjunction between the current sender and some other entity to which SBP makes reference.

The early work introduces the body shift device which later work divides into a *role shift marker* indicating the shift out of the current sender role and a *role prominence marker* which uses SBP in a verb complex (1990; Aarons et al 1992). Kegl observes that classifiers more frequently substitute for nonhuman referential objects, but SBP is sometimes used. In these latter cases, the nonhuman referential object is personified (as happens in some spoken languages as well when nonhuman entities are referred to by personal pronouns). For example, telling a story about the chopping down of a venerable old tree, the signer could use a classifier verb construction which takes the upright forearm and hand with fingers extended and spread to represent the tree. Alternatively, the signer could use SBP to represent the

tree, with the nuances of meaning attendant upon personification (i.e. that the tree has physical and emotional feelings such as fear, pain, courage, resignation and the like). This observation again draws on the relationship between a common-sense notion of person and the grammatical notion. It seems, though, that the body pronoun model does not crucially depend on the traditional notions relevant to grammatical person (i.e. strong formal differentiation of addresser, addressee, and other) for the set-internal contrasts proposed. To the extent this is so, the analysis cannot be taken as arguing for a set of personal pronouns in ASL.

The concept of body pronouns provides a solution to the problem of a theoretical infinity of forms which has been at the center of the debate about sign language pronouns. Yet, if the body pronoun model best captures the system for making pronominal reference in ASL, then this pronoun system is significantly different from those attested for spoken languages.

3.3 Liddell: Surrogates and Tokens Model

Linguists analyzing sign languages have sought to demonstrate that deictic person reference is achieved by means of linguistic conventions. They have worked against the prejudice, at one time quite prevalent in the field and even now not totally overcome, that deaf people's pointing behaviors have more in common with ostension than with language. For this reason, perhaps, little attention has been accorded to the possible role of gesture in combination with deictics, a role Bühler (1982) argues is crucial to reference and which Fillmore (1971, 1975) and Levinson (1983) attempt to delineate for spoken languages. The surrogates-and-tokens model raises the issue for sign languages. It does not reintroduce the old misconception but allows us to re-

view pointing behaviors as conceptually multi-leveled, the co-articulation of gesture and lexeme.

3.3.1 Fauconnier's mental spaces, Bühler's modes, and Liddell's model

Recent work by Liddell (1994, 1995, 1996) builds on the central facet of Kegl's proposal: that signers' performances often appear to attend to human-sized and -featured mental projections. Liddell, working from mental spaces theory (Fauconnier 1985), proposes a tripartite model involving what he labels real space, surrogate space, and token space. Real space is the signer's mental conceptualization of the environment in which the actual discourse takes place. Pronouns and *indicating verbs* (labeled *agreement verbs* by Padden (1983, 1990) and others, the notion of agreement having been introduced in Kegl's early work) are directed to the entities in this space. That is, reference to an object present in the conversational setting would normally be made towards that object's actual location. Surrogate space is based in the signer's recollections or imaginations and here the entities, called *surrogates*, to which pronouns and verbs are directed are human-sized and -featured referential substitutes, treated as if they were present in the environment. For example, a signed utterance translatable as 'I looked up at the giant,' would have the sign LOOK-AT, [u V_f^f], angled sharply up from its canonical location forward at the signer's eye level. One difference between Kegl and Liddell, then, is this distinction made between the conceptualization of the real-world setting of the current conversation and a conceptualization of settings at a remove in time and space from the present. No such distinction was overtly made in the earlier work, although some notion of it emerges in Kegl's choice of terms: real body pronoun vs. projected body pronoun, with signer body pronoun straddling the boundary between reality and recollection. Another difference is the treatment of referential entities.

Kegl's body pronouns are internally differentiated as described above, while surrogates form a unitary class that freely make reference to signer, addressee, or nonparticipant. The most significant difference is that surrogates, like real-world objects but unlike body pronouns, are not themselves linguistic entities.

A further departure is the second nonlinguistic entity Liddell proposes, which he calls a *token*.⁶⁷ Like the surrogate, the token comes into being as part of conceptualizations apart from the real-world of the physically present. Different from surrogates, however, the token is not human-sized and -featured, not restricted to embodied entities, and covers a wide range of possible referential objects including the abstract. And, finally, the token can only substitute for third person referential objects. For example, in a comparison of weather conditions in Alaska and Hawaii, Alaska could be referenced by a third person pronoun oriented ipsilaterally, represented phonetically as [G_f >], and Hawaii by a third person pronoun oriented contralaterally, represented phonetically as [G_f <]. Once these two associations are established, repetitions of the articulation [G_f >] will make reference to Alaska, while repetitions of the articulation [G_f <] will make reference to Hawaii.

Liddell's two non-real mental spaces recall a deictic "mode" discussed by Bühler (1982), namely, *deixis at phantasma*. Within this mode, Bühler contrasts a case he calls *Mohammed goes to the mountain* with one he calls *The mountain comes to Mohammed*. In the first, the speaker transposes himself into a recalled or imagined situation, switching the deictic moment to that time and place. An example of this might be the following. "I hear this

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⁶⁷ In the first conceptualization of the token, Liddell (1994) considered it to be a linguistic entity, in contrast to the nonlinguistic status of the surrogate. As he developed the notion in the later works (1995, 1996), he determined that it is not a linguistic entity.

sound behind me. I turn, and it's a bear! Huge, hairy, and hungry."

Grammatical reflexes of *Mohammed goes to the mountain* are the use of present tense for nonpresent events and the use of spatial deictic terms appropriate to the nonpresent situation. The 'I' of the story-telling need not be the same as the current sender since it could be a retelling of someone else's story. In a sense, the 'I' cannot be the same as the current sender. The story could be about a childhood memory or a dream. But even if it were about a real event that happened only moments ago, the current sender is not identical to the character of the story. Evidence of this is the fact that a bee stinging the story-teller would have no effect on the character facing the bear and likewise the story-teller is not threatened by that bear. As with shifted attribution of expressive elements, there is usually a heightened sense of drama which pertains to the narrative situation, not to the current conversation. Bühler's other case also treats the nonpresent but less vividly. *The mountain comes to Mohammed* differs in that nonpresent elements are projected into the current situation. They leave behind them in their own time and space much of the high feeling attendant upon the events in which they took part.

Liddell's surrogate space has much in common with the first of Bühler's cases. The signer travels to the mountain by shifting away from the current conversation. Liddell rejects the notion that the signing space itself rotates, yet his "surrogate representation" (Appendix B, figure 3.2) depicts cues which indicate that some kind of perspective shift has indeed taken place. From this other perspective, then, the deictic moment becomes that of the recalled or imagined event, and the personages that people surrogate space are likewise those of the recalled or imagined event, not the current

setting. Facial expressions and some postural features are not associated with the current signer but with the surrogate he represents.

In Liddell's first conceptualization of token space, he placed the tokens inside the signing space as it is normally construed, roughly the area in front of the signer's upper torso and extending outward an easy arm's reach (Appendix B, figure 3.2). In a later reconceptualization tokens are no longer considered to exist in the signing space, having been reclassified as nonlinguistic entities. Still, token space, unlike surrogate space, evidences no shift away from the current conversation and no switch to a deictic moment other than the present. Time and space adverbials take the current setting as their point of reference. Token space, then, is the mountain coming to Mohammed. Liddell's model allows us to see these mechanisms in sign languages, which have appeared to be unique to the spatialized communication medium, as falling within the range of discourse practice found in spoken languages.

Where Liddell's model differs from standard descriptions of conversational practice in spoken languages is in its depiction of a single category corresponding to Bühler's other two modes: *demonstratio ad oculos* and *anaphora*. The referential objects of the former are those entities present in the environment, for which the interpretation of linguistic expressions depends on physical perception. It will be recalled that *deixis at phantasma* deals with the nonpresent. Bühler does not make the difference clear between anaphora and these other two. I can only assume that he considers pronominal references to objects which are already the focus of attention to be anaphoric, what Lyons (1977) later called "deictic words in anaphoric use," whether the object is present in the world of the conversation or that of the narrative. Liddell's model, however, discards anaphora entirely; entities are

only referred to deictically. He takes this as being necessarily so since all referential entities are considered present in the environment. He does not discuss the possibility that anaphoric reference can be made to present objects or that a particular use of the sign can be simultaneously deictic and anaphoric, as Lyons suggests (for words). If we exclude considerations of use and accept that all pronominal references to present objects are categorically equivalent with respect to form, then Liddell's position is in keeping with observations about speakers of oral languages' preference for making deictic rather than anaphoric reference to present entities.⁶⁸

Aside from differences in scale, however, it is not obvious why Liddell's model requires two different types of entities. His schematic comparison of the two types (Appendix B, table 3.1) indicates that the token is featureless, but the discussion in the text suggests otherwise. It would appear that tokens have not only vertical extension but also tops and bottoms, fronts, backs, and sides. In his discussion, he gives several examples (1995:36-38). One is a signer describing an encounter between two people from different cultural backgrounds. The signer represents *language* and *culture* as being contained in a cylindrical object, and she metaphorically represents the encounter as one between two containers of different linguistic and cultural behaviors. Liddell gives a second example involving the art and science of ASL poetry where the former is separated from the latter in a sign sequence which has the two hooked 5 handshapes setting the 'art' part off to one side. He characterizes the situation thusly, "I have seen signers look at different sides of an abstract concept, pick it up, or even look behind its surface complexity to reveal the simplicity which lies behind it. All these usages

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⁶⁸ See Heath (1980) for a discussion of an Australian language which has separate deictic and anaphoric pronouns.

require that the abstract entity be represented as a dimensional token...”

These examples and this statement, it seems to me, blur the boundary between tokens and surrogates since these container metaphors and others that would be treated as he describes might be seen as surrogates for real world entities, comparable to the surrogates for human beings. The examples lead to the conjecture that tokens and surrogates differ only in their selectional restrictions.

Liddell has argued, persuasively I think, against a model of ASL grammar that proposes two different grammatical spaces: topographical and syntactic (Liddell 1990). He suggests that these two are only more or less detailed exploitations of the same space. Similarly, it seems to me, surrogates and tokens are only more or less detailed versions of the mental substitute. The selectional restriction Liddell attributes to tokens that differentiate them from surrogates -- namely, that the former cannot refer to either first or second persons -- may arise from the fact that interaction is possible between real space and token space such that reference can be made to entities from both in the same utterance. (There is no interaction between surrogate space and token space. Nor is there interaction between surrogate space and real space since the signer becomes a surrogate for himself in those utterances which include self reference.)

Taking an LSB example, the sequence translatable as, ‘John, he tells me everything,’ where *John* is a topic coreferential with the subject *he*. First, the signer introduces the nonpresent referent by proper name or namesign⁶⁹; next, he points ipsilaterally; then, he performs the sign TELL (a path movement verb) from ipsilateral forward towards center chest; finally, he

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⁶⁹ In the usual case, the namesign is a relatively simple form phonologically which facilitates reference to an individual. For more discussion on namesigns, see section 5.5.

performs the sign ALL. In this sequence, the reference to the nonpresent entity is made in token space and the reference to first person is made in real space. Even without the interaction between the two spaces, the fact that the deictic center of token space does not shift away from the of the current conversation means that the roles of the conversational participants, i.e. the first and second persons, are already occupied.

Comparing these mental substitutes with real space entities, Liddell maintains that just as the people and objects to which verbs and pronouns are directed in real space are not made up of phonemes and morphemes, so too the referential entities of surrogate space and token space are not made up of phonemes or morphemes, yet all of them can contribute meaning to communicative exchanges. Reference is made to any of these nonlinguistic entities (real, surrogate, token) by the combination of a deictic pronoun and a nonlinguistic gesture, which together produce the variable form that has so perplexed linguists. Liddell's proposal, then, can be seen to re-position the point in space outside the pronominal system -- a potentially meaningful element in communicative exchanges but not a linguistic entity.

What remains inside the grammar in this model are the root forms of the indicating verbs -- that is, forms not yet specified for the locational markers of their arguments -- and the rules which govern their use. Liddell states (1995:26), "[T]he use of these verbs is clearly governed by the grammar of ASL." With respect to the form for the pronoun(s), Liddell allows:

The handshapes, certain aspects of the orientation of the hand, and types of movement for PRO ... are lexically fixed and describable using abstract phonological features that also function for the purpose of describing simple lexical signs. (1995:24)

With this phonological form, Liddell, following Meier (1990), argues for a set of two pronouns, the first and the nonfirst persons (1994:109). Liddell

accepts the claim that only the first person pronoun demonstrates a reasonably invariant form associated with a reasonably invariant meaning. The variability of the nonfirst person form is explained by appeal to situational features used to locate the nonlinguistic entities.

3.3.2 Vertical and horizontal variability in the performance of verbs and pronouns

Liddell's model undermines what has been accepted as a strong argument in support of linguistic status for pointing gestures to nonfirst person referential objects. Given that what has heretofore been seen as the self-evident grammatical status of points to nonpresent entities, in that this use was considered anaphoric and therefore a matter of grammar and not just of communicative intent, Meier pointed out that it would be problematic to deny the grammatical status of pointing gestures to present referential objects, i.e. the deictic use of the same form. Liddell's model, by eliminating the anaphoric use, reintroduces doubt about the status of points to nonfirst referential objects.

As previously noted, one of the stronger motivations underlying both Kegl's and Liddell's models is the need to account for height variability apparent in some usages of pronouns and, more commonly, in particular verb complexes. With respect to verbs, they focus explanation on those with an endpoint of a path movement. It has long been recognized that the place of articulation for many verbs is motivated by an association between a body and the activity the verb denotes: e.g., THINK articulated at the forehead, TALK articulated at the lips, LOVE articulated at the chest. Of those verbs that have motivated places of articulation, some do not have path movement (THINK, held at the place of articulation), some have end-marked path movement (FEED, articulated towards a real or imagined mouth) and some

have path movement with both salient origin and endpoint (GIVE, articulated between real or imagined chests). (cf. Bühler 1982 for remarks on head coordinates, chest coordinates, etc. encoded in lexicons.) Liddell himself (1995:24) reminds the reader that “the part of the body toward which the verb is directed is a lexical property of the individual verb.” (Emphasis mine.) This being so, what remains to be accounted for is the fact that the body part relevant to the lexical form of a given verb can itself be imagined to be located at different heights: e.g., one referent’s eyes can be imagined to be at a location higher than the signer’s eyes and another’s at a location lower than the signer’s.

If the variation in such heights is fully analogic, then it would seem indeed to be dependent on an extralinguistic model of the world. I argue that it is not analogic. I draw on material from Brazilian Sign Language (LSB), the sign language with which I am most familiar, with the expectation that my observations may inform ASL analysis as well, as insights about ASL have informed sign language research worldwide. Empirical evidence from LSB indicates that height variability is a spatial deictic system which turns the horizontal plane typical of spatial deixis on its edge. Both constrain the number of contrasts permitted, even though the real-world locations at which distance or extension are established within a given stretch of discourse may differ from such locations in other stretches of discourse. These systems do not encode absolute measurements but allow the signer to refer to schematic relations between referential objects: *near*, *medial*, *far* for distance⁷⁰; *high*, *mid/neutral*, *low* for extension. At least as far as LSB is concerned, spatial relations more specific than *near*, *medial*, *far* are indicated through

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⁷⁰ This contrasts with the system in Brazilian Portuguese, which encodes instead ‘near the speaker,’ ‘near the addressee,’ and ‘far.’

figure/ground relations; an English paraphrase might be, 'The door nearest you on the left as you look down the corridor, just beyond that you'll find the telephone.' FAR can be modulated to mean 'really far' but this is not a separate categorical degree of distance; the manual and nonmanual elements of the derived sign show predictable effects of an augmentative modulation which also takes other, nonspatial deictic signs as input. This is not, then, an analogue phenomenon, where gradations shade imperceptibly one into the other, but rather a system of categorical distinctions.

With respect to extension, signers can use the system reduplicatively (e.g., John is taller (than me), Bill is taller (than him), Fred is taller (than Bill), Dan is taller (than Fred)...), componentially (e.g., John is taller by a couple of inches.), or even atypically (e.g. John is so much taller (than me) I need to climb a ladder to indicate his height), but what is grammaticized is the three-way set of height contrasts. It has sometimes been argued that the number of height contrasts it is possible to indicate is theoretically infinite on evidence like: if there are ten children in a photograph, signers can indicate heights for each of them. What is in fact theoretically infinite here is the number of tokens of taller-than-X or shorter-than-X; each token contrasts only with contiguous tokens so that it would not be possible to challenge the height indicated for child 2 against that for child 5 as the sequence unfolds. Rather, a new contrast would be instantiated between the two heights in question. Typically, the signer takes his own height as a standard of measure (= neutral) and places others' heights as taller or shorter than himself. Signers will indicate approximately the same position for the height of someone regardless of whether the signer is at the moment seated or standing. This is the default. When the signer wishes to call up another

standard of measure, he must do so explicitly.⁷¹ These contrasts indicate relative vertical extension or physical position or, metaphorically, social status and the like. The combination of this vertical spatial deictic system and the lexically determined positions based on body coordinates marked for particular verbs accounts for the vertical position variability of surface forms.

There exists another kind of vertical plane variability. In response to deviations from the typical conversational configuration in which the interlocutors face each other at approximately the same level,⁷² interactional situations arise in which the physical position of a particular addressee is elevated or lowered with respect to a particular addresser. In such situations, it is not single lexical items which show vertical position variations from citation form but whole stretches of discourse. Irene Greftegreff, a Deaf researcher of Norwegian Sign Language, has suggested that it is preferable to attribute the positional shift to the signed stretch as a whole and not to attempt to account for it in terms of the individual lexical items (SLLING 11/1994). Such shifts are a discourse-level phenomenon, although the physical features of both the single lexical item variants and the discourse-level shifts are the same -- manual and nonmanual elements encode vertical position deviations from citation forms. This is to be expected; typically, explanations of higher level phenomena -- syntactic or discursive -- should not introduce phonological material not found in lexical items.

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⁷¹ If he wishes to indicate extension from some surface -- e.g. the floor or a tabletop, he glances between that surface and the height he is indicating. This does not set up a contrast but is instead similar to the use of the English word *yea* that Fillmore notes (1971:224). It differs from *yea* in that the lexeme and the gesture occur in the same communication channel.

⁷² See the work of Lisa Martinez (NWAV, Oct. 1994) for evidence of the impact of atypical conversational configurations on data.

More than this variability in the vertical dimension, linguists have worried about variability in the horizontal plane which is not a simple matter of proximity relations between referential objects, as in the three-way contrast between near, medial, and far. Turning back to the pronouns to consider this issue, Liddell puts it this way (1995:26-27), "The problem is not only the unlimited number of forms but the fact that the different forms carry different meanings." He hypothesizes that in a situation where there are fifteen nonparticipants present, points to each one "would make reference to that person, but not to any [other]... Fifteen pointing directions would be necessary [for] fifteen different individuals, all of which are third person referents..." "Fifteen" here is just an arbitrary, largish sort of number as regards distinctions typically encoded in grammars; the concern is really that there is a theoretical infinity of possible forms and meanings. So the challenge is to reduce the number of forms and meanings to manageable proportions.

To that end, we should first notice that *person* is used in two different ways in the quoted passage: first, in the sense of 'a human being' and second, in the sense of 'a grammatical category,' but the question of grammatical category is nowhere addressed. In posing the problem, Liddell foreshadows its solution: "all ... are third person referents" -- that is, semantically third person; none are addresser or addressee. This is a sufficiently invariant meaning to establish the semantic category. What about a reasonably invariant form? Although there is no description of the "handshapes, certain aspects of the orientation of the hand, and types of movement" which would be found with each of these fifteen pointings, I can predict with considerable confidence what would not occur: there would be no movement to/toward contact at center chest, i.e. no first person pronouns; there would be no

conjunction of gaze, head, chest, and handshape positions away along the midline of the signer's body, i.e. no canonical second person pronouns. From this we can conclude that the third person category is definable as the nonfirst-nonsecond with respect to meaning, just as it should be according to semanticists (Benveniste 1971, Bühler 1982, Lyons 1977), and that the third person form is describable as the nonfirst-nonsecond (within the set of personal pronouns). Points to any of the fifteen individuals present, who are neither addresser nor addressee, do not denote the individual human being by any nondeictic characteristic (e.g., the bespectacled/skinny/handsome one) or by any nondeictic description of his or her location (e.g., the one near the door/window/water cooler) or by name -- that is, these points do not mean the particular individual who is located along the trajectory from the pointing gesture. They only mean the nonfirst-nonsecond person, in the grammatical sense, and their interpretation is dependent upon situational context, just as is the interpretation of deictic usage of English pronouns. Meaning of pronouns is always dependent upon text or context.

The question remains: Are points to the nonfirst-nonsecond person to be treated as personal pronouns or demonstratives (which are, after all, grammatically third person)? Demonstratives rely for their meaning on spatial deictic relations between entities, but personal pronouns are the most semantically attenuated of forms. If spatial deixis is not relevant to the content of the conversation, there is no reason to attribute it to the meaning of a given form. In some spoken languages, demonstrative forms are recruited to personal pronoun usage (e.g. Yiddish, Turkish). In those sign languages in which this question has begun to be investigated, evidence is

suggestive that there are consistent differences in form between demonstrative usages and personal pronoun usages (Massone 1993b).⁷³

I have observed greater muscle tension and more focused gaze behavior for LSB demonstratives, although both demonstratives and personal pronouns require bent elbow and both exhibit rhythmic properties typical of stretches of signed discourse. The deictic use of the pronoun -- or first mention -- requires co-occurring gaze, but anaphoric use -- that is, subsequent mention -- often does not show co-occurring gaze.⁷⁴ The pronoun in deictic usage may be conceptually and formationally identical to a demonstrative. This should not be surprising, given the close formal and semantic relationship between the two noted in spoken languages (Bühler 1982; Lyons 1977). In contrast to the pronoun in deictic usage, however, the pronoun in anaphoric usage differs both conceptually and formationally from the demonstrative. The multiple functions of eyegaze are only now beginning to be carefully explored (Bahan 1996), and differences in muscle tension in the hand have been investigated only with respect to verb modulations (Klima & Bellugi 1979). We should, thus, withhold judgment as to the criterial roles of gaze and muscle tension until we have more evidence.

In terms of physical activity, personal pronoun usage falls at one extreme of a graded progression; nonlinguistic pointing is the other extreme -- in the typical instance, formally distinguishable from linguistic items by the full extension of the arm and a disruption of the rhythmicity of the signing activity. Demonstrative usage lies between these extremes. (In practice, there is not always a clearcut boundary between linguistic activity

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⁷³ Related to this is van Hoek's comment that ASL signers give "clear and unequivocal judgments" when differentiating between pointing gestures with pronominal force and those with adverbial force (1992:185-186).

⁷⁴ Classifiers also exhibit this difference between first and subsequent mentions.

and nonlinguistic activity; but this is not a problem unique to pointing behavior. Sometimes vivid story-telling shades into dramatization.) It remains to be determined whether the manual and nonmanual differences between demonstrative usages and personal pronoun usages are lexicalized or are instead a matter of the presence or absence of stress on particular instances of a single lexeme.⁷⁵

3.3.3 The co-articulation of language and gesture in the gestural-visual channel

Whether pronominal references to nonparticipants be personal pronouns or demonstratives, interpretation is dependent in part upon locational features of the situational context. An infinity of possible forms is no more to be expected in a system of demonstrative pronouns than in a system of personal pronouns. Kegl argues that while the pronoun system is quite constrained, ASL grammaticizes a rich system of agreement. Kegl does not specify whether the agreement system is to be understood as theoretically infinite. As noted above, Liddell's model moves agreement out of the grammar altogether. He comments that "[t]he need to gesture while producing language has been met in sign languages by creating classes of signs which combine the two" (1996:166). This is an important observation that has not been sufficiently attended to in earlier attempts to deal with the variability seen in nonparticipant references, but it falls short in that it is inconsistent with his own model, which places locational specifics outside the grammar proper.⁷⁶ To be fully consistent with the model, it would seem that

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⁷⁵ See also Engberg-Pedersen 1993b, in which "phonetic weight" of some types of pointing signs is discussed.

⁷⁶ It is not clear if Liddell is working with a two-tiered model, with underlying form and surface form. In another passage, he says, "Returning to the earlier example of the sign PRO, if it is directed toward the addressee the result is the sign ordinarily glossed as YOU." Liddell could be saying here that an underlying sign PRO articulated with a particular

it is not a matter of classes of signs created by sign languages, but of conversational practice of signers who draw on resources of the language as they simultaneously exploit features of the environment so that just as it is necessary to the interpretation of a spoken 'he' that either text or context specify the referential object, the interpretation of signers' linguistic performances can depend in some measure on nonlinguistic locational features.

Evidence that there is no sign which results from the combination of the pronoun and locational features can be seen in the practice common to situations in which a signer has attempted to make pronominal reference but the reference did not go through, as indicated by the addressee's mistaken inference of the signer's intent. In these cases, where it could be said that the reference was vague, the signer will often turn to the use of signs from a set which encode proximity relations, taking the referential object of the mistaken inference as a base from which to attempt again to refer. (E.g., A: See him? B: The bald guy? A: No, next to him on the right.) That is, the signer does not react to the mistaken inference as if it were an error on either his part or that of the addressee in the form-meaning relationship of the pronoun itself.

But even if specific locational features are not part of the (derived) sign, there is no denying that they co-occur with the sign. By way of comparison, we can consider a vocal gesture that is not part of lexical description but carries conventional meaning for English-speakers: vowel lengthening to convey augmentative, e.g., "It's reeeeeeally good." This convention allows a contrast to be set up to indicate a number of degrees.

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locational affix results in a derived sign YOU. Or he could just be saying that the relationship between PRO and the gloss 'you' is atheoretic.

That number, although not fixed, is considerably less than the number of locations that can be indicated by pointing, but this is not surprising, given the greater acuity of vision, compared to audition, for recognizing gradations (Coulter 1993). The locational features need not be specifiable because they are not part of the lexical form of the sign. A similar situation pertains for various types of classifiers so that it is not just pronouns that co-occur with gesture. For example, the ASL semantic classifier for 'vehicle in motion or at a location' (3-hand in neutral space) does not specify the extent of a path movement. The size and shape classifiers for long, round object (e.g. F-hands in neutral space begin in contact and move apart) do not specify the distance the hands must separate. The issue for locational features is: To what degree are they grammaticized in sign language systems?

I would argue that locational features play no part in the determination of person reference, aside from the proximal/distal dimension Fillmore (1971) suggests distinguishes the first and second persons. Rather, locational features contribute to what Bühler (1982) calls "full meaning," which I understand to be interpretation. And they do this in much the way the combination of language and gesture accomplishes the task in spoken languages. To repeat here the quote from Bühler (1982:18), cited in section 2.1.3, "[A]ny deictic word without such [gesture] is running blind to its meaning. It would give us a sphere, an environment which is not sufficient to find what is referred to." Similarly, in sign languages, the deictic sign is accompanied by a gesture which hones in, so to speak, on the nonlinguistic entity within that environment called up by the deictic sign.

Sign languages have recruited to linguistic purposes human gestural potentialities, but some aspects of gesture certainly remain outside the bounds of language. It is worthwhile to look briefly at work on gesture to get

a better sense of what aspects of gesture lend themselves to systematicity. Some of the most influential work in this area has been done by Ekman and Friesen. They propose a three-way division of gesture: emblems, body manipulators, and illustrators.

Emblems are the most wordlike of gestures. They show consistent form-meaning pairings which are widely known among individuals who share a particular culture.⁷⁷ Some may even be universal, occurring independently in diverse populations. Emblems, unlike words or signs, are not decomposable. Many signs have their origins in such emblems, but as lexical items of a language they are decomposable into morphemes which enter into morphological processes that depend on alterations in form. Thus, they are no longer emblems.

For example, in Brazil there is an emblem which means 'thief' made by placing the thumbtip extending from the palm-forward flat hand perpendicular to and in contact with the center of the palm of the other (flat) hand held upright palm towards the midline of the body, and bending the fingers of the (active) flat hand at the metacarpal joints. The form is found in LSB with approximately this meaning.⁷⁸ The lexical item STEAL, [B[^] B_f^{xn}], however, is decomposable into morphemes and can be input to grammatical processes such as the modulation for distributive (Klima & Bellugi 1979), which many other signs undergo as well. As such, it is no longer an emblem. For STEAL, the modulation disarticulates the active hand from the base hand which now replicates the shape and bending movement of the active hand, and the two, beginning at the midline of the signer's body, separate,

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⁷⁷ See also Kendon 1995.

⁷⁸ I have yet to encounter instances where an emblem in the gestural repertoire of hearing Brazilians is not a lexical item of LSB. This semantic transparency sometimes leads to the use of alternate forms with which hearing people are unfamiliar.

repeating the bending movement several times along a horizontal arc. The meaning of this modulated form would be completely opaque to nonsigners.

Body manipulators are activities, usually unconscious, like scratching the head, licking the lips, or playing with a book of matches. They do not play a role in conveying content. To the extent they have communicative import, it lies in the inferences they cue interlocutors to draw about each other rather than about the message itself. It has been observed that deaf people on the whole seem to engage less in this kind of activity, presumably because these activities create visual noise, but I have also seen such activities used intentionally to screen conversation the participants wish to keep private. Body manipulators are relevant to language usage but do not have counterparts in sign language grammars.

The third major category of gesture is illustrators, “movements ... intimately tied to the content and/or flow of speech.” The category is further subdivided. Manual activities included in this category become in sign languages different aspects of the linguistic system: *batons*, “which accent a particular word,” appear in the sign stream as, for instance, the stress indicative of the intensive aspectual modulation of predicate adjectives (Klima & Bellugi 1979:66) ; *ideographs*, “which sketch the path or direction of a thought,” are the movement roots of classifier verbs; *kinetographs*, “which depict a bodily action or a non-human action,” are the body anchor verbs; *pictographs*, “which draw the shape of the referent in the air,” are the size and shape classifiers; *rhythmics*, “which depict the rhythm or pacing of an event,” are important to establishing syntactic relations between clauses, as well as being relevant to the distinctions in predicate adjective modulations (Klima & Bellugi 1979:265) ; *spatials*, “movements which depict a spatial relationship” are the spatial deictic adverbs and occur as part of classifier

verb complexes; and *deictics*, “movements which point to the referent.” become pronouns. (The terms and their definitions are found in Ekman 1977:49.)

Sign languages can be seen to grammaticize particular aspects of gesture. Consider the size and shape classifiers which describe cylindrical widths. Rather than representing analogic and infinite variability, LSB distinguishes categorical gradations: narrow (bent G-hands with thumbs opposed [G_g]), medium (F-hands), wide (C-hands).⁷⁹ Supalla (1982) provides an indepth analysis of discrete morphemes found in ASL verbs of motion and location, previously thought to be largely analogic.

Other aspects, those which are analogic by nature, remain outside grammar, even when they can be communicated via linguistic activity. Taking two examples from spoken language first, by way of comparison, consider the sentence, “Talk this loud,” where the desired volume is indicated gesturally by the acoustic properties of the utterance itself. Here, the necessary vocal gesture is analogic, and it is in the same communicative channel as the linguistic item it accompanies, the vocal-auditory channel. In the sentence, “Put the book here,” the necessary manual gesture is analogic and it is in a different communicative channel from the linguistic item it accompanies, i.e. the gestural-visual channel. In the signed sentence equivalent to this second example, the necessary manual gesture is analogic but it is in the same communicative channel as the linguistic item it accompanies. Semanticists have yet to resolve the theoretical implications of the combination of gesture and word for a theory of deixis, but the problem is essentially the same whether the linguistic element is spoken or signed.

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⁷⁹ I have described only the manual component of the signs. These manual components are each accompanied by distinctive facial behaviors.

Turning attention again to Liddell's model, the analysis of the personal pronouns he proposes moves away from the points-alone or handshape-alone hypotheses, but it relies on a partially unspecified form and requires that what is unspecified in the form be filled in by nonlinguistic features. This is problematic because it goes beyond the domain of deixis, which hinges interpretation to situational factors, and makes the form itself dependent on such factors. Liddell's model also denies grammatical status to a second person form. I see the lack of a second person form as a very significant difference between personal pronoun systems proposed for sign languages and those attested in spoken languages. Not all spoken languages indicate the nonparticipant by a personal pronoun, but all distinguish the addressee in this way. My arguments for a grammaticized second person pronoun will be presented in section 4.2.2.3.

While the mental spaces model is appealing, this application of it seems to do both too little and too much at the same time. Liddell rejects the long-held notion that body shifts are cues that a space other than the current conversational space is being activated. Yet this would seem to be coherent not only with mental spaces theory but with sign language data as well. Moreover, the justification for the division of mental substitutes into surrogates and tokens is unconvincing. Liddell assumes that all pronominal references to present entities are deictic, but I would argue that points to nonparticipants without co-occurring gaze are anaphors in that they serve to sustain the addressee's attention on the referential object rather than to focus the addressee's attention (Ehlich 1982).

Liddell's model, like Keg's, attempts to constrain pronouns phenomenologically, more than linguistically. Neither looks to the signer producing and interpreting forms whose features fall into conventional

patterns of contrasts. I suggest that it is there that the phonological features are to be found which provide the set-internal contrasts distinguishing the forms.

3.4 Lillo-Martin and Klima: The one-to-many and many-to-one model.

Lillo-Martin and Klima 1990 is perhaps the first published account of the pronominal system of a sign language that attempts to explicate phenomena within a particular syntactic framework widely used for spoken languages. That framework is Government and Binding theory, under an adaptation based on Roberts (1985, 1986), which introduces a mechanism called a *Discourse Representation Structure*. The DRS, as Lillo-Martin and Klima envision it, enriches Government and Binding theory by adding a new dimension that has access to phonological representation and logical representation, and possibly to syntactic representation as well. It is in this dimension that coreference relations between noun phrases are established. Lillo-Martin and Klima offer the model as a solution to the central issue they seek to resolve: How can the facts about the ASL pronominal system be accounted for within a linguistic theory that is not overly powerful -- one that is needed anyway on the basis of languages studied so far (p.196). I will show that the DRS fails to account for these ASL facts and, more importantly, that the "facts" themselves are a *misconstrual* of the data.

While Kegl chose the label *body pronoun* and Liddell chose the labels *surrogate* and *token*, I invented the name for the Lillo-Martin and Klima analysis, *one-to-many and many-to-one*, based on its major claim: that ASL has but a single pronoun undifferentiated for grammatical person (one to many) to which a potential infinity of distinct points in space can be associated (many to one). The analysis recalls Kegl's hypothesis that the

pronoun system of ASL is quite constrained but that a rich agreement system has been grammaticized. The three “facts” the model is intended to account for are: (a) potentially infinite number of distinct pronominal forms, (b) unambiguous reference, (c) shifting reference. The first two will be considered together because they are really making the same claim, (a) on the level of form and (b) on the level of meaning.

3.4.1 Referential loci and unambiguous reference

Lillo-Martin and Klima’s analysis follows the direction implicit in the very early work of Lacy and of O’Malley⁸⁰ and first made explicit by Gee and Kegl (1982). It is based on the notion of the referential locus or R-locus, a point in space associated with a discourse referent. That is, the referential index of Government and Binding theory, by which coreference relations between referring expressions are accounted for, is instantiated in surface form in ASL. R-loci enable signers to produce and to perceive tokens of the pronoun uniquely associated with particular referents. Just as, in theory, there is no limit to the number of referential indices, there is no limit to the number of referential loci. Thus, the surface form of the ASL pronoun can make unambiguous reference to an unlimited number of different referents. By this analysis, then, a theoretical construct which influences surface form but is not itself realized at surface form in the case of spoken languages becomes so for ASL. If the analysis holds and can be extended to sign languages generally, it would reveal an interesting and important modality difference.

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⁸⁰ This work is summarized in Wilbur 1979.

3.4.1.1 Linguistic space and geometric space: Same or different?

As already noted, the idea that ASL pronominal reference utilizes points in space entered into the debate early on and has maintained a tenacious hold ever since. Lillo-Martin and Klima have taken the idea to its logical apogee when they say, “[T]hat the ASL [pronoun] system is potentially infinite can be understood by the following simple test: between any two points that have been associated with various referents, another could in principle be established.” Contrary to this position, I am proposing that points in space play no role in determining the set-internal contrasts of grammatical person in the pronoun system, and I offer an alternative test: plot the coordinates for points in space as indicated in multiple instances of reference to a single referent. It is highly unlikely that any two instances will have absolutely identical coordinates, even those made in close succession by a single signer sitting relatively still. The possibility of inserting another point between any two points is a tenet of the theory of plane geometry. The difficulty of producing two pointing gestures the trajectories of which would terminate at a precisely identical point in geometric space is a limitation of human physiology (fine motor ability, hand-eye coordination, etc.). If the former were pertinent to the ASL pronominal system so that points in geometric space are associated with discourse referents, then, given the latter, coreference would be just about impossible to achieve.⁸¹ This being so, under the Lillo-Martin and Klima analysis, signers could indeed make unambiguous reference to an unlimited number of distinct referents -- but

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⁸¹A rebuttal to my argument may be that limitations imposed by human physiology are merely matters of performance. At the risk of being impolitic, I would counter that it is a strange linguistic analysis indeed that discounts evidence from language behavior and privileges notions of another intellectual domain. It falls to the analyst to argue, rather than presuppose, the relevance to linguistics of the mathematical theory about points in space and their properties.

only once. In order to make multiple coreferences, another device would be needed which associates various points in space with a single referent. The need for this device would be peculiar to ASL, or to sign languages more generally, so that Lillo-Martin and Klima's goal of accounting for ASL data without proposing a language-specific, or modality-specific, explanation fails on its own terms.

I am not contesting the possibility that signers are remarkably precise in their articulation of pronouns; that is not the test Lillo-Martin and Klima propose. Theirs is concerned with geometric points. My counter-claim is that it is statistically improbable that signers would produce a series of exactly the same geometric points. I argue that the geometric fact they cite is not relevant to ASL grammar and further that what is relevant is not whether it is possible to put another point between any two points but whether it is possible to put another pronoun between any two pronouns.

The Lillo-Martin and Klima analysis takes linguistic space as being identical to geometric space, which surely it is not. Would the repetition of the sequence of vocal gestures, [h i] for example, uttered in two different spatial locations be different words or simply different tokens of the same word, perhaps showing some phonetic variation? Vocal articulatory gestures are executed in geometric space but geometric space does not figure in their linguistic description. Rather, vocal articulatory gestures are seen as the relationship between the mobile vocal tract part (usually, the tongue or lips) and (usually) a place of articulation in the sense of an identifiable region of the vocal tract.

Engberg-Pedersen talks about areas rather than points or, alternatively, vectors created by the position of the articulator vis à vis the signer's torso. While an area could encompass the array of points in space at

which the various trajectories of pointing gestures would terminate, it is not clear how the boundaries of such areas would be determined. If they are unbounded or have fuzzy boundaries, how could distinctions between multiple referents be maintained? And areas, like points, seem to have existence independent of the signer's volitional production of linguistic behavior.⁸² Vectors, on the other hand, depend on the relationship between a mobile articulator and a place of articulation, in much the same way as do vocal sounds. They are describable with respect to an articulatory array presented by the signer, as speech sounds are describable as an articulatory array presented by a speaker (or the visual or auditory results of such arrays). The question persists, though, as to how many distinctions can be made and whether or not coreference is unambiguous. I argue that neither infinity nor nonambiguity are features of sign language personal pronoun systems. To the extent that multiple nonparticipant referents can be associated with unique forms, these distinctions arise either as secondary contrasts like gender or by means conceptually similar to prosody in English, or both under specific conditions.

Where secondary contrasts can be systematically associated with semantic notions like point of view, they resemble logophoric pronouns and similar structures found in diverse spoken languages (Clements 1975, Hyman & Comrie 1981, O'Connor 1992). To date, the most thorough exposition of such contrasts in a sign language is Engberg-Pedersen's work, where an opposition was found in Danish Sign Language between instances of nonparticipant references oriented near the signer's torso and ipsilaterally against those oriented away from signer's torso and contralaterally forward.

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⁸² Engberg-Pedersen's transcription convention, unlike previous conventions including the one Lillo-Martin and Klima use, does take the signer's position as central. She uses subscripts that mark left, right, center, and forward of the signer's body.

Semantically, the opposition displays empathy the signer feels with the proximal-ipsilateral referent. She notes that the distinction is conventional but not obligatory. This conversational practice recalls Robin Lakoff's work on empathetic deixis, which shows that use of English proximal and distal demonstratives is bound up with speaker's attitude to the referent.⁸³ Lyons also notes the relationship between physical and emotional proximity.

Primary deixis is of the kind that can be accounted for in terms of gestural reference within the framework of the deictic content....

Secondary deixis involves the displacement or reinterpretation of the spatiotemporal dimensions of the primary deictic context.... Primary deixis refers to relations of physical proximity; secondary deixis refers to relations of emotional proximity. (1981:234-235)

Engberg-Pedersen's finding that locations have semantic weight shows that R-loci are not freely associated with referents, even in the nonparticipant category. Kegl observed that the choice of body shift for pronominal reference is linked to the signer's feeling of affinity with a referent. Future research is sure to elaborate these insights and to uncover other regularities, perhaps even logophoric pronouns, especially as native signers trained in linguistics combine analytic skills with their own intuitions.

As the linguist Carol Padden, a native signer of ASL, in her discussion of analyses of ASL pronominals, observes (1990:118):

Since these distinctions are largely made spatially, perhaps this difference [in the number of pronouns proposed for ASL compared to oral languages] is due to the fact that space is implicit in oral languages but explicit in signed languages. Alternatively, it is possible that the spatial dimension in signed languages exists only as an epiphenomenon of grammatical structure. Spatial contrasts and distinctions can be accounted for by grammatical features that already exist in the class of natural languages.

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⁸³ R. Lakoff 1974. See also J. Rubba 1996.

I read Padden to be favoring the alternative hypothesis, a hypothesis I argue the data better supports.

Another type of multiple nonparticipant contrast can be instantiated when the signer replicates spatial relations that existed between the referents at the time the narrated event took place. The locations of these forms are not arbitrary; an interlocutor could interrupt the narrative to say, 'John was to the right of Bill, not to the left.' Even here, though, it is not location in real world space, but only the schematic presentation of proximity relations or figure-ground relations between referential objects. Entities are located with respect to each other, and these relations give rise to the multiple distinctions possible.

For example, the signer might report that several people sat around a large, rectangular table in a particular order. LSB signers can indicate distinctions between entities by particulars of location. A G handshape pronominal indicating the referent established at the head of the table draws on that locational information to make reference. The pronoun is the nonparticipant form; its interpretation derives from the previous text which established the figure-ground relations between linguistic entities. A difference between visual languages and aural languages is that the ground remains available longer to anchor reference. The number of entities it is possible to make unique reference to is constrained only by the number of contrasts that can be maintained by virtue of the proximity or figure-ground relations, but these are not contrasts within a system of personal pronouns. It is rather a matter of conversational practice.

Where no semantic distinction can be identified, contrasts can be seen to depend upon perception of a phonological contrast that does not participate in determining the lexical form of the pronouns, similar conceptually to

particular prosodic patterns for disambiguating instances of the English third person pronoun that are the same gender. Engberg-Pedersen contrasts the diagonal dimension for establishing multiple nonparticipant referents with a side-to-side dimension for referents of equal discourse weight. Perhaps the distinction is between a convention that employs a semantic measure, the diagonal dimension, and one that relies on a prosodic contrast, the side-to-side dimension.

In a way, all prosodic contrasts mark a spatial relation between the pronoun and its antecedent. In English, contrastive stress can signal a switch in theta roles between those associated with the lexical noun phrases of the first clause and those associated with the pronouns of the second clause. For example, the noun phrase referring to the agent of the first clause may be coreferenced with the pronoun referring to the patient of the second clause while the noun phrase referring to the patient of the first clause is coreferenced with the pronoun referring to the agent of the second clause, as in Lillo-Martin and Klima's example: "John called Bill a Republican, and then he insulted him." Without contrastive stress on the pronouns, the agent-patient relationship in the second clause would be the same as that in the first. The switch affects not only interpretation of theta roles but also textual proximity relations between the pronouns and their antecedents.

Alternatively, the contrast in the side-to-side dimension may be conceptually closer to the convention in Hausa that Fillmore (1971:225), citing Eulenberg, mentions whereby *nàm* and *càm* may refer anaphorically to two objects between which no distinction in proximity to the speaker is distinguished; *nàm* refers to the first object introduced into the discourse, and *càm* to the second. Levinson (1983:87) also notes that anaphoric reference

commonly makes use of the order in which referents were introduced into the discourse.

In LSB, the first coreference relationship in a contrast set is usually established between a noun phrase and a pronoun whose handshape orientation is ipsilateral at approximately a 45 degree angle from the midline of the body and the second is usually contralateral at about 45 degrees. Discourse and situational factors can affect the typical order. A signer may establish the first referent contralaterally because that referent will be the patient in predications which normally have a passive hand and an active hand. Or the addressee may be positioned in such a way that the signer establishes a referent contralaterally in order to maintain maximally distinct forms between second and third person pronouns. Elicited pronouns, given that they are free from such influences, always take this ipsilateral-contralateral order. The two forms are contrasted simply on the phonological basis.

Analysts worry about the justification for claiming a distinction based on laterality, pointing out that no other signs contrast on the basis of which side of the body they are made on except those whose meaning entails sidedness, like ASL RIGHT, LEFT, EAST, WEST, which rely on a more direct mapping from world to word, relative to other lexemes (although less so for the latter two).⁸⁴ In addition to the directionals, Engberg-Pedersen reports that Danish Sign Language has signs “where the left and right dimension is

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⁸⁴ The ASL signs RIGHT and EAST are articulated by the R-hand and the E-hand, respectively, moving linearly rightward. The ASL signs LEFT and WEST are articulated by the L-hand and the W-hand, respectively, moving linearly leftward. The DASL entry for EAST includes a note that the E-hand can move towards the ‘east,’ if the direction is known. The entry for WEST does not include such a note (nor NORTH or SOUTH). Deaf Brazilians, like their hearing countrymen, do not in general rely on the cardinal directions; they prefer to orient themselves by landmarks. Unlike the initialized ASL signs, the LSB signs RIGHT and LEFT contrast only by sidedness.

distinctive” for telling time and for certain concepts relevant to soccer (SLLING 12/9/1994). Greftegreff has found that the contrast is relevant to some signs in Norwegian Sign Language where the motivation is iconicity. Given such evidence that left/right plays a role, albeit a limited one, in the phonology of several sign languages, it is clear that the contrast is available at this level and perhaps at other levels as well. However, my claim is that the pronouns are the same lexeme with contrastive stress. Laterality of the pronouns is not based on a left-right distinction but on the ipsilateral-contralateral distinction; left-hand dominant signers indicate the left -- their ipsilateral side -- first. Moreover, other signs exploit laterality sublexically. Examples are ASL KING and LSB GOVERNMENT, each of which move from contralateral shoulder to ipsilateral hip. Laterality is implicit in signs that use a base hand and an active hand and in signs which use alternating movement. Just as in English, tone does not contribute to lexical distinctions but does support interpretation of coreference, laterality may a phonetic fact in sign languages, relevant to many other signs, that can be exploited to create a contrast in forms that is not phonemic. On the other hand, laterality may be more akin to lexical stress in English in that it is not distinctive in the vast majority of words but is so for a small subset of noun-verb pairs, among these `re-play/re-`play, `con-sort/con-`sort. I will argue in section 4.3.2 that laterality is, in fact, a phonological contrast in sign languages.

It may be that a greater number of distinctions is possible among tokens of the nonparticipant pronoun in sign languages than is possible among such tokens in oral languages. If this is so, it could be a modality difference which owes itself to our greater visual acuity or to the fact that the articulators and articulatory space are larger in the gestural-visual modality than in the vocal-auditory modality. However, it may turn out that

grammatical relations already attested for oral languages are sufficient to explain sign language data. Padden's suggestion that space is only an epiphenomenon of grammatical structure in sign languages may well prove to be the case. I argue that the number of distinctions is neither rigidly fixed nor logically infinite. This assertion will be discussed more fully below.

3.4.1.2 The personal pronoun system vs. other coreference strategies

Perhaps because Lillo-Martin and Klima's analysis is strictly syntactic in approach, they take coreference as it is realized in ASL to be a unitary phenomenon. They conflate with personal pronoun forms not only secondary distinctions co-articulated with the pronouns but also pronominals which rely on means other than the notion of grammatical person for achieving coreference. Although the analysis is presented as treating personal pronouns, it makes no use of the notion of grammatical person and is, in their own words, a "personless analysis."⁸⁵

Lillo-Martin and Klima consider these other pronominals to be techniques for disambiguating multiple references. While they do serve that purpose, they are not personal pronouns but rather a different system entirely based on the notion of chronology. Because the system encodes temporal notions, I call this the *temporal anaphor system*.⁸⁶ Referents are introduced by means of deictic pronouns, proper names, or definite descriptions and assigned a numerical position. The form, [5 G ^x •], takes the spread or 5 handshape as the base hand or place of articulation and the index or G handshape as the active hand which makes contact with a sequence of extended fingers on the base hand. This is a listing of referents

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⁸⁵ This being so, it is difficult to see how, under the Lillo-Martin and Klima analysis, it can be maintained that ASL has a personal pronoun system at all.

⁸⁶ This label may lead to some confusion with the temporal deictic *then*, which may be used anaphorically. Temporal notions encoded by the temporal anaphor system are actually meta-temporal. I defend the choice of this label for the system in section 5.4.

among which signer and addressee may fall into any position or none. All referents are grammatically third person, taking the category as being simply the nonfirst-nonsecond.

Levinson (1983:72) claims that demonstrative pronouns combine person deixis and space deixis. In the discussion in section 2.3, I pointed out that demonstratives are only third person by default. Similarly, the temporal anaphor may be seen to straddle the two deictic categories *time* and *person*, but only the latter in the way of being third person by default.

That all referents are third person can be demonstrated by considering a narrative in which the signer establishes a coreference relationship between himself and one of the extended fingers, the addressee and another of the extended fingers, and nonparticipant referents on the remaining extended fingers. The signer then uses these locations as endpoints for the verb GIVE. If we assign labels to the fingers: thumb=T, index finger=I, middle finger=M, ring finger=R, little finger=P, then the signed utterance could be transcribed as follows.

TGIVE_I IGIVE_M MGIVE_R RGIVE_P PGIVE_T

The closest English translation of this sequence would be, 'The first gave (something) to the second, the second gave to the third, the third gave to the fourth, the fourth gave to the fifth, the fifth gave to the first,' although a more natural English translation might be, 'We passed (something) around among ourselves.' This latter translation finds its justification in the previous utterance that established a coreference relation between one of the positions of the temporal anaphor and an instance of the first person pronoun, but it is a translation true to meaning, not to form. The formally closer translation is all grammatically third person. Modifying the above example and stipulating that R=signer,

TGIVE_I IGIVE_M MGIVE_P PGIVE_T

a natural translation into English could be, 'You passed (something) around among yourselves skipping me.' Use of the second person plural draws on the coreference relationship between an instance of the second person pronoun and a position on the temporal anaphor but the formally closest translation is all grammatically third person: 'The first gave (something) to the second, the second gave to the third, the third gave to the fifth, the fifth gave to the first.'

The order is fixed as regards establishing the coreference relationship between some NP and a position on the base hand, and the active hand must touch contiguous fingers on the base hand. (Subsequent coreferences are not so constrained.) If there are only two positions, they must be I M, in that order; if there are three in LSB, either I M R or P R M can be used, in the orders indicated; three referents in ASL use T I M, in that order; four referents take I M R P in both languages, but in LSB the order can begin with either I or P; for five referents in LSB, either T or P can be first. Moreover, there must be a minimum of two such relationships established.⁸⁷ The point here is that the temporal anaphor relies upon a specific semantic notion to achieve coreference which is not relevant to the other forms under discussion and particular constraints are relevant to the temporal anaphor but not to the other pronominal system. R-loci contribute nothing to explicating the temporal anaphor since spatialization has no part in determining the set-internal contrasts on the level of form. (That is, the semantic notion of temporal ordering is directly anchored in the hand structure, not in an array of abstract R-loci.)

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⁸⁷ The LSB facts are somewhat more complicated than presented in this summary and will be discussed in more detail in section 5.4.1.

Conversational strategies Lillo-Martin and Klima include in disambiguation techniques support my claim that distinctions among nonparticipant referents are not amenable to a syntactic analysis. They mention head shakes and nods which accompany pointing. These add semantic and perhaps lexicalized content, namely negation or affirmation respectively, which have nothing directly to do with the set-internal contrasts of the pronominal system on any level. What about distinctions discernible in the pointing gestures? Lillo-Martin and Klima make no mention of this but I have observed in LSB that particular instances show a contrast between a relatively long but lax hold and a tense, staccato hold reminiscent of prosodic patterns which serve to disambiguate two tokens of the English third person pronoun with the same gender specification: Not hiiiim, HIM!. No one would argue that the vowels of the two words create distinct English lexemes. So too in LSB, some of the particulars of performances of tokens of the nonparticipant pronoun serve communicative purposes in calling the addressee's attention to the fact that there are multiple possible antecedents for a given token. Of the two other disambiguation techniques Lillo-Martin and Klima mention, *renaming* would seem to associate a lexical NP with a particular R-locus which is already associated with another lexical NP; *regrouping* would seem to associate the same NP with different R-loci. In either case, R-loci confuse rather than disambiguate multiple referents. The continuities or discontinuities among referents require something else to sort them out.

The idea that sign language pronominal reference is unambiguous is thus a theoretical projection based on the observation that multiple referents can be tracked over the course of a narrative. Empirical evidence demonstrates that the LSB temporal anaphor limits the number of possible

referents to five, and the ASL temporal anaphor seems to permit a switch between active hand and base hand so that the system expands to ten. As for the G handshape form, there is no empirical support for the claim that the number of individual referents is larger than is attested for spoken language systems; the problem is to find the categorical distinctions among and between forms. Because finding those distinctions has been difficult, it is tempting to take refuge in theory. In Portuguese, for example, it is possible to make distinctions by person, number, gender, formality considerations, and case for a total of 24 different pronominal forms.⁸⁸ Add the contrastive stress convention, and the number is even higher.⁸⁹ All these contribute to unambiguous pronominal reference and together make possible a rather large number of unique forms and an even larger number of unique referential associations.⁹⁰ The challenge sign language pronominals pose is to identify regularities and the basis on which they are made. Meier is the first researcher to make an argument for a lexicalized first person pronoun in a sign language on the basis of both form and function. (See section 4.2.2.2.) Similarly, my analysis provides evidence for second and third person pronouns. (Also in section 4.2.2.3.) With Engberg-Pedersen's provocative findings, sign language researchers are just now beginning to identify form-meaning relationships for nonparticipant pronouns.

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⁸⁸ This total is based on a count of unique forms among subject and object pronouns listed in *201 Portuguese Verbs*. Reflexive pronouns, possessive pronouns, and oblique pronouns are not included in the count.

⁸⁹ Prosody in Portuguese serves to distinguish sentences types; there is no other overt marker. E.g., whether the sequence, "Você quer ir," is understood as declarative or interrogative depends solely on prosody. Thus, prosody plays a central syntactic role. Even so, contrastive stress on the pronouns has not been treated as a matter of grammar. This is attributable to the fact that the direct object pronoun *o/a* cannot take stress and the use of the pronoun *ele* as an object pronoun violates prescriptive grammar dictums. Nevertheless, *ele* occurs as an object pronoun in everyday speech of certain classes of speakers.

⁹⁰ This is also a theoretical projection of sorts since, in an actual discourse, a feminine pronoun is no use as a distinctive label for an added masculine participant.

3.4.2 Shifting reference: referential locus or rhetorical practice

The third phenomenon discussed by Lillo-Martin and Klima is shifting reference. This is not the type of shift that semanticists have discussed whereby the deictic center shifts between interlocutors such that each in turn uses the same form, i.e. the first person pronoun, to refer to himself as addresser and the same form, i.e. the second person pronoun, to refer to his conversational partner as addressee.⁹¹ The type of shift Lillo-Martin and Klima intend approximates what Lyons (1977) called *deictic projection*. By shifting reference Lillo-Martin and Klima mean that the addresser can associate self-directed points with a referent other than himself. They describe *role-play* behaviors like modified facial expressions, body posture, and style of signing, but they also note that these behaviors do not always accompany the reference shift.

In keeping with Lillo-Martin and Klima's observation, Engberg-Pedersen's more recent analysis (1992) separates *shifted attribution of expressive elements* from *shifted reference* and from *shifted locus*. The first notion, essentially equivalent to role-play, was discussed in sections 3.2.1 and 3.3.1; the second notion "means the use of pronouns and nominals from a quoted sender's point of view"; the third notion "means that the signer uses the sender locus for another referent or that he uses another locus than the sender locus for himself" (Engberg-Pedersen 1992:203-205). Lillo-Martin and Klima do not treat shifts for purposes of attributing talk differently from shifts for purposes of attributing action, nor do they explain why some shifts are accompanied by expressive behavior and others not. I will not treat the distinction between shifted reference and shifted locus here nor argue the

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⁹¹ At least in those languages where social status considerations are not explicitly encoded on these pronouns.

merits of the dichotomy, but I will discuss the difference between these two, on the one hand, and shifted attribution of expressive elements -- that is, shifts with and without expressive elements.

The signer signals a shift by a break in eye contact with the addressee and by re-orienting his head and perhaps his chest as well. Two or three positions differentiated by head and chest orientation can be used in a single narrative: right, left and, less often, center. (When center is used, it is usually the third position to be associated with a referent.) Sometimes height distinctions also are exploited; for example, if one character is a child and another an adult, or one character is seated and another standing. In LSB discourse, I have observed that expressive elements not only contribute to narrative description but they can also serve to distinguish between referents, functioning as definite descriptions or reduced definite descriptions, the latter of which take on a pronominal function. Signers contrast the happy guy with the sneering guy or the fearful one with the threatening one. Role-plays are descriptively rich, variable in content, and relatively unconstrained. The number of contrasts signers can make based on definite descriptions is, if not infinite, at least very large. The theoretical limit would be reached by exhausting the possible combinations of three horizontal positions, with two height distinctions,⁹² with the conventional facial expressions for expressive elements. Just as with spoken languages, the cognitive limitations for keeping track of the different references would be reached much sooner. However, without expressive elements and height distinctions, which are unarguably outside the domain of person deixis, what remains are the horizontal positions.

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⁹² For narrative, in contrast to conversation, typically two height distinctions seem to be utilized.

This type of shift is not a different pronominal system, as is the temporal anaphor; it is a rhetorical strategy which exploits space consistent with the set-internal contrasts for person I have already presented but in a rather complex way. Like the temporal anaphor, all references are third person from the point of view of the current conversation. However, within the narrative space, the set-internal contrasts of the personal pronoun system are available. How grammatical person is treated for purposes of translation is really a matter of the conventions of the goal language. To illustrate this point and the confusions that arise, let us look at an example with translation Lillo-Martin and Klima include in their exposition of the DRS.

LAST NIGHT _bPRONOUN STRANGE DREAM

_bPRONOUN DREAM _bSELF BECOME JESUS _bFORMAL-PRONOUN

_bPRONOUN SEE JOHN _aPRONOUN _bPITY_a

      _t
SINS _bFORGIVE_a . (shift a) RELIEF

'Last night I had a strange dream. I dreamed I became Jesus. I saw John (myself), had pity on me, and forgave all my sins. Boy, was I relieved.'

While their translation captures the meaning of the signed sequence, it is not a strict translation. First of all, the function of the sign FORMAL-PRONOUN is nowhere accounted for, yet with its articulation, the shift from the current conversation to the narrative is completed. In terms of mental spaces theory, FORMAL-PRONOUN is a space-builder. Lillo-Martin and Klima say that this example is a translation from English but they do not say whether they did the translation themselves or had it translated by a native signer. When I read it, in my mind's eye I see the signer make a postural adjustment as he signs FORMAL-PRONOUN, assuming the majestic stance proper to Jesus. In so doing, the signer reassigns coreference relations so that not he but Jesus is the sender, the first person. Even if the signer does

not shift left or right, he has, with FORMAL-PRONOUN, suspended the space of the current conversation and called up a narrative space. There is no indication in the transcription, but I also envision a break of eyegaze with the addressee. The translation blurs the boundary between the space of the current conversation and the space of the narrative. From the space of the current conversation, a closer translation is: 'He saw John, him. He had pity on him. He forgave him sins.'⁹³ From within the narrative space, a better translation is: 'I saw John, you/him. I had pity on you/him. I forgave you/him sins.' The choice of second or third person pronouns depends on gaze behavior (and perhaps other body coordinates), which is not transcribed. There is no formal justification for the use of first person pronouns for those signs coreferenced with *John* as their antecedent. With the *shift a*, the signer closes the narrative space so that the space of the current conversation resumes, and first person pronouns again refer to the sender of the current conversation.

3.4.3 Personless personal pronoun?

The DRS reduces all distinctions based on form-meaning relations, as well as those based on conversation versus narrative, to associations between lexical NPs and variables. Lillo-Martin and Klima focus their argument on the claim that since the data can be accounted for quite nicely with a single pronoun plus referential loci or indices supplied by a discourse representation structure, there is no need to propose more than that. What is most surprising, then, is the generality they attribute to the conclusion they draw.

We conclude that there are no contrasts for person in ASL.... Within the analysis we have proposed, it is much simpler to use the single

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⁹³ The example as it appears in Lillo-Martin and Klima's text has the *b* subscript of the fourth line suffixed to the sign SINS. I assume it was intended to be prefixed to the sign FORGIVE and gives rise to the subject pronoun of the translation.

indexed PRONOUN sign for all pronouns, including those with first person reference, as long as the full range of data can be described. (p.198-199)

But what if the “simplicity” of the analysis does violence to the data in managing to “account” for it? Contrasts in formational features like handshape orientation are leveled. Lexical specification for endpoints of path movement in some verbs, perhaps first observed by Fischer and Gough (1978), elaborated by Kegl, and most recently treated in Liddell’s work, does not figure in the analysis, even though the relationship between independent pronouns and verb agreement phenomenon is well-known. All pronouns on this account are anaphors, even those with first person rhetorical force, yet there is no explanation given for how variables for first (and second) person pronouns are assigned.⁹⁴ The result is that what starts out as an effort to bring the ASL data within the limits of attested grammars finishes by arguing that the ASL pronoun system differs significantly from all others. Finally, given the problems of multiple coreferences to a single referent, the DRS must be augmented with some other device so that even the elegance or economy of the analysis must be questioned.

3.5 Too many distinctions, and too few

None of the analyses of personal pronouns reviewed in this chapter employ the notion of *person* to account for differences in form and meaning between members of a contrast set. Morford, Singleton, and Goldin-Meadow (1993:253) make the point that the central focus of the symbols of conventional languages is a relationship of opposition with each other, rather than a direct relationship between the symbol and its referent. This is

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⁹⁴ The formalism showed only that variables are associated with full lexical noun phrases.

certainly true of the set of classifiers, which is the phenomenon they studied. I claim that the observation is equally true for the set of personal pronouns.

The personal pronoun analyses for ASL so far proposed do not consider the traditional semantic distinctions between the first and nonfirst persons and between these persons and the nonperson. In addition, they superimpose other orthogonal parameters on the actual personal pronoun system -- among these, representations of spatial relations that pertain between referents in the conversational or narrative setting, metaphoric extensions of spatial deictic distinctions which may represent non-deictic hierarchical relations of various kinds (e.g. the school administration and the students; literature and particular genres; generations in a family), and considerations of point of view.

In some analyses of Native American languages, the terms *proximate* and *obviative* -- spatial notions which encode point of view -- have been analyzed as fourth or fifth person categories (Anderson & Keenan 1985). Rhodes (1976:199), citing DeLisle (1973), points out that *fourth* and *fifth person* are, in fact, misnomers; these forms are categorically third person, with additional semantic distinctions encoded.

English demonstratives *this* and *that* may encode point of view, but they may also be neutral in this respect. Danish Sign Language seems to treat these two cases separately: the empathetically neutral contrast in the left/right dimension and point of view in the front/back dimension. However, point of view, while a deictic notion, is not a matter of person distinctions.

I will argue (section 4.2.2.3 and 4.3.2) that analyses of sign language nonparticipant forms must investigate the phonological roles of *laterality* and *proximity*. I will show (section 5.3.1.1.3) that LSB grammaticizes the semantic notion of *present/nonpresent* on nonparticipant forms. Kegl's body

pronoun analysis implicitly recognizes this distinction. Liddell's surrogates and tokens analysis does as well. But neither analyst critically examines the effects of the distinction on referential practice. One piece of evidence that it has crucial influence is the fact that communicative efforts may conceivably move between performances of pronouns and nonlinguistic deictic pointing, but that option is unavailable in what Bühler calls the *Mountain comes to Mohammed* case, and Liddell calls *token space*. In my own analyses, I see these as a type of narrative which does not involve *deictic projection*.

The inadequacies of the form-based personal pronoun analyses are due to the fact that they focus too narrowly on accounting for form, and take too little account of form-meaning relationships. Linguists could see that signers' pointings, at least in many instances, function like the personal pronouns of spoken languages, and thus they sought an explanation that would reveal the systematicity and the conventionality which underlie the "ubiquitous point" (as Engberg-Pedersen 1993b calls it). The work discussed in the next chapter draws attention to the need to anchor analysis in semantics. Without that anchorage, the complexities of form can never be understood.

4. Meaning-based analyses of sign language pronominals

4.1 Ahlgren: The Demonstrative Hypothesis

Most analyses of the signs that translate into oral languages as personal pronouns have examined the sign language data on the basis of use rather than on the basis of meaning. It was not until the late 1980's that the Swedish researcher Inger Ahlgren raised the question of the validity of the presupposition that these sign language forms are personal pronouns.

Ahlgren (1990) claims that Swedish Sign Language (SSL) does not encode a category of grammatical person, and is therefore a counter-example to the claims of Benveniste (1971) and Lyons (1977) that all natural languages will have such a category. Ahlgren argues that SSL identifies pronominal referents solely on the basis of their location and not on the basis of conversational role. Thus, these pronominal forms are not personal pronouns but rather demonstratives. This is a provocative analysis; there is an appeal to the idea that languages which utilize the medium of space for grammatical purposes could dispense with the notion of grammatical person, and rely solely on spatial notions. A prime example of an area of grammar where sign languages effectively exploit the medium of space is verb modulations that use displacement of the sign in space to indicate a variety of aspects (Klima & Bellugi 1979).

Bühler (1982) and Lyons (1977) each hypothesize that personal pronouns in spoken languages develop out of demonstratives. Perhaps the efficacy of spatial deixis for identifying referents in the visual-gestural channel obviates the necessity for the developmental course to personal pronouns. The issue then becomes a question of the influence of space as a linguistic medium; can it override the grammaticization of conversational

roles? Conversational roles are recognized in the context of social interaction -- with respect to turn-taking (Baker 1977) or interruption (Hall 1989), for example -- but are they grammaticized as personal pronouns? Ahlgren reaches the conclusion that they are not.

When Ahlgren first formulated and presented her analysis (1986), she claimed that SSL had only locative adverbs. In the published version (1990), she amended this to the claim that SSL uses demonstrative pronouns for the functions personal pronouns serve in Swedish -- recognizing, we can assume, considerations of syntactic slot as criterial for distinguishing adverbs from pronouns. Still, it is worthwhile to review the semantics which underlie the distinction between entities and location because for demonstrative pronouns there is an interplay among the features of each.

Using LSB data to look at Bühler's distinction between the place marker and the closely related sender marker, the proximate adverb and the first person pronoun respectively, it can be said that the sign *HERE* and the sign *I/ME* encode the same information as spoken languages: (paraphrasing Bühler) *HERE* gets its full meaning as a position signal from the origin quality of the visual gesture and *I/ME* gets its full meaning as an individual signal from the personal characteristics of the visual gesture. Put another way, *HERE* encodes *location*, *I/ME* encodes *person*. While formational features of nonfirst adverbial and pronominal pointings may blur together, the sign *HERE* as the proximate place marker which includes the physical space the sender occupies, as opposed to identifying a location proximal to the sender, must be a downward pointing G-hand, and *I/ME*, a point to center chest. By the G-hand point to center chest (without intersecting gaze direction), the signer calls attention to himself as *sender*, not as a referential object, and only secondarily does he call attention to his location. As Lyons points out:

[P]laces are not entities, though they may be hypostatized and treated as entities in particular languages.... As places are not entities, so entities are not places; but, in so far as they occupy space, entities may serve to identify the spaces they occupy (1977:693).

Since the demonstrative pronouns form a link between the adverbial locative deictics and the personal pronouns, the refutation of Ahlgren's claim is a two-step process.

The first step is to distinguish pronouns as a class from adverbs as a class. Again citing Lyons,

The deictic, it will be observed, may refer to either an entity or a place; and this ambivalence is the source of a subsequent syntactic distinction between its use as a pronoun and its use as an adverb. (1977:650)

Some spoken languages have a single form which is used both pronominally and adverbially, ambiguity being resolved by context. To find such a situation in sign languages, therefore, would not be unprecedented. Berenz and Ferreira Brito (1990) point out that the syntactic slots relevant to this issue do exist in ASL and LSB (such as subject and object) and, further, that any leveling of the verbal argument positions will have to include full lexical NPs. Therefore, we would have to categorize these as adverbs as well. While there might be some justification for such a conflation of categories, traditional wisdom seems to hold that to do so does not facilitate the task of linguistic description. This analytic perspective is as valid for signed languages as it is for spoken languages. Thus we must conclude that at least ASL and LSB, among sign languages, have forms which have the syntactic properties associated with pronouns.

Turning to the possibility that the single SSL form in its pronominal use is a demonstrative rather than a personal pronoun, it should be noted

that some spoken languages have a single form that does dual duty as a third person personal pronoun and a demonstrative, its use disambiguated by context. To find a similar situation in sign languages would again not be unprecedented. However, it has not been reported that these spoken languages lack distinct first and second person pronouns which encode the roles of sender and receiver. If sign languages have only demonstrative pronouns and not personal pronouns which encode the participant roles, that would be unprecedented evidence against the linguistic universal proposed by both Benveniste and Lyons, as Ahlgren claims.

The second and more difficult step, then, is to distinguish demonstrative pronouns from personal pronouns. This is a semantic issue, since in many languages, though not all, both classes are appropriate for the same syntactic slots. We need to recall then that the semantic function of demonstratives is to focus the receiver's attention on locational features of an entity, and the semantic function of personal pronouns is to focus the receiver's attention on personal features of an individual.

For LSB and ASL, and likely many other sign languages which use the G-handshape, there are bound to be some similarities of form between the demonstrative pronoun used when the signer wishes to draw the addressee's attention to his physical position and the personal pronoun used when the signer wishes to draw the addressee's attention to his person, this being his social person, of course, not simply his physical body. Such is not the case for the set of possessive pronouns in either LSB or ASL, nor for the ASL emphatic/reflexive pronouns, since these take different handshapes.

Using English paraphrases for ease of exposition to show the LSB difference:

- (a) Who has the tickets? Me
 (b) Where are the tickets? Here (in my shirt pocket)

Although both second parts (i.e. the underlined text) could employ the same manual component, in the (a) case the signer is presenting himself as an individual not as an entity in a certain location in the deictic space. In the usual course of events, if a signer is discussing, arguing, complaining, philosophizing, and so on, points to self will likely be intended to draw the addressee's attention to the signer as a person in the role of sender of the message, whether as a gestural use or a symbolic use (in the sense of Fillmore 1971, 1975), but not to his physical position. If we accept that such points to self are linguistic objects, then they are ipso facto first person pronouns.

It should be noted that *person* is not a vague concept in this usage, elusive of definition like beauty or intelligence. In the (proto)typical language using situation, the language user is a person. As Jakobson (1957) notes, first person signals identity of the participant of the narrated event with the performer of the speech event, taking "narrated event" in the Jakobsonian sense of the use of any verb. It may be difficult to pin down the exact boundaries of the concept of person but it is not difficult to identify its focal exemplar.

Certainty about which notion, *place* or *person*, is more basic -- and, therefore, with respect to forms simultaneously encoding both notions (e.g. Armenian suffix -s) which is the direction of derivation-- may be impossible. It is certain, however, that the physical person of the sender is the origo around which the deictic system is organized. Locatives, after all, measure relative distance from the sender. It may be only a deduction, but surely not a far-fetched one, that languages which encode degrees of distance from the

sender would also grammaticize that pivotal conversational role. Meier attempts to determine if ASL can be shown to have done so.

4.2 Meier: The Sender-Only Hypothesis

While Ahlgren's exposition is purely semantic, given that the formational features of the signs she discusses are neither described nor illustrated, Meier (1990) identifies specific formational properties of an indexical sign associated with the semantic properties of first person. This is perhaps the first work that examines the pertinent sign language data at the levels of both form and meaning. However, because Meier is unable to identify comparable regularities for second person or third person, the set of ASL personal pronouns he proposes has only a single member. He claims that the opposition *first/nonfirst* is the only distinction ASL makes. With respect to general features of human language, it is highly unusual for a category to have only a single member and for a language to encode only the *first/nonfirst* distinction and not the *participant/nonparticipant* distinction. Moreover, as noted in chapter 2, Benveniste and Lyons claim that the first/nonfirst distinction divides the person category between first and second persons, not between person (=participant) and nonperson (=nonparticipant).

The analysis of the ASL personal pronoun system Meier proposes is widely accepted among researchers (Liddell 1994; Padden 1990) and has influenced analyses of personal pronoun systems in other sign languages (Engberg-Pedersen 1993a; Massone 1993a). Meier examines ASL deictic person reference from the perspective of linguistic universals and phonological form. He begins by making the point that the difference in communication channel between auditory-vocal languages and visual-gestural languages imposes constraints on the way conversations take place,

and he raises the question of the effects on grammar of this difference in communication channel. Despite the considerable influence of Meier's work in shaping generally accepted views of sign language pronoun systems, there has been little critical examination of its claims and conclusions.

4.2.1 The influence of communicative modality

Meier notes that participants in a spoken conversation may be out of view of each other but that this is impossible in a signed conversation. With a different center⁹⁵ from that implied in Meier's observation, it is could as well be said that participants in a signed conversation may be out of earshot of each other but this is impossible in a spoken conversation. In either channel, auditory-vocal or visual-gestural, reception under nonoptimal conditions is possible as long as participants in spoken conversations are able to glean some minimal amount of the sound signal and participants in signed conversations are able to do so with the visual signal.⁹⁶

Taking these two observations together, one might reflect on the (un)likelihood that natural language grammars develop in response to marginal communication conditions. Bühler and Lyons both claim that the typical features of conversation include an interactional configuration wherein the participants are visible to each other and proximal. An example of the grammaticization of these typical features is found in spatial deictic systems, for which the most common dimension encoded is proximity, using either the sender or the participants as the deictic center and locating objects

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⁹⁵ Padden and Humphries (1988) explore the notion that the Deaf World has a "different center" based on cultural values that differ from those of the majority hearing culture. These cultural values derive in part from the fact that deaf people's perceptual center differs from hearing people's perceptual center.

⁹⁶ With respect to the amount of visual signal necessary for accurate understanding of a communication, a number of studies have been done which impose visual noise over the sign signal (Klima & Bellugi 1979:164-75; Tartter & Knowlton 1981; Tartter & Fischer 1982). A recent recording of ASL poetry experiments with techniques which obscure the visual signal for artistic effect (Lentz 1995).

at distances relative to the center. Portuguese, for example, has a three-term system: *aqui*, *aí*, *lá*, usually understood to mean 'near the speaker,' 'near the addressee,' and 'far,' respectively. It is not uncommon in context, for *aqui* to include the addressee's location, and *aí* can take on the sense of medial from the speaker, but neither participant can be *lá* with respect to the other, even when they are separated by great distances. This grammatical fact can be seen to hearken back to the days when conversational participants were of necessity proximal to each other. Visibility is commonly an implicit measure in spatial deictic systems, the presupposition being that proximal objects are visible and distal objects may not be. Hanks (1990) shows that Maya speakers' choice of spatial deictic terms can be influenced by whether or not participants share visual field. Visibility can also be explicitly encoded, so that a particular term denotes a location that may be proximal or not, yet is visible to the participants (Fillmore 1982; Anderson & Keenan 1985). Thus, visibility seems highly relevant to the deictic systems of spoken languages, as well as to signed ones.

This is not to deny that there are consequences of communicative modality. One example is the fact that the articulatory gestures of sign languages are direct input to perception, while in spoken languages input is primarily (or even solely) the acoustic results of vocal gestures rather than the gestures themselves. Still, general prosodic features such as phrase-final lengthening and emphatic stress are to be found in both modalities (Coulter 1993). Another example is the fact not only do that the articulators for sign languages operate independently but the products of those operations can also readily be perceived each independent of the other. This permits signed languages to exploit simultaneity on the morphological and syntactic levels as well as the phonological. It is thus not surprising to find that although signs

take longer to articulate than do words, signed and spoken utterances produce propositions at similar rates (Klima & Bellugi 1979). Although signed and spoken languages differ with respect to the particulars of production, this general comparison suggests that they nonetheless share higher level processes.

Given that the auditory modality privileges proximity over visibility and the visual-gestural privileges visibility over proximity, an empirical question about auditory-vocal and visual-gestural languages is: How deep in the grammar are effects of the modality difference in communication channel felt? Specifically as regards deictic person reference in sign languages, what consequences of the need to attend visually can be identified? Does the efficiency of simple deictic pointing, one of the earliest communicative acts ontogenetically, impede the development of a set of personal pronouns, one of the more cognitively complex of grammatical systems?

Fillmore (personal communication) observed that the possibility for language usage at a remove from participants -- specifically writing and perhaps also telephoning -- has had impact on the grammars of languages whose users customarily engage in language usage at a remove. One reflex of writing may be increased sentence complexity, with the use of embedded and subordinated clauses as opposed to simple or coordinate structures. Writing and telephoning may both promote the use of lexicalized and explicit information, with the result that interpretation relies less on the addressee's ability to utilize information from the environment. (E.g. "The non-spill coffee cup you gave me is great!" vs. "This is great!") Under these conditions, the function of deictic expressions which rely on accompanying gesture could be subsumed by lexicalized descriptions which free communication from its dependence on participants sharing a visual field.

These effects may be more readily located in rhetorical practice rather than in grammar *per se*, but the determination of which, grammar or practice, is at present an empirical question, given the paucity of in-depth analyses of languages whose users do not have a tradition of language usage at a remove. Cheri Smith, co-author of a widely used ASL curriculum, has noted (personal communication) the difficulty of teaching English speakers to provide the appropriate level of detail in ASL narrative. Perhaps it is not only how much information, but also how to encode information (i.e. grammar), that confounds the task because of differences between the students' native language and ASL. We need to recognize that the boundary between grammar and practice is not entirely fixed.

A comment made by a Native American consultant working with a group of linguists underscores the point. After having accepted a series of constructions as possible in her language, the consultant was asked not whether the sentence was acceptable -- which she may have understood to mean intelligible -- but how it sounded. To which she replied: It sounds like a white man talking Indian.^{97,98} Typicality may be a better guide to grammaticality than intelligibility in the guise of acceptability, and grammaticality may turn out to be a matter of degree.⁹⁹

Heath (1980) describes referential practice among speakers of Nunggubuyu, an Australian aboriginal language, who show a preference for deictic expressions rather than lexical noun phrases. In describing how they prepare a wallaby carcass, a Nu speaker might say (paraphrased in English), "We cut the wallaby like this," drawing his hand diagonally across his torso

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⁹⁷ I owe this story to Nancy Frishberg.

⁹⁸ Linguists also attest to the reverse situation, i.e. where a language consultant rejects a construction during an elicitation only to use it himself later on in conversation. The methodological lesson to be learned here, then, is that elicited data is always suspect.

⁹⁹ The use of marked forms may be typical in certain marked situations.

from shoulder to hip. Nu speakers are unlikely to say, "We cut the wallaby diagonally from shoulder to hip." In the first instance, where a gesture accompanies the deictic expression, it is necessary that the addressee be visually attending the speaker. Only the less likely utterance is fully interpretable on its own.

Besides differences in the use of deictic expressions with manual gestures, spoken languages also differ in their use of vocal gestures. Many Brazilians familiar with American conversational practice observe that Portuguese depends on prosody to mark sentence types, while for English, prosody is often redundant with morphological and/or syntactic markers. On the pragmatic level, Brazilians depend more on intonation (and visual cues) to convey politeness; Americans lexicalize. Differences in the use of prosody have also been noted between British English speakers and Indian English speakers (Gumperz, Roberts & Jupp 1981).

Related to the grammatical notion of deixis is the discourse-level notion of context: cultural, social, and situational. Within and across languages, individuals or communities of speakers tend to a kind of usage which requires either high or low context for interpretation.¹⁰⁰ High context style presupposes a high degree of shared understanding, while low context style is marked by explicitness and descriptive precision. Part of shared understanding is a shared visual field where it suffices to answer, "Where's my book?", with "There" and a deictic gesture rather than "On the second shelf from the top of the bookcase, third book from the right." The first response requires that the questioner be attending visually to the answerer; the second does not. Despite a (middle class English-speaker) bias towards evaluating high context style as less sophisticated, each style has its

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¹⁰⁰ See Bernstein (1974) on restricted and elaborated uses of English.

strengths -- perhaps reducible to engagement for high-context and clarity for low-context.

Low context style is particularly suited to communication situations where participants are not familiar and where information transfer is the primary goal. The practice of language usage at a remove supports social relations between people who are not local to each other so that even exchanges between familiar cannot always depend on shared understandings. As these factors come to be commonplace in a society, low context style becomes the norm. In those modern Western societies that elevate rationality over all else, low context style is often seen as better than high context style rather than just different. (The literature on "language-deficient" African American children is a case in point.)

To be convinced of the power of high context style, however, one need only observe the performance of a skilled spoken-language storyteller. The storyteller's use of both visual and nonlinguistic vocal cues is intrinsic to the support of narrative development. Facial expressions and body postures serve to identify which character is saying or doing what and with what intent (equivalent to Engberg-Pedersen's *attribution of expressive elements*) or suggest the narrator's stance with respect to the unfolding events. Vocal cues, which derive their meaning in large measure from culture-specific associations that may be difficult to fully articulate, convey similar elements simultaneously with the linguistic stream rather than encoding them linearly and linguistically. These elements must find linguistic expression when story-telling is no longer performed but is designed for silent reading. For example, prosodic shifts which typify gendered voices must be replaced by "he said... she said...." Under these conditions, it is a challenge to the artful writer to convey nuance effectively while maintaining narrative coherence.

Low context style, so effective for information transfer, can easily become dry and flat when the goal of communication is less instrumental.

Furthermore, while it is the case that much information can be conveyed in spoken language without appeal to situational context, significant portions of the system -- e.g. spatial and person deictics, certain verbs -- require that the addressee be visually attending the speaker: "Who's he?" is impossible to interpret without cues from the situational context. In many cases one may be able to determine the identity of a speaker on the basis of voice quality so that it is only necessary to be auditorily-attending to associate tokens of the first person pronoun with the referential object. As Bühler points out, "I gets its full meaning ... from the personal characteristics of the voice" (1982:13). But a hearer must be visually attending to the speaker in order to associate tokens of nonfirst person pronouns in deictic usage with specific referential objects. Under these conditions, visual attention is as necessary for spoken conversations as for signed conversations.

4.2.2 Linguistic universals

Having raised the issue of potential modality effects, Meier turns to an examination of purported linguistic universals for person deixis based solely on data from spoken languages to see which are supported by data from signed languages as well. He cites three: (1) all known spoken languages have a system of grammatical person; (2) all known spoken languages have a way to distinguish first, second, and third person; (3) all spoken languages have a first-person plural -- that is, first plural is a lexical form, although second plural and third plural can be componential. To determine which apply to sign languages, he asks three questions: (1) what is the linguistic

status of deictic points in ASL? (2) does ASL have a grammatical category of person? (3) if ASL does have person, what person distinctions does it make?

4.2.2.1 Linguistic status of deictic points

Meier answers the first question by presenting three pieces of evidence in support of the linguistic status of deictic points in ASL, two syntactic and one phonological. The phonological argument is this: given the undisputed linguistic status of G-handshape points to nonpresent referents (i.e. anaphoric pronouns), it would be “troubling” to include anaphoric usages but not deictic usages, considering that they are the same form.

I would add that it is not enough to note the formational similarities between anaphoric points and deictic points, since these can be indistinguishable in form from nonlinguistic pointing. The argument must be syntactic as well as phonological because it hinges on the fact that both deictic and anaphoric usages can occur in the same syntactic structure. Points that occur in isolation may be arguably merely gestural, but those that are embedded in the sign stream, even participating in morphological processes that affect lexical signs as well and alter meaning in predictable ways, are convincingly linguistic. Neither formational similarities between gestures and signs nor the presence or absence of the referential object of the G-handshape point should obscure the fact that the form fills a syntactic slot.

Another piece of evidence is based on Padden’s observation that pronominal pointing signs used as emphatic tags (e.g. YOU FINISH YOU, ‘you finished, did you?’) can only coreference certain arguments of the matrix clause (subject, direct object, indirect object) and cannot coreference nominals in subordinate clauses. (E.g. YOU TELL JOHN FINISH YOU, ‘You said John finished, didn’t you?’; *YOU TELL JOHN FINISH HE, ‘You said John finished, didn’t he?’) The fact that reference to the grammatical category of the

antecedent is necessary to the description of pronominal points in emphatic tags provides support for their linguistic status.

Meier does not make it explicit -- perhaps it is self-evident -- that if the linguistic status of these emphatic tag pronominal points, which can reference either present or nonpresent referential objects, is acknowledged, it would again be troubling to deny the linguistic status of main clause points to present referential objects (whether or not the main clause is followed by an emphatic tag). Moreover, if the matrix clause antecedent of an emphatic tag takes the form of a G-hand point (rather than a proper name, definite description, or other nominal), this form must be understood to be an argument of the verb. G-hand points which occur in subordinate clauses cannot be antecedents to emphatic tags. How would this fact be accounted for if the G-hand point is extralinguistic?

Meier mentions the phenomenon of *double articulation*¹⁰¹, specifically the type where the nondominant hand indexes a referent while the dominant hand produces lexical signs, to examine the question of the boundary between gesture and language in sign languages. In spoken languages, gesture can co-occur with speech so the possibility exists for ASL that the nondominant hand is merely executing an accompanying gesture. Meier's presentation suggests that double articulations involving G-hand points lend credence to the assumption that deictic points are merely gestural. He does not discuss how double articulation is grammatically constrained but argues for the linguistic status of deictic points only on the grounds that, irrespective of

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¹⁰¹ *Double articulation* is the term Meier uses in his article. For this reason, I repeat it here. Other researchers object to this usage because it can be confused with the sense of the term also known as *duality of patterning*. Christopher Miller suggests *parallel signing* and *simultaneous construction*, the first being a general term and the second referring to instances that create syntactic or discourse units. Klima and Bellugi (1979) use the term double articulation to label a nonce form that plays on formational and/or semantic similarities of two conventional signs.

whether they be made by the nondominant hand or the dominant hand, deictic points use space in much the same way as do agreement verbs, which are lexicalized forms. The argument weakens under a strict reading of Liddell's recent analysis, which should set just this use of space outside grammar -- although Liddell himself seems to equivocate a bit.

Aside from how Liddell's analysis may be understood, an argument based on evidence from the aspect least amenable to grammatical description is a weak argument. It would be better to emphasize that the G-hand point fills a syntactic slot in a sentence. Meier's example (taken from Padden 1983) where three points in space, labeled *i*, *j*, *k*, are indicated sequentially by the nondominant hand in the G-handshape while the dominant hand simultaneously signs FORGET three times could be compared to a structure which moves the verb ASK from *i* to *j*, from *j* to *k*, from *k* to *i*. (Glossed: "She forgot, she forgot, and she forgot," and "Each asks the other."¹⁰²) In all instances the articulation conveys information about argument structure and the reference associated with the articulation is specific in contrast to other possible articulations which could instantiate different argument structure and nonspecific reference. Although constraints on combinations of referents are not mentioned, I suggest that it is not accidental that the three referents of the example are all nonpresent nonparticipants. It is unlikely that present referents and nonpresent referents could be mixed. These are linguistic facts and not merely matters of conventions of gesture.

Rather than casting doubt on the linguistic status of deictic points in sign languages, double articulation provides evidence which is more compelling than a dominant hand sequence of INDEX FORGET. On the face of

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¹⁰² Gender and tense in this example are matters of English grammar, not ASL grammar, although recent work by Aarons et al (1992) argues for the presence of tense marking on ASL verbs.

it, the G-hand point (which Meier glosses INDEX) in either or both could be gestural. The important contribution to the issue an examination of double articulation makes is that there are restrictions on what forms can be produced simultaneously which are narrower than those governing what forms can be produced sequentially. As with emphatic tags, the fact that we must draw upon grammatical notions to explain a phenomenon is evidence for the linguistic status of that phenomenon.

Double articulation that simultaneously presents two distinct meaning-carrying units is a resource of visual-gestural language, given the two-handedness typical of human beings and the perceptual salience of the articulators. By comparison, vocal double articulations produce a single unit, such as the velar and labial activities that are labeled /w/ (although Dizzie Gillespie, the trumpet virtuoso, could produce two distinct notes at the same time). Vocal double articulations are exclusively phonological while manual double articulations are morphological and syntactic as well. This is a modality difference of considerable importance, yet so far is little understood.¹⁰³ It is clear, however, that the use of manual double articulation is not free. Evidence for this claim comes from the fact that certain double articulations which stretch the bounds of acceptability for heightened effect are material for humorous creations and for poetry. Klima and Bellugi (1979) give a number of examples; others can be seen in the videotape "Creative Uses of ASL" (Deaf Media, Berkeley, CA).

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¹⁰³ In a departure from previous treatments of the sign which see the articulators as phonologically distinct entities, Uyechi (1995) argues that "the articulator(s) [are] a single phonological construct." Uyechi examines articulation at the level of the individual sign; the double articulations Meier is concerned with, G-hand points on the nondominant hand accompanying dominant hand lexical signs, are phrasal. The class of double articulations which include a perseverated classifier handshape, discussed below, are also phrasal. How Uyechi will deal with the class of signs which allow the nondominant hand component to be perseverated remains to be seen.

Besides G-handshape points, which indicate individual referents, articulation by the nondominant hand can take the form of a line or an arc traced by the G-hand. The verb must be articulated -- either held or reduplicated -- over a period of time about equal to that of the G-hand articulation. This line or arc accompanies verbs or adjectival predicates whose forms do not permit modulations of the kind Klima and Bellugi (1979) labeled *multiple*, meaning 'many' or 'everyone.' Neither iterations of the G-hand point nor the arc form can co-occur with verbs which have undergone the modulation.

To the extent that the phenomenon has been systematically examined, evidence is strong that double articulations which include at least one G-handshape are by far the most common (Miller 1994a,b). The constraint may be phonological, related to two constraints on single sign forms proposed by Battison (1974). The Symmetry Constraint deals with two-handed signs in which both hands move and states that the hands must have the same shape, location, and movement. For example, the LSB sign HOUSE, [B[^]B[^] x ·], is made in neutral space by upright B-handshapes touching twice at the pads of the fingertips. The Dominance Constraint states that in a sign where the dominant hand acts on the nondominant hand, the nondominant hand must be one of six unmarked handshape, among these is G. An LSB example is the sign BUS STOP, [G F x], the dominant hand in the F-handshape makes contact with the nondominant hand in the G-handshape (tips of the joined thumb and index finger of the F-hand touch the index fingertip of the G-hand).

Nonce forms reported in Klima and Bellugi support the possibility that the constraint is phonological. In one example, the signer combined the two-handed signs DEPRESSED, [[ ] 8⁸ x^v], and EXCITED, [[ ] 8⁸ x[^]~],

signing one hand of each, [[ ] 8`8` x^r]. He could do this because the two signs are not only semantic opposites but formational opposites as well. They use the same place of articulation ([ ] = the torso), the same handshape (8` = spread hand with thumb opposed and middle finger bent), and the same brushing movement in contact with the torso. The difference is that the movement for EXCITED is upwards and for DEPRESSED, downwards (although for DEPRESSED the hands move in unison, while for EXCITED, they alternate, as indicated by the tilde). In another example, the signer co-articulated two one-handed signs, CLEVER and IGNORANT, [u C x] and [u O x], respectively. Normally, the place of articulation for both signs is the center of the forehead. In the nonce forms, the signer articulated the signs one on either side of the midline. The first example adheres to the Symmetry Constraint. In the second example, one hand is not acting on the other, as is stipulated by the Dominance Constraint, but both are among the unmarked handshapes that can participate in a sign that does not have identical handshapes.

A phonological constraint may capture nothing more than the reality that it is difficult to pat your head and rub your belly at the same time. That would not be so different from phonological processes in spoken languages motivated by ease of articulation. But there is evidence to support a claim that the constraint on double articulations is syntactic. Nominal signs which use the G-handshape are as infrequent as signs which use other handshapes, as this LSB example shows.

- (4.1) *?dominant hand: WANT 5ⁿ_a t
 nondominant hand: CANDY c G x • 104
 “Do you want candy?”

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¹⁰⁴ In ASCII-Stokoe notation reads: WANT, in neutral space location, bent-fingered 5 hand, palm up, moves toward the signer; CANDY, at the cheek location, G hand touches twice. Nonmanuals are not transcribed.

The acceptability of this example improves if the verb is modulated, replacing the movement toward with internal wiggle. Double articulations with a single G-hand point and an unmodulated verb (i.e. a single subject-predicate construction) are also only marginally acceptable.

A second kind of common double articulation involves the perseveration of the nondominant hand component of a two-handed sign while the dominant hand goes on to articulate other signs. In these cases, the nondominant hand form takes on a classifier function. An LSB example is a sequence like the following.

(4.2) YESTERDAY MUSEUM I SEE PICTURE

LOOK-AT-CL-B:flat object+intently

RECOGNIZE HOUSE MINE

'Yesterday at a museum I saw a picture. I looked at it closely and recognized my own house.'

What is relevant here is the perseveration of the nondominant hand of the sign PICTURE, $[B_t, ^\wedge U_{< n} \cdot]$ ^{105,106}, in the B-handshape to become the direct object of the sign LOOK-AT, $[B_t V_{b,f}^f]$.¹⁰⁷ Signs like these, where the nondominant hand forms an independent morpheme, contrast with other signs for which the handshape is only phonologically relevant, as for example LSB TRUE, $[B_a D^x]$. In the former case, the nondominant hand is equivalent to a classifier.

¹⁰⁵ In the ASL manual alphabet, both U and H are handshapes with index and middle fingers extended and touching. They differ in that the fingers point upward for U and to the contralateral side for H. Stokoe notation and subsequent analyses use H as a label for the handshape regardless of orientation. In the LSB manual alphabet, the H-hand does not have fingers touching. For this reason, I am using U as a label for this handshape.

¹⁰⁶ In ASCII-Stokoe notation reads: nondominant or base hand in upright B-handshape toward the frontal plane of the signer's body, dominant hand in U-handshape, palm left, nods repeatedly.

¹⁰⁷ In ASCII-Stokoe notation reads: nondominant hand in B-handshape towards frontal plane of the signer's body, dominant hand in V-handshape palm downward fingertips forward. The fingertips are oriented toward the B-handshape and thus toward the contralateral side as well as forward.

It is well-known that classifiers substitute for nouns, so it is not surprising that in the two most common kinds of double articulation the nondominant hand is a pro-form. Although the details of the constraints on double articulations have yet to be fully determined, it is clear that both hands are engaged in linguistic activity. This being the case, rather than weakening the argument in support of the linguistic status of deictic points in sign languages, double articulations provide strong positive evidence.

Meier observes that deictic signs in ASL are syntactically constrained, as gesture is not, and he concludes that, while some instances of pointing may be nonlinguistic, the “hypothesized analogic nature” of ASL pronouns does not preclude their linguistic status. Thus, the answer to the first question about the linguistic status of deictic points is that at least some of them are grammaticized. My aim in reviewing this part of his argument is to show that the evidence for that premise is even stronger than Meier shows it to be. Many linguists remain doubtful about the linguistic status of deictic points in sign languages and even about the linguistic status of sign languages themselves, so it is important that claims be thoroughly grounded.

However, with the disclaimer implied by “hypothesized,” Meier sidesteps another important issue, that is, whether or not ASL pronouns are indeed analogic in nature. He does not anywhere assert that they are categorical and therefore necessarily discrete in nature, which his own argument for distinguishing first person discussed below implies. Leaving unexamined the issue of whether ASL pronouns are, in fact, analogic in nature confounds analysis and leads Meier to claim, in answer to his third question regarding the person distinctions made, that there are only person and nonperson. Before turning to that discussion, I will reconsider Meier’s arguments for person as a grammatical category in ASL.

4.2.2.2 Grammatical person

Meier's argument for a category of grammatical person in ASL rests on observations about the first person singular and plural. One is that the form of the first person plural, especially the possessive, is not directly deictic. The possessive form is only partially motivated, given the place of articulation at the signer's chest even when reference includes others present. That is, the sign form does not change to reflect real world locations of present references. This is important because it shows that the use of space is categorical, at least for first person.

Meier says as well that the form of OUR, [[ ] B[^] x,<^a,x], is not fully componential since the supinating motion of the wrist (as indicated by *a* in the DASL entry for the sign Meier analyzes) is not predictable from a morphological analysis of the form as consisting of three morphemes: first person [ ] , possessive B , plural x,<,x (sweep = touch, move contralateral, touch). Whether or not OUR is componential is important to the third universal Meier is considering: All spoken languages have a lexical first-person plural.

Supination can be morphologically meaningful. Verbs of motion and location (which incorporate classifiers) include forms where the palmside of the hand is associated with the frontside of an object, so that supination or pronation may indicate orientation of the referent; there are also forms where pronation indicates negation. Some ASL examples of the latter are: NOT-WANT [5_a5_a ^b], NOT-KNOW [u B_t ^{b,f}], BAD (= NOT-GOOD) [l B_t ^{b,v}].

Although the supination of the hand in OUR is not predictable from a morphological analysis, it is not unexpected from a physiological perspective. Supination requires less effort through the shoulder and elbow than the

alternative articulation; it is easier to make contact with the contralateral side by supinating the hand than by maintaining the initial upright position of the B-hand and rotating the wrist in the vertical plane to end with the palm facing ipsilaterally rather than up. This alternative articulation of OUR is also acceptable (Sternberg 1987). In fact, a careful articulation of the sign will produce this variant, while the variant Meier describes occurs in everyday conversation.

The sign WE is transcribed in the DASL as [[ ] G_v x,<,x].¹⁰⁸ The movement sequence of WE differs from OUR in that there is no indication in the notation that palm orientation changes. However, WE can show a pronating movement as the G-hand reaches for the contralateral shoulder. In order for the down-pointing G-hand to make contact with the ipsilateral shoulder prior to the movement, the wrist must be flexed resulting in the palm facing somewhat ipsilaterally.¹⁰⁹ The sweep toward the contralateral side can be articulated with or without pronation, but is more common with pronation, [[ ] G_v x,<b,x].

Moreover, if handshape orientation, and not handshape alone, is considered, the upward orientation of the B-hand (indicated by ^) and the downward orientation of the G-hand (indicated by v) may be found to be predictors of supination and pronation, given the movement sequence. The LSB sign EGOTISTIC, [u P_t x | [ ] P_t x], begins with the middle finger of the P-hand, palm in, touching the forehead then pronating as the hand moves down to touch the center chest, but the pronation is only an artifact of the

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¹⁰⁸ Citing Baker and Cokely, Meier allows that WE may be limited to speaker+nonpresent referents, but he does not elaborate on this point. Such a constraint in ASL would parallel the analysis I propose for LSB, wherein horizontality encodes *presence* and verticality, *nonpresence*.

¹⁰⁹ Alternatively, the bent G-handshape may be facing toward the frontal plane of the signer's body. In either case, what is most salient about the movement is the extension of the hand from the flexed wrist position. The pronation is only an artifact of this extension.

sequence of touches when the movement down is made by flexing the wrist. If the movement down is made by retracting the elbow, palm orientation does not change. A similar sign, (BE-)YOUR-DECISION [u P_t x,fb], begins the same way but moves forward pronating. Here the pronation is not articulatorily predictable; supination is possible with this movement sequence, as happens for example in LSB THANK-YOU, [u B_t x,fa]. Pronation in (BE-)YOUR-DECISION is phonemic. Another LSB sign, the first person plural inclusive pronoun, has two variants, [[] G_t x,<@f] or [[] G_t x,>@f], in the first of which the G-hand will pronate as it circles contralaterally and forward from center chest, while in the second it will supinate as it circles ipsilaterally and forward. Either articulation carries the same meaning, namely inclusiveness, and is distinguished from the first person plural exclusive, [[] G_t x,@,x], which, since it does not move forward, neither pronates nor supinates as it circles. Here it is the movement forward or its absence which is morphologically meaningful,¹¹⁰ and the supination or pronation is a phonetic fact with neither morphological nor phonemic status.

Supination and pronation can be phonemic (without, at the same time, being morphological) in ASL as well, e.g. DEAD, [B_a | B_b b,a], where one flat hand begins supine and pronates at the same time as the other begins prone and supinates. For OUR and WE, however, supination or pronation of the hand are merely phonetic facts which, like LSB WE-inclusive, have neither phonemic nor morphological status.

The phonologically predictable supination of OUR does not obscure perception of the three morphemes: first person [ ] , possessive B ,

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¹¹⁰ Later in this section I argue that the movement forward along the midline of the signer's body within the contrast set of personal pronouns imparts the meaning *second person* as chest location imparts the meaning *first person*. ASL also appears to encode inclusive-exclusive in a similar way (A. Moy, p.c.).

plural=**sweep**. The plural morpheme is, in fact, simply the linear movement, be it contralateral or ipsilateral; the touches occur only with first person pronouns. With this in mind, we can see the chest location as a conditioning environment for an assimilation of the plural morpheme. Just as we would say that the English words *keys* [kiz] and *kites* [kaits] are componential and involve the same plural morpheme, regardless of the effect of the phonological environment on the plural morpheme, so too the palm orientation change in the plural morpheme as it is realized in both OUR and WE is influenced by the first person morpheme. This observation and the existence of a non-supinating citation form of OUR show that, contrary to Meier's claim, ASL data are counterevidence for the universal which proposes that first person plurals are lexical.

Nonetheless, Meier's first point, that OUR is not directly deictic demonstrates that first person forms differ from nonfirst person forms. This fact, rather than noncomponentiality, demonstrates that the ASL first person plural is special. As semanticists have noted (Benveniste 1971; Silverstein 1976), first person plural is not, in the usual case, a plurality of like referential objects (i.e. senders), as nonfirst person plurals may be. Thus, if ASL can be shown to divide the person category, then the plural evidence from ASL can be seen to support the universality of the first/nonfirst distinction.

Taking the plural data as evidence for the first/nonfirst distinction in ASL, they give positive supporting evidence with respect to the larger issue of whether ASL, and by extension other sign languages with similar forms, has a category of grammatical person. However, trying to establish the uniqueness of the first person plural pronoun before establishing the existence of a first person singular pronoun puts the cart before the horse.

Thus, Meier's second argument based on first person singular is crucial to the establishment of a first person category in ASL. The argument rests on the fact that in roleplay a point to self, which Meier glosses INDEX_S, can refer to someone else, as in reported speech *I* can refer to another speaker.¹¹¹ Meier was the first to draw attention explicitly to this property of the sign. Following Meier, the same kind of evidence has been sought in other sign languages as well.

In the discussion of pronominal reference in shifted spaces, Meier provides this example (Meier's 9.8).

(4.3) YESTERDAY INDEX_S SEE FRIEND

gaze j
 1 [INDEX_S LOOK-FOR [M: durational] INDEX_j] 1

'Yesterday I saw a friend. "I've been looking for you," she said.'

He discusses only the two tokens of INDEX_S, both points to self but performed at different loci: neutral in the first instance and left in the second (as indicated by the subscript *l* before and after the bracketing). In the following example (Meier's 9.9),

(4.4) gaze j Q

Character A: WANT EAT

gaze i
 Character B: EAT FINISH INDEX_S

A: Do you want to eat?

B: I already ate.

there is no full body shift but only a shift in head position and gaze so that the token of INDEX_S in this report is "identical to the deictic point by which this signer would refer to self outside role-playing." Meier argues that INDEX_S consistently means sender, whether or not the signer is the sender referred to by a particular token. INDEX_S can refer to either the current

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¹¹¹ Meier produced this work before a distinction between various types of shifting was much discussed and roleplay was still used as a general term. In view of Engberg-Pedersen's (1992) more recent analysis, the evidence Meier's presents is more specifically from *shifted reference*. (See section 3.4.2 for further discussion of Engberg-Pedersen's distinction.)

sender or a reported sender and thus functions as a first person pronoun, a linguistic convention that is not directly deictic. Meier concludes that ASL does have person and that INDEX_S is a grammaticized first person pronoun.

The semantic arguments for INDEX_S being a first person pronoun are quite convincing, but the phonological ones are less so. First, the assessment of identity between points is a problematic issue. It is a flaw in Meier's argument that he does not address how the two tokens of INDEX_S in example (4.3), nonidentical by his criteria, are both first person pronouns. It is not enough to say that the form in (4.4) is identical to the form the signer would use to refer to himself as sender so that the form-meaning relationship is constant and independent of the individual who happens to be in the sender role. We must also explain how the second token in (4.3) is also a first person pronoun.

The measures of identity and nonidentity used by Meier are based on the assumption that the phonologically relevant elements are the handshape, the place of articulation, and spatial loci. If spatial loci are at the same grammatical level as handshape and place of articulation -- by which I assume Meier to mean signer's center chest, then the second token of INDEX_S in example (4.3) being interpretable as a first person pronoun remains unexplained. It cannot be that the body shift is an accommodation to communicative conditions that distort the grammatical form, since this kind of shift is widely attested and is in fact the citation form signers will give in response to elicitation of narrative. Furthermore, with respect to the evidence from (4.4), if a spatial locus is established for Character B at *j*, as Meier indicates in his figure (Appendix B, figure 4.1), then it is difficult to see how *j* gets associated with the signer's spatial locus so that a point to self can be a *sender* form attributable to Character B.

Besides the issue of nonidentity in form, a second question arises: what evidence is there that INDEX_S is a personal pronoun and not a demonstrative, as Ahlgren (1990) argues with respect to what must be similar forms in Swedish Sign Language? Much has been made of the indexical function of gaze. Clearly, gaze has an indexical function, but I would argue that it also has a lexical function in pro-forms. The formal distinction between personal pronouns and demonstratives lies in part with gaze behavior. For demonstratives, gaze direction and handshape direction will intersect (or nearly so), and here gaze is indexical in that it invites the addressee to follow the trajectory of the handshape direction to identify the referential object on the basis of its location; for personal pronouns the two will not intersect,¹¹² yet gaze behavior is still part of the form. Considering first person, a point to center chest with gaze direction to center chest is a demonstrative; a point to center chest with gaze direction away is a first person pronoun.

Meier's criteria for identity of forms does use a notion of coordinates, but he takes the relationship to be between the handshape and a spatial location independent of the signer's body. Only in this way could he see the tokens of INDEX_S in (4.3) as being formationally dissimilar. In terms of the body coordinates model I am proposing, the tokens of INDEX_S in (4.3) are phonologically identical since they both have the same configuration of handshape, gaze, head, and chest orientation. Shifted space affects not only the pronoun but all items in the utterance from that position. This becomes clear when the signer chooses to locate the reported receiver in a position relatively higher or lower than the reported sender, as in adult-child discourse. Given this evidence, the signer's position, whether neutral, left, or

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¹¹² In section 5.3.1.1, a distinction is made between present and nonpresent nonparticipants with respect to the coordinates of handshape and gaze. For nonpresent nonparticipants, there is a near intersection of the two.

otherwise, need not enter into a description of the pronoun form. Example (4.4) shows influence of situational factors such as informality; informal articulation is less precise, so that the chest coordinate is disjoined from handshape, gaze, and head orientation. It is also noteworthy that (4.4) reports the turns of two participants, not just one as did (4.3). It may be that reports of more than a single character's utterances tend to use head shift.

Head shift is a subtype of body shift, the evidence for this being that body shift entails head shift; unclarities under (reduced form) head shift can be resolved by (full form) body shift and the meaning remains constant: the referent is a sender other than the current sender as current sender.¹¹³ In (4.4), the chest coordinate is a trace of the current conversational configuration rather than being an element of the reported sender form. The body coordinates analysis strengthens the argument that ASL has a reasonably invariant form which encodes the conversational role *sender*, and thus serves to confirm Meier's claim that ASL has a grammaticized first person pronoun.

4.2.2.3 Person distinctions

Taking the existence of a first person form as evidence for the grammatical category of person, Meier turns to his third question: what person distinctions does ASL make? He investigates the issue of whether or not second and third person forms can be distinguished from each other and concludes that they cannot. On this basis, he claims that ASL data support only the first/nonfirst distinction and, it can be inferred, fail to support the participant/nonparticipant distinction. Up to now, my examination of the issues has sought to refine rather than repudiate Meier's claims. With the

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¹¹³ See section 4.2.2.3.3 and section 4.3 for a discussion of the relationship between the current conversation and the reported conversation.

exception of the universal dealing with componentiality of first person pronouns, the conclusions he arrived at are generally correct, even if some details are wrong. This last claim, however, is alarming for what it implies about sign languages, Deaf communities, and the validity of linguistic data in demonstrating the reflexive relationship between language and culture.

Although Benveniste (1971), Lyons (1968), and others do indeed propose that the first/nonfirst distinction is basic (and evidence from first person plural supports the notion), it is not the case that this distinction is attested in spoken languages in the absence of the participant/nonparticipant distinction. In fact, the semanticists all pass rather quickly over the first/nonfirst distinction and proceed to contrast participants with nonparticipants. They speak forcefully of the folly of including the nonparticipant in the category of person, all the while unquestionably including the nonfirst participant. It may be that the status of addressee as person is conferred by the sender and therefore not independently arrived at (Benveniste 1971; Silverstein 1976), but there is no doubt that person it is. This being so, under Meier's analysis ASL presents a unique and troubling case.

Troubling because the grammaticization of types for indicating conversational participants goes beyond grammar itself and suggests that the social world of the deaf differs markedly from that of the hearing in the direction of being considerably more egocentric as opposed to sociocentric. Sociological studies suggest the opposite: that the importance of community as a cultural value is greater in the Deaf World than in the majority American society. What would it mean to the utility of linguistic data for investigating social and cultural specificities of various communities if ASL's failure to encode the participant/nonparticipant distinction is at such

variance with perhaps the most basic cultural value attributed to the Deaf community?

The claim that ASL grammaticizes only the conversational role of sender is quite different with respect to the issue of the relationship between language and culture than is Ahlgren's claim that SSL grammaticizes no conversational roles at all. Ahlgren's claim does not set the sender apart. One location is not privileged over the another. Since no social roles are encoded by demonstratives, the question of egocentric versus sociocentric social organization having linguistic reflexes in the system does not arise.

If Meier's conclusion is valid, then either ASL is anomalous with respect to the reflexive relationship between language and culture or a rethinking of that relationship is warranted. Preliminary to the radical re-ordering that either of these prospective explanations would lead to, Meier's argument calls for a second look.

4.2.2.3.1 The first/nonfirst distinction

Although Meier intends to argue for the grammaticization of the first/nonfirst distinction in ASL, upon close examination, the analysis does not present a contrast between first and nonfirst within a category of grammatical person but between person and nonperson. Benveniste and Lyons use first/nonfirst as a means to distinguish between the two persons of the discourse, sender and receiver; Lyons (1977) uses person/nonperson in reference to the participants versus the nonparticipant. Consonant, then, with the established meanings these distinctions have in semantics, Meier's arguments support the participant/nonparticipant distinction rather than, as he claims, the first/nonfirst distinction. Under Meier's analysis, the ASL person category has only a single member. As already noted with respect to the Lillo-Martin and Klima analysis, linguistic categories seldom consist of a

single member. To instantiate the first/nonfirst distinction, the ASL person category must be shown to have two members. Thus, Meier's interpretation of the evidence supports only the distinction Lyons (1981) calls "secondary," and has nothing to say about the "primary" distinction.

Meier presents several arguments against the existence of a second person pronoun in ASL. One of these is that only first person shows gaps and idiosyncrasies in the paradigms of agreement verbs.¹¹⁴ This fact contributes to the establishment of the category of grammatical person, although not directly to the discussion of whether or not a first person pronoun is grammaticized. It is evidence for the first/nonfirst distinction, but it has nothing to add to a discussion of the possible grammaticization of a second person pronoun.

A related observation Meier makes -- that a number of ASL signs can be seen as deriving from first person signs, but no such signs come to mind for nonfirst person signs -- also holds true for LSB. EGOTISTIC (see section 4.2.2.2 above) is such an example. It derives from a first person idiom that means, "The problem/decision is mine." There are second and third person idioms with equivalent meanings. All of these have undergone phonological changes which set them apart from the two sign sequences from which they derive. Yet only the first person form gives rise to a sign whose meaning is independent of a specific grammatical person. Here again, however, this is positive evidence for the grammaticization of the first person pronoun -- or, more precisely, for the first/nonfirst distinction¹¹⁵ -- and not negative evidence against the grammaticization of the second person pronoun. We will

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¹¹⁴ As mentioned in chapter 3, these are verbs that change the orientation of movement to encode elements of argument structure.

¹¹⁵ The existence of the first person pronoun would have to be assumed before the derivation of the LSB sign could be explained.. See section 5.3.5.2 for a discussion of this sign.

now turn to a detailed examination of Meier's claims with respect to the grammaticization of a second person pronoun.

4.2.2.3.2 Addressee as a phonological element

Meier rightfully rejects phonological descriptions that make reference to the location of the addressee. He contrasts these with descriptions where the notion of conversational role only plays a part in the conditions on use and not in the form itself, as it does for the English pronoun *you*. He also contrasts this kind of description with the ASL first person pronoun, which has center chest as place of articulation. He states,

Unless the form of the ... ASL sign can be described independent of the location of the real or hypothetical addressee, I see no reason why the grammatical description of ASL must be complicated by the notion of second person. (p.188)

I fully agree with Meier. As I have pointed out, only the signer's body has phonological status; the signer is simultaneously (a) a particular individual, (b) in the conversational role of sender, and (c) a place of articulation which bears a certain relationship to the handshape and movement in the phonological description of the first person pronoun. Not so the individual who stands in the conversational role of addressee; the body of the individual who stands in the role of addressee is not a source of phonological places of articulation. My disagreement with Meier is with respect to his conclusion that the relevant ASL sign cannot be described without reference to a particular individual or to that individual's location. In the following sections, I will provide counter-arguments to each of his points. In the rest of this section, I will consider an argument related to Meier's assessment of the grammaticization of the conversational role of addressee with respect to its phonological form.

Arguing against a grammaticized second person pronoun in Danish Sign Language, Engberg-Pedersen notes that while a point to the sender can refer to a referent other than the current sender, a point to the addressee cannot refer to an addressee other than the current addressee. This is to confuse the semantics with the phonology. It is not that a point to the particular individual who stands in the role of sender of a given message is the form. Rather, *sender* is the meaning of a point to center chest and, I would add, gaze away, regardless of whether or not the person to whom the chest belongs is the individual referred to by a usage of the pronoun which encodes this meaning.

To paraphrase the quotation from Bühler cited above, the first person pronoun gets its full meaning from the personal characteristics of the sender's voice, in the case of spoken languages, or visage, in the case of sign languages. For this reason, current senders -- both speaker and signers -- sometimes try to detach themselves from the role when reporting for other senders by caricaturing personal characteristics they wish to attribute to the reported sender. But this "full meaning" of the first person pronoun, by which we can understand Bühler to mean its interpretation in terms of the referential object, goes beyond grammar and lexicon. For the second person pronoun, nothing in the form in either the vocal or gestural modality is directly connected to the referent; in both modalities, the form is articulated by the sender and is describable solely in terms of the articulatory array. Its full meaning in Bühler's sense is only derivable from context, be it situational or textual.

Engberg-Pedersen's evidence for the grammaticization of the first person pronoun in Danish Sign Language differs in a significant way from Meier's for ASL. Meier is arguing that the form of the sign with respect to

features of handshape and location is consistent over instances of use; Engberg-Pedersen is arguing that reference is based on the convention of generalization from a token to a type. Just as one can point to a hyacinth and say, "That's my favorite flower," meaning hyacinths as a species not the particular hyacinth, one can point to oneself, she argues, as a token of the type *sender*. Engberg-Pedersen's position, then, is similar to Kegl's in that meaning derives from the association of the pointing handshape with the signer's body, rather than that features of handshape and location define the form, as Meier would have it.

Greftegreff (1992) presents a similar position, even more broadly construed. Based primarily on Norwegian Sign Language (NTS) data but drawing also on ASL, she challenges Stokoean description, as well as more recent phonological models, arguing from a phonological perspective that NTS signs EYE, EAR, NOSE, and others, including pronouns, are better described as deictic points to the relevant referential object. Thus, by pointing to one's nose, one can refer to noses in general or perhaps to some other specific nose. But Greftegreff does not mention a telling asymmetry: one cannot refer to one's own nose by pointing to someone else's nose. Nor can one point to someone else's nose to refer to noses generally. This asymmetry is strong evidence for my claim that only the signer's body is phonologically relevant.

Greftegreff notes that in the DASL variants of the first person pronoun are to be found on pages 63 and 193, since in the one case zero tab (neutral space) is the place of articulation and in the other, the chest is the place of articulation. This is in large measure an accident of the choice to arrange the dictionary first by tab rather than dez (handshape), and to the choice of separate entries for variants of a single lexeme. Variants of spoken language

lexemes could create similar lexicographic confusions if each were entered separately in the dictionary by pronunciation. The English word *he* is usually represented as the sequence of fricative and vowel [h i] but in many instances of use is merely the vowel, while the English word *you* is usually represented as a sequence of glide and vowel [j u] but in rapid speech becomes only the initial glide. It does not matter that in the one it is the onset of the syllable that is elided and in the other it is the nucleus; the variants are readily and appropriately categorized by English speakers.¹¹⁶

I am not denying the obvious, that the sign has its origin in ostensive gesture. Rather, I support Stokoe's claim that once these features of human physiognomy take on linguistic values, they cease to be an end in themselves and become a means to an end. That this is so can be seen more clearly with signs for which the iconic origins are somewhat more obscured. Take the ASL sign RED, [l G_t ^{xv} •], said to have its origin in a point to red lips, it means 'red' whether or not the signer's lips are pale with cold or painted punk green; BLACK, [u G_< ^{x>}], thought to originate in a point to black eyebrows, means 'black' no matter if the signer is a fiery redhead with eyebrows to match. ASL NOSE [m G ^x] contrasts phonologically with BORING [m G ^{xa}]¹¹⁷ by virtue of the movement, which for the latter includes a supination. On the level of phonological description, it does not matter that prelinguistically NOSE derives from a certain kind of illustrator (i.e. nonlinguistic deictic pointing) and BORING from a certain body manipulator (i.e. nose-picking), in Ekman's terms. Likewise for the pronouns, what is relevant to the forms is

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¹¹⁶ It is curious that " 'e" (for example, "Where'd'e go?") is only recoverable as *he* and not as *she*. Among other things, this shows that the process is sensitive to considerations of meaning.

¹¹⁷ The DASL (p.138) glosses this sign as 'be reluctant,' and 'feel lazy.'

that they are built up from elements which no longer have direct associations with elements of meaning.

The type/token argument does not figure directly in establishing either the first person pronoun form or the second, but it is useful as support that claims about hypothesized forms are valid. The several different conjunctions of body coordinates (see section 4.2.2.3.3 for an example) define forms of particular types. Tokens of these types are systematically interpretable without recourse to the personal identities or spatial locations of the individuals to whom they refer at a given time in a given discourse. The type for the addressee form is a point away along the midline of the body with nonintersecting gaze away in the same direction. Tokens of the type can refer to the current addressee or to a reported addressee. Peculiarities in the current or reported conversational setting will affect tokens of the type as much for pronouns as for other signs.

This is to utilize the type/token generalization in a significantly different way than Engberg-Pedersen does. As the semanticists reviewed in chapter 2 agree, deictic words do not denote according to a descriptive quality. Yet that is just how one can move from a token of hyacinth to its type, from a token of red to its type. Furthermore, it must be an enduring and definitive characteristic of the token that leads us to its type. With this in mind, we might consider whether Greftegreff's argument -- if not Engberg-Pedersen's -- can be maintained for lexical signs, even though it fails to directly explicate pronouns. I would argue that a person cannot provide a token of the type *sender* or the type *receiver* but only of the type *human being*, a nondeictic semantic category. Perhaps a linkage can be forged between *human being* and *sender* by means of the type/token relationship.

A person cannot be a token of the type sender -- that is, a first person pronoun -- because a person is only feelingly a sender. The relationship between a person and the role of sender is not direct, as is the relationship between a person's nose and the concept *nose*; nor is it metonymic, as is the relationship between a person's forehead and the concept *thinking*; nor is it synecdochic as is the relationship between a man's mustache and the concept *man*.¹¹⁸ Perhaps the relationship between a person as a token of the type *human being* and the type *sender* is frame-metonymic, i.e. a role (sender) plus a value connection (human being). This notion may be worked out but it seems to me far less satisfactory than Meier's argument based on a description of the articulators.

Even in the context of the type/token argument, it is only the person who stands in the role of sender upon whom the phonological form depends and not the person who stands in the role of receiver or other nonparticipant present in the conversational setting. After all, the specific manifestation of *hyacinth* that is the token of the type is not a linguistic entity. The linguistic entity is the deictic word that indicates to the addressee where in the deictic space the nonlinguistic entity referred to can be found. Therefore, if a person in the role of addressee cannot be used to make reference to the concept *addressee*, that is not evidence that the concept is not encoded in linguistic form, but that, on the level of form, only the signer's body is phonologically relevant and, on the level of meaning, deictics are not good candidates for the type/token generalization.

Evidence of the independence of the second person pronoun from its referent can be seen in the fact that there exists a citation form which is

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¹¹⁸ In the glossary Washabaugh (1980:90) provides in his article on Providence Island Sign Language, there is this entry: "MALE₁ Index finger brushes along upper lip."

readily elicited and which depends on no real or reported addressee for its meaning. Additionally, a second person pronoun that fails to draw the intended addressee's attention is still a second person pronoun. An observer to the scene could know that a second person pronoun had been produced even if he could not locate which of a number of possible addressees had been the intended addressee. The addressee's location is relevant for making the association with a particular referential object, in Bühler's terms, relevant to the "full meaning" of the pronoun, but it is irrelevant to the phonological form of the pronoun. What is relevant? The signer's intent? How to describe the shape of intent? Or is it the set of coordinates of head, gaze, handshape, and, in many cases, chest orientation that are the relatively invariant form associated with the meaning *receiver*? In sum, it might be better to throw out only the bath water and take another look at the baby; failed phonological descriptions are not evidence.

4.2.2.3.3 Arguments from shifted reference

I will show that evidence for the grammaticization of a second person pronoun can be found in an examination of shifted reference as readily as evidence for the first person, although Meier overlooks it. He says that "in a conversation in which John is alternately the signer, the addressee, and a nonaddressed participant, deictic pronouns translated respectively as 'me,' 'you,' and 'him' all index the same spatial location." It is also true that if John changes location during the conversation deictic pronouns translated respectively as 'me,' 'you,' and 'him' will index a different location. These facts present a problem for a phonological description of pronouns that includes arbitrary spatial loci. Even taking the signer's position into account (as does an older proposal by Liddell now superseded by the Surrogates and

Tokens model), it is difficult to escape associating loci with referents' locations rather than with the articulatory array presented by the signer.

John's real world location is not a linguistic object. What is linguistically interesting is that certain indexes to John will be translatable as 'me' no matter where he is located, others as 'you' and still others as 'him.' The analytic task is to identify the recurrent aspects of these forms translatable as 'me' that systematically contrast with recurrent aspects of forms translatable as 'you,' and these two with those translatable as 'him.' Consider how different the body coordinates of these several kinds of reference to John would have to be; minimally, for 'me,' a (bent) G-hand point toward center chest with gaze direction away; for 'you,' G-hand point, head, and sustained gaze direction away in the same plane; for 'him,' a G-hand point, with or without glance (not gaze¹¹⁹), head and/or chest orientation disjunct from handshape orientation.

For example (4.3) above, intended to show the effect of body shift on the form of INDEX_s, Meier does not note that the spatial relationships between *I* and *A*(dressee) in the drawing of unshifted space and *I* and (INDEX)_j in the drawing of shifted space (Appendix B, figure 4.2) show a formational equivalence. The drawings are not merely abstractions but typifications of the conversational configuration. As such, they demonstrate the conditions under which grammatical mechanisms emerge.

Meier does not specify what these typifications schematize but presumes that the reader can call up the appropriate conversational configuration -- that is, the two participants facing each other at the opposite ends of the line of sight Stokoe describes (DASL:281; cf. section 4.3.1 below).

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¹¹⁹ Here I am contrasting a fleeting "looking" which may not extend over the duration of the pointing with a durative "looking," which in the normal case extends over the duration of the pointing.

The spatial relationship between participants in the unshifted typification is not derivable from the transcription since neither gaze behavior nor any other indication of body orientation is notated until the reported speech segment. Of course, where the addressee was positioned is not relevant to Meier's argument for first person. It becomes relevant, however, when we move to the argument for second person.

The default addressee position is so familiar that no justification is deemed necessary. Speakers as well as signers may prefer to position themselves opposite and facing since in both modalities participants have reason to be visually attending each other. For signers, however, the strength of the preference is so strong that the commotion which ensues when a group of signers position themselves for conversation has become part of in-group joking. The importance of the line of sight is therefore a matter which requires explicit mention in sign language instructional materials (Smith et al 1988; Pimenta de Castro et al 1994).

In the shifted space typification, Meier assigns the default addressee position to *j* without explanation. Although he goes on to argue against the hypothesis that the conjunction of sustained gaze and a G-hand point constitutes a grammaticized second person pronoun, it is difficult to see what else could give rise to both the spatial relation between entities in the shifted space typification and the translation of INDEX_j as "you."

If the particular orientational coordinates indicated here are not part of a grammaticized second person pronoun, there is no explanation for interpreting INDEX_j as having second person pronoun rhetorical force. Even under an analysis which relies on spatial loci, there is no locus the signer establishes when he shifts left other than a reported sender locus -- unless the orientation directly away along the midline of the body is conventionally

associated with second person. Just as the shift carries with it the instantiation of a reported sender locus, it must be so that it carries with it the instantiation of a reported receiver locus. If a better translation would be, “I’ve been looking for someone,” how would the current addressee ever associate the referent of INDEX_j with the current sender? Even taking into account that ASL has been called a high context language, there is no clue from the situation that a point away from the signer might refer to the signer.

Whether the association of the “friend” with the reported sender is a matter of grammar or discourse,¹²⁰ the “she said” of the translation is motivated by this association.¹²¹ The association of the reported receiver with the signer can only find support in conversational implicature: given that no other referential object was introduced besides the signer and the friend, if the friend is the reported sender, then the signer must be the reported addressee. The question is: what associates *j* with the addressee position and thus motivates the translation? What, if not the conjunction of sustained gaze and G-hand point away along the midline of the body?

Here, where the pronoun is not directly deictic, the conjunction of point and gaze oriented toward the default/typical addressee position is all the more important. This orientation in shifted space is neutral with respect to the conversational configuration which pertained at the time; there is no presupposition that the participants in the reported conversation were actually positioned in this way. When the pronoun is not directed toward the typical addressee position, the signer’s posture is taken to recreate that of the

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¹²⁰ In section 4.3, I will argue that the interpretation of both conversation roles in this example depend on conversational implicature.

¹²¹ Tense and gender here are not part of the ASL data as presented, although translation to the English past tense is justified by the time adverbial which introduces the example.

reported sender (a shifted attribution of expressive elements), and in such cases this consideration overrides the default. For example, if the signer simultaneously gazes and points to the extreme left, he is indicating that the reported addressee was so positioned vis à vis the position of the reported sender. The signer could be challenged by his interlocutor about the accuracy of the representation of the reported conversational configuration; he cannot be challenged about the accuracy of the default representation of a reported conversational configuration, except on the grounds that he should be more explicit, i.e. truer to the configuration that pertained at the time of the particular reported conversation. The predictability and neutrality of orientation away along the midline of the body is evidence for the claim that this orientation is part of the phonological form and not merely discourse level.

In the same way that the grammaticization of a first person pronoun is supported by the fact that a point to self can reference another person as sender, the fact that a point away from self can make reference to self as addressee is evidence that the form is a grammaticized second person pronoun. In both cases, the form-meaning relationship is constant and independent of the individual who happens to be in the sender or receiver role. Despite Meier's own conclusion, evidence from roleplay is as convincing for the second person pronoun as it is for the first person pronoun.

The figure 4.1 (Appendix B) shows positions for the two participants in the reported conversation located on either side of the current addressee. The figure is somewhat misleading in that it fails to convey the fact that the world of the reported conversation and the world of the current conversation are distinct, though inter-related, entities. The current addressee's rights as a conversational participant are abrogated so that, for instance, a turn

relevance point in the reported conversation is not available to him for uptake. The addressee is temporarily reduced to the role of audience. Yet, the world of the current conversation is only partially suspended when the world of the reported conversation is called up by roleplay. The current addressee remains a shadow figure in the reported conversation. Meier notes the importance of break of gaze with addressee for *role-playing*.¹²² More than that, the signer avoids gaze towards the current addressee, except when he momentarily suspends the world of the reported conversation to assess the addressee's engagement. Nor can the signer, within the narrative, report references to the current addressee made by a reported sender by directing a G-hand point, with or without gaze, to the current addressee. Such references must use a namesign or other nominal, even when a pronoun was actually used by the reported sender. Other evidence comes from reported conversations with three parties, where the signer uses center in addition to left and right to signal who is taking the turn at talk. In such a configuration, to give an LSB example, the participant represented at *center* cannot orient the sign YOU-TWO [$P_{a,f} \text{ }^Z$]¹²³ such that it straddles the current addressee position.

As with figure 4.2 (Appendix B), these schematized participant positions do not reproduce the positions which pertained at the time the conversation took place. They only reflect the signer's shifts of head and gaze direction left or right off the midline of the body as he calls into being one or the other of the referents, and in so doing, shifts the deictic center between the two participants but not between two spatial loci. 'Near me' uttered by

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¹²² Recent work by Loew, Kegl, and Poizner (1994) also finds gaze breaks to be the single consistent signal of entrance into narrative space.

¹²³ The sign is made in neutral space by the supine P-handshape, extended fingertips forward, flexing from side to side at the wrist.

Character A does not indicate locus i ; nor does 'near me' uttered by Character B indicate locus j . The signer does not from the position of Character A at locus i look to the position of Character B at locus j , and vice versa, as would be expected in actual conversation. There is, in fact, no interaction between the two loci established by signer's head and gaze direction. Extrapolating further, points to reported addressee would for each participant consist of a conjunction of head, gaze, and handshape direction that does not originate at the locus of the reported sender. The set of coordinates takes the signer's body as origo, no matter which the reported sender. The obvious conclusion is that spatial loci play no part in the form of the personal pronouns, either first or second.

4.2.2.3.4 Eyegaze and person distinctions

In this section, I will consider together Meier's arguments dealing with the G-hand point and eyegaze. In the body coordinates model, they function as a unit.

Meier discounts the influence of the typical conversational configuration on sign forms by presenting alternate configurations, one of which shows the signer and two addressees and the other, the signer and an audience. In describing a possible second person form, he considers and rejects the importance of the coordinates of torso and signer's arm (as an extension of the handshape, I assume).

Meier uses the Goffmanian term *nonaddressed participants* to refer to others present in the environment who are neither signer nor addressee. Although this usage is at odds with the semanticists' definition of participants as being exclusively those who participate in address either as sender or as receiver, the two conceptualizations may be reconcilable if we understand nonaddressed participants to be potential addressees. Just as

the roles of addresser and addressee shift rapidly during conversation, in multi-party conversations, some number of individuals attending to the conversation may not themselves be specifically addressed at a given time but may readily take up the role of addresser or addressee in the course of the conversational exchange.

In the configuration where the signer is located equidistant from two positions labeled as addressees, there is no account made of gaze direction, which is likely to be crucial to understanding which of the two potential addressees is the actual addressee at a given moment (but see the example and discussion below). One or the other of the potential addressees will be the privileged addressee in the sense that signer can maintain gaze with only one person at a time. Under the body coordinates analysis, the nonaddressed participant category (or, in Fillmore's terms, *audience*) may be grammaticized by being indicated by different alignments of coordinates. We would expect, then, that the chest coordinates are disjoined from the head, gaze, and handshape coordinates, not dissimilarly from what pertained in the earlier described case of roleplay without full body shift.

Levinson (1983) suggests that different languages may encode reflexes of the notion of nonaddressed participant in their systems of person deictics. It is clear that person reference in sign languages is affected by the presence or absence of the referential object. A case in point may be Brazilian signers' disinclination to use deictic pronouns to refer to nonaddressed participants. The question is: is it ungrammatical to refer to a nonaddressed participant with a (third person) pronoun or is it impolite? This is a question which affords no easy answer.

This use of the term *participant* needs to be examined. Discourse level roles may not be distinguished by grammaticized contrasts within the system

of personal pronouns of particular languages. While the two are related, the question Levinson raises is: what does a given language grammaticize? It is not enough to point to usages which belie a recognition of audience or nonaddressed participants; these distinctions may yet play no direct role in grammar. For example, I pointed out (section 2.4) that, while use of the English pronouns is sensitive to the conversational participant category *audience*, that category is not grammaticized. Conversational roles and grammaticized forms are at different levels of the communication system. Although Meier talks about the nonaddressed participant, his analysis does not provide any insights on the grammatical status of a distinction between addressed and nonaddressed participants. He does not define what he means by *participant* so that it is not clear if he considers anyone present in the environment to be a nonaddressed participant or only those who are attending to the conversation while not taking an active part (at a given moment).

Meier cites further evidence for the absence of a stable second person form in situations where there are a large number of addressees, claiming that “the set of pointing gestures we might identify as second person largely, if not completely, overlaps the set we would identify as third person.” This is not true, as has been pointed out above, if we take as the phonological form of the second person, the articulatory array presented by the signer, and not points in space. To demonstrate an LSB third person pronoun to a group, the signer will exaggerate the criterial behavior, torquing his body so that a G-hand point intended to have third person reference will be almost in the same plane as the frontal plane of the signer’s body, and/or head and gaze are noticeably averted. It should be remembered as well that platform signing is not typical conversational behavior, just as platform speaking is not:

everyone is addressed and no one is addressed. In LSB rhetorical practice as in spoken language practice, the signer will typically scan the audience, not fixing gaze on any particular member, or focus gaze just above the audience members' heads.

Rules for turn-taking and topic change are markedly different in platform signing compared to everyday conversation. Consider response appropriateness from audience members. If a turn at talk has been thrown open, the lecturer will likely glance from member to member then turn to whoever takes up the turn. If a specific audience member is the designated (next) sender, then anyone else is likely to be sanctioned for attempting to take up the turn. To the extent that any potential addressee is in fact individuated and licensed to participate in the interchange between first and second person, the body coordinates are likely to lie in the configuration typical to the second person pronoun.

The main thrust of Meier's discussion is that eyegaze is not criterial for distinguishing second person from third person. But this difficulty arises from an oversimplification of the role of gaze. It is not that gaze is only a phonological property of pronominals or a discourse level phenomenon; it is both, and sometimes both at the same time. Meier gives several permutations of a short narrative where gaze has multiple functions, yet he uses these as counterevidence. The one of these intended to be pivotal to the argument has gaze transcribed as if it were the typical case, i.e. gaze and head orientation in the same plane. Then, in his discussion, Meier elaborates saying that it was gaze out of the corner of the eye and further that gaze was co-articulated with modifications in signing behavior to indicate that the reported linguistic activity was contemplative and not communicative. Cramped signing style with respect to the manuals is analyzed as relevant at

the discourse level, but the atypical gaze is analyzed at the phonological level. I would argue that relationship between gaze behavior and meaning is not one-to-one.

The counter-examples to the claim that gaze behavior is criterial are like potsherds removed from an archeological dig without noting at which stratum of earth they were located. Without situational context, the examples prove nothing. Corporal activities and other situational factors can distort the sign, but the resultant form is not a counter-example to the claim that gaze is phonological. The frequency with which the signal is disrupted to some extent by nonlinguistic corporal activity may be a modality difference of some significance since fewer nonlinguistic activities interfere with the production of the auditory signal than interfere with the production of the visual signal. For instance, if a signer in the middle of an utterance turns his head in response to the entry into the setting of another person, that gaze behavior does not indicate a shift in addressee that must be accounted for in the grammar. Similarly, if a speaker yelps because someone pinched him, the articulatory and acoustic alterations to the typical sound signal are not linguistically meaningful. Admittedly, the first situation is the more common; nonetheless, the parallel remains valid.

Transcription can also be a confounding factor for evaluating evidence provided in that form. In (4.5) below (Meier's 9.16), the transcription is not fine enough to make a convincing case that head (and perhaps chest) coordinates, as well as duration of gaze, did not differ systematically in the two indexes with *j* subscripts, although Meier claims that there was no difference in the performances of the two.

(4.5a)

$\frac{\text{gaze } k}{\text{INDEX}_{A/k}}$ $\frac{\text{gaze } j}{\text{INDEX}_{P/j}}$ $\frac{\text{gaze } k}{\text{GO-TOGETHER V-I}}$ $\frac{Q}{\text{V-I}}$
 To girl: 'You_k and he_j went to the Virgin Islands together?'

(4.5b)

$\frac{\text{gaze } k}{\text{INDEX}_{A/k}}$ $\frac{\text{gaze } j}{\text{INDEX}_{A/j}}$ $\frac{\text{gaze } j+k}{\text{GO-TOGETHER V-I}}$ $\frac{Q}{\text{V-I}}$
 To both: 'You_k and you_j went to the Virgin Islands together?'

The glossing itself indicates a difference, given that one instance is labeled $\text{INDEX}_{P/j}$ and the other, $\text{INDEX}_{A/j}$. Evidently, Meier intends the choice of subscripts P(articipant) and A(ddressee) to be atheoretic, with the difference in interpretation between the two examples justified only by the gaze behavior co-occurrent with the predication. Similarly, the spacing of the glosses for the first and second signs may be only accidental or it may correlate with the rhythmicity of the signed sequence wherein the first articulation was longer in duration than the second.

From the perspective of the body coordinates model, I would expect predictable variation between the two tokens of INDEX_j , i.e. the conjunction of the eye, head, and possibly chest coordinates for $\text{INDEX}_{A/j}$ and a disjunction of the handshape coordinate and the head coordinate, with gaze being fleeting, for $\text{INDEX}_{P/j}$. In the context of the Brazilian Deaf community, if not the American, it would be odd for a signer to sequentially orient the body coordinates equally towards each of two people present and attending to the talk, and then address the immediately following utterance to only one of them, as Meier's example (4.5a) shows. The transcription of gaze behavior in Meier's example (4.5b) is ambiguous between a reading where the signer was able to take both addressees in with a single glance and a reading where the signer looked alternately at first the one and then the other of the addressees.

Consider the following example. Typical of many of the conversations I observed during fieldwork is a three-party conversation I recorded in Rio. At

first only two of those present, JC and NC, are engaged in conversation about the LSB class they have just finished co-teaching and the next day's classes. They are standing facing each other, separated by about an arm's length. GR, who is waiting for NC, stands off to the side several feet away. When the topic of conversation becomes more general, GR waves his hand towards NC to get his attention, and both NC and JC turn towards GR. As they do so, they step back from each other, making the positions of the (now) three of interactants approximately equidistant.

In the exchange that follows, as each takes a turn, his head and gaze are directed towards one or the other of his two interlocutors so that these conjoined coordinates shift between the two positions. That is, although both interlocutors fix gaze on the signer, the signer can only return gaze to one at a time. The chest coordinate, however, does not follow the head and gaze coordinates but remains oriented at an angle about midway between the positions of the two interlocutors. At the end of this exchange, NC and JC turn again towards each other. As NC does this, he continues momentarily to gaze towards GR, perhaps to confirm that GR concurs with the closure of the exchange.

The role that chest orientation plays in differentiating dyadic from multi-party conversation is clear in this example. While the roles of the head and gaze coordinates do not differ markedly between the two types of conversation, i.e. each signer can only address himself to a single addressee at a given moment in his turn, the disjunction of the chest coordinate from the head and gaze coordinates signals that the signer is attuned not only to the current addressee but also to others present and attending to the talk.

The issues raised by these examples recall the work of Clark and Carlson (1982) on *lateral speech acts*, which recognizes the influence on the

form of utterances exercised by the presence of nonaddressed present individuals, i.e. those who are attending to the talk but are not at a given moment specifically in the role of sender or receiver of the act of address. The authors present examples of multi-party conversations which are actually dyadic exchanges.¹²⁴ That is, each utterance is directly addressed to only one of the others present, although the form of the utterance is attuned to those present but not directly addressed. The topic merits more careful investigation in sign languages than Meier has given it here. There is much that is systematic but unanalyzed in multi-party conversations between signers that can elucidate distinctions which are not only discourse-level but also grammatical.

Meier acknowledges the importance of gaze, but he overlooks or oversimplifies the complexity of the interaction of its several functions. He suggests that gaze at addressee may be "a property of conversations, not of deictic signs in particular." I would say that it is a property of both. That gaze can be part of phonological form is evidenced by its obligatory role with classifiers and, for LSB at least, in a small subset of nouns and verbs which have classifier origins, among these: MIRROR [$B_{t,\wedge}^w \cdot$], READ [$B_{a,>} V_{b,f}^v$], WRITE [$B_{a,>} bO_f \text{ } \text{xn}>$],¹²⁵ DRAW/DRAWING [$B_{t,\wedge} U_{b,<}^n \cdot$], PAINT/PAINTING, [$B_{t,\wedge} B_f^{xr}$]. In these cases, gaze is coterminous with the manuals. Some manuals can be in some instances nominal signs and in other instances classifiers. The difference phonologically is gaze behavior.

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¹²⁴ A number of other analysts have addressed this issue. Goffman (1975:260) defines one category of listeners as those "who are ratified participants but (in the case of more than two-person talk) are not specifically addressed by the speaker..." Sacks et al (1974), following Garfinkel (1967), label the attunement to others not specifically addressed *recipient design*.

¹²⁵ For the handshape bO, "baby O," the thumb and index fingers are touching as for O, but the rest of the fingers are curled into the palm.

4.2.2.3.5 Multiple nonparticipant references

As a further argument against the hypothesis that ASL has a grammaticized second person pronoun, Meier brings up the claim that third person allows multiple forms, distinguishable on the basis of spatial loci. He then concludes that the spatial locus is “a far more powerful descriptive device than is a contrast between second and third person.” This being so, the argument runs, we can dispense with the notion of addressee as an unnecessary encumbrance. I would point out that the same argument serves as well for dispensing with the notion of sender, in the opinion of Lillo-Martin and Klima. Freed from the “excess baggage” of sender and addressee, we are left with Ahlgren’s claim for Swedish Sign Language, that there is no category of grammatical person; it is all just demonstratives. And we are back full circle, undoing the job of establishing the grammatical category of person and the grammaticization of the first person pronoun.

Semanticists have warned us to expect a multiplicity of third person forms. To repeat the quote from Benveniste (1971) on a Caucasian language (cited in chapter 2), “[F]or the third person there are many signs and quite a number of difficulties.” Meier himself remarks at the outset of his discussion that “problems arise in the analysis of third person [in spoken languages].” Semantically, third person is the intersection of the nonfirst/nonsecond and nothing more. Some spoken languages, e.g. Turkish, use locative deictics bleached of locative meaning as third person pronouns. The formal relationship between the distal members of the locative set and the third person pronouns in Portuguese is transparent: *aquele/aquela* and *ele/ela*, respectively. Among sign languages, the third person pronoun may be simply a nonfirst/nonsecond G-hand point that does not refer primarily on the basis of the locative characteristics of the referential object. Claims about the

number of distinctions it is possible to make derive from theoretical projections based more on the geometry of space than on linguistic analysis. Subcategorical distinctions of third person, comparable to gender or noun classes in spoken languages, have so far received little systematic attention from linguists.

A notable exception in this area is the work of Engberg-Pedersen, who, despite her rejection of an analysis of addressee forms as tokens of a grammaticized second person pronoun, has identified positions or directions relevant to the signer associated with specific semantic notions. These may be third-person pronoun morphemes, proximate and obviative, where the spatial relation of the articulation to the signer's body as deictic center instantiates a semantic notion of affinity with the referent's point of view. She has also undertaken a principled examination of G-hand points which seeks to categorize them along several formational parameters in conjunction with systematic distinctions in meaning. Zimmer and Patschke (1990) made a beginning at doing this for ASL in their article which seeks to identify determiners separately from anaphors.

Meier's treatment of spatial loci is inconsistent. In his description of the phonological form of the first person singular pronoun, spatial loci are separate from place of articulation. This differs importantly from the status he attributes to spatial loci in his prefatory remarks, where he characterizes the prevailing view in sign language linguistics as holding that, "the place of articulation of [deictic pointing] signs is analogically determined by the location of the referent." Here, spatial locus and place of articulation are equivalent. Meier cites the DASL as one of the purveyors of this view, but that is inaccurate. The DASL gives "[ ]" (torso) as the place of articulation for first person pronouns and "Ø" (zero tab = neutral space) as the place of

articulation for nonfirst person pronouns, and attributes the specific locational characteristics of the nonfirst person signs to the movement element.

Another feature of spatial loci that Meier does not address is the fact that not only can a single locus represent multiple referents, as he shows in his example of first person with head shift, but also multiple loci can represent a single referent even in a single clause, as the following example shows (Meier's 9.10).

(4.6) YESTERDAY INDEX_s SEE_j GIRL. WALK _jPERSON-WALK-TO_k

gaze down

mm   gaze i
[WALK. LOOK-UP_i

gaze i
MAN _jPERSON-MOVE-TO_s HIT_s INDEX_s LOOK-AT_k, SCARED.]

'Yesterday I saw this girl. She walked by in front of me. She was strolling along, then she looked up and saw this man come up to her. He hit her. I watched this -- I was scared.'

Meier claims that the subscript *s* of HIT_s cannot be translated as having a first person patient on the basis that it is not an instance of direct quotation and, furthermore, that it does not indicate that the events are being reported from the perspective of the patient of the verb. I am not completely convinced of the latter claim, a point I will take up again shortly. It should also be said that subscript *s* is not associated with the signer either in his role as a participant in the narrated event or in his role as current sender. In fact, if *s* is not associated with the patient of the verb, it would seem that it is not associated with any noun phrase. If the *s* were associated with the referent who is the patient of the action of the verb, there would be three different loci associated with a single referent in this example: *j*, *k*, and *s*; and a single locus, *s*, associated with two different referents, the signer and the girl. Even under Meier's analysis, *j* and *k* are associated with the girl and

s is associated with the sender and with no referential object. Given this, it is hard to see how these loci could function as markers of coreference for the characters of the narrative.

With respect to HIT_s, it may be only a matter of the gloss chosen. There is an ASL verb HIT, [G[^] A(S) x[!]],¹²⁶ which incorporates the classifier for 'long, narrow object', [G], as its place of articulation. This form is neutral as to where the patient received the blow; there are other forms which specify the body part. Although Meier's transcription does not indicate it, I deduce from his use of subscript *s* that the dominant hand contacted a body part other than the G-hand as classifier in producing the sign so that the sign, rather than being transcribed as HIT_s, should be HIT-face or whatever body part was relevant. The signer's body, at least the upper body, is available as source of phonological locations in signs. This being so, Meier's assertion that the verb does not imply that the event is narrated from the girl's perspective may be grounded in the data but obscured by the transcription.¹²⁷

Meier does not explain the *s* in the verb complex *i*PERSON-MOVE-TO_s, except to conjecture that the use of *come* in the translation may be attributable to an understanding of the narrative as taking the girl's perspective, much in the way proximate and obviative pronouns function in some American Indian languages. As the translation is not the object of analysis,¹²⁸ it would be better to note that, within the context of the narrative, the signer associates the sender locus with the character of the

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¹²⁶ DASL entries use Stokoe's phonemic analysis, which groups together as allophones of the same phoneme handshapes which are equivalent to letters of the manual alphabet. "A(S)" indicates that the *S* allophone of the *A* phoneme is used.

¹²⁷ Kegl distinguishes *role shift* (= Engberg-Pedersen's *shifted reference*) from *role prominence marking*. HIT_s here would be an instance of the latter. Bahan (1996) is the most thorough treatment of this distinction to date.

¹²⁸ A translation by a bilingual with good command of both languages can provide supporting evidence for an analysis. Perhaps this is the case here.

girl by co-articulation of the expressive elements (*gaze down*, *mm*, and *gaze i*) with the repetition of the verb WALK. This association is the basis for the translation of the verb as *come* and the interpretation that the narrator is privileging the perspective of the girl over that of the man. There is an interesting interaction here of notions of perspective, agency, and grammatical subject which merits investigation in its own right.

Meier does not explicitly differentiate by status the subscript *s* from the subscripts *i*, *j*, and *k*. That there is a difference can be inferred from the motivated choice of *s* and the arbitrary choice of the others: *s* is associated with the conversational role *gender*, which is grammaticized as first person, but the others are merely arbitrary variables. So subscript *s* marks a first person pronominal and *i*, *j*, and *k* are variables associated with nonfirst person. To say that ASL encodes the first/nonfirst distinction entails that within the category of person there is a contrast between first and nonfirst. But it has not been established that the notion of grammatical person is encoded by these variables.

Felipe (1992) transcribes the semantic distinction between loci associated with *person* and loci associated with *place*, although the formational features of each and how they differ have yet to be fully delineated. In Meier's transcription it is difficult to know whether *j* is intended to be coreferential with GIRL or as standing for the location at which the girl was first seen, a location that has permanence even after the girl has left it. (In Lillo-Martin and Klima's analysis, the syntactic R-locus is the form the semantic R-index takes, and the R-index is associated with noun phrases. They do not discuss verbs with path movement, such as those in the example Meier analyzes, so we cannot know how they might treat such verbs.) An

example where the subscript more clearly identifies a location is the following.

(4.7) YESTERDAY INDEX_s SEE_j GIRL. WALK _jPERSON-WALK-TO_k

HAPPEN SEE_j SHINE SUMMON_k INDEX_k DROP_j INDEX_j

'Yesterday I saw a girl. She walked by me. Suddenly I saw something shiny where she'd just been. I called to her. "Did you drop something there?"'

Subscript *i* in Meier's example, associated with the man is also ambiguous as to whether it identifies a referential object or a location. The first use of subscript *k* is more in keeping with an understanding of its being associated with a location, and that may be true as well of the second use. Alternatively, the second use may be discourse-deictic for the whole incident witnessed, in which case its referent is an object that is not coreferent with any other referential object in the example -- including the first use of the *k* subscript. Meier never addresses the semantic distinction between entities and places or between spatial deictic pronouns and person deictic pronouns.

Whether these spatial loci are associated with person or place, the use of arbitrary variables presupposes, as does Lillo-Martin and Klima's argument for a theoretical infinity of pronominal forms, that it is points in space per se and not locations or vectors which take the signer as origo that are important. The use of this convention also implies that it is specifically that one point in space in the physical world, and not any other, that is linguistically relevant to the meaning of a particular token of a sign.

To see the inutility of spatial loci as a descriptive device in sign languages, consider a situation where an addressee (A) does not understand so the signer (B) has to repeat. Would meaning be affected if PERSON-WALK-TO were not articulated with exactly the same endpoints? After observing the repetition, could A challenge B by saying, "Oh, now I get it. Why didn't you

say so in the first place?" To the extent that it can be assumed that Meier's translation captures his own understanding of the meaning of (4.6), the translation supports an analysis of PERSON-WALK-TO not as moving between two specific points in space but merely transversing the signer's torso.

Engberg-Pedersen's transcription system (1993a), which uses directional subscripts for left, right, and center in combination with forward, taking the signer as *origo*, is more felicitous because it does not imply that particular points in space play a linguistic role. Of course, even *left* and *right* are potentially misleading; phonologically the sign is likely to specify only that the movement pass along a path from the ipsilateral side to the contralateral side.¹²⁹ Similarly, PERSON-MOVE-TO, while end-marked for the sender locus, probably approached from forward-right or, less likely, forward-left, rather than from a specific point, either on the level of form or on the level of meaning. I deduce this from the fact that, in his discussion, Meier identifies the *k* locus as left. If the G-hand classifier passed in front of the narrator's body, as the translation indicates, then the *j* locus must be right. As for the sender "locus," in the world of the narrative it may indeed represent a first person participant, as it does when talk rather than action is being attributed to a participant in the narrated event. The translations to third person forms depend not on the world of the narrated event but on the world of the current conversation (see section 4.3.3 for further discussion). Then there is no need to talk of a locus: the link between the narrator and the character of the narrated event may be forged through an association of the notion of *sender* with notions of *perspective*, *agency*, and *grammatical subject*.

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¹²⁹ Engberg-Pedersen's consultants were all right-handed so on the phonetic level the left/right transcription convention was accurate for these signers.

4.2.3 Conclusions

To distinguish the persons of the conversation, i.e. sender and receiver, loci play no part; the personal pronouns which encode these roles are describable on the level of both form and meaning without recourse to loci. If loci are part of the grammar of ASL, it is more likely that they participate in the spatial deictic system and not the person deictic system. Unambiguous coreference of locations across tokens of INDEX-loc would already be significantly different from what is attested in spoken language grammars because what is encoded is an absolute value rather than a relative value, as is normally the case: for example, Portuguese *aí* = 'near you,' *aqui* = 'near me.' As a hypothesis to explore, however, if sign language grammars were going to deal with absolute values, it makes more sense that a notion like *place*, which is inherently a spatial notion, and not *person*, which is inherently a social notion, would be encoded. My position is neutral with respect to the role of absolute values in the spatial deictic systems of sign languages. With respect to the such values in person deictic systems, I believe I have provided here overwhelming and conclusive evidence that the description of these systems can be fully satisfied without recourse to points in space.

Returning to the question with which Meier began, the conclusion I am led to draw on evidence from ASL (and LSB) is that the effects of communicative modality are not so deep in the person deictic system that the configuration of that system differs markedly from those attested in spoken languages.

4.3 Body Coordinates Model

I began arguing for the body coordinates model in section 4.2.2.2. and 4.2.2.3. I demonstrated that an analysis based on body coordinates better

accounts for the ASL data and, at the same time, positions the personal pronoun set within the range of person deictic systems attested for spoken languages. Most importantly in this respect, I provided counter-arguments to Meier's conclusion that ASL does not have a grammaticized second person pronoun. As regards the first/nonfirst distinction, I clarified its function in setting the first person apart from the second person; as regards the participant/nonparticipant distinction, I showed that it is to be found in ASL as readily as in the spoken languages on the basis of which Benveniste and Lyons proposed it. In chapter 5, I will present a detailed exposition of deictic person reference in LSB from the perspective of the body coordinates model. In rest of this section, I will situate the model historically and summarize its workings.

4.3.1 Body coordinates in spoken and signed languages

Bühler (1982) recognized the importance of positional coordinates to the grammars and lexicons of spoken languages: specifically, eye, head, chest, and pelvis coordinates. At the origo of these coordinates is the 'here,' 'now,' and 'I' of the sender. The coordinates can function in unison or separately to some extent. Consider, for example, a troop of soldiers passing in review by a grandstand in which the President of the United States is seated. The drill sergeant might have ordered them to "Forward march!" -- by which he would intend that they move along a path with all body coordinates oriented similarly. However, as each horizontal row came abreast of the President's position in the grandstand, they might have turned only their heads toward him in salute, having been ordered to "Right face!" at that point in the march. Here, the head coordinate would be disjoined from the chest and pelvis coordinates. Eyegaze might follow the head position -- attempting to glimpse

the President perhaps, or it might approximate to the chest and pelvis position -- the better to keep in step with the march.

The independence of the gaze and head coordinates has linguistic reflexes in English as evidenced by the expression *a sidelong glance*. The word *askance* may indicate that the gaze and head coordinates were not aligned or that gaze and head together were not aligned with the chest coordinate. The independence of the gaze and pelvis coordinates is evidenced by the admonition "Look where you're going!" since *looking* draws on the former and *going* on the latter. The independence of the chest and pelvis coordinates is evidenced by the word *slouch*, which in one of its senses indicates that the chest and pelvis coordinates are not aligned. *To stand/sit up straight* means to align your chest and pelvis coordinates.

Lyons (1977) also sees coordinates as relevant to the analysis of deixis, although his sense of coordinates takes the body as a whole as the origo. He emphasizes the *egocentricity* of deictic reference, by which he means that the speaker's physical location is the deictic center around which coordinates of space and time are oriented. These coordinates are exploited in the distinctions encoded in the deictic systems. He observes that the center switches, and the coordinates with it, as the roles of speaker and hearer are transferred from one participant to another in a conversation. Fillmore (1982:35) makes this same point when he states that the sender's body determines a set of axes.

Even spatial deictics which have the 'near the addressee' sense still partake of the fact that it is the speaker who, by calling the addressee into being, calls into being the addressee's deictic space. Taking Portuguese as an example, a given space is *aí* only because it is near someone to whom a speaker directs his utterance. The addressee's deictic space is dependent

upon the speaker but the speaker's deictic space is independent of the addressee. No spatial deictic adverb has been identified in natural languages that takes any reference point as *center* for deictic terms to locate the speaker other than the speaker's own location.¹³⁰

Hanks (1990) introduces the notion of *sociocentricity* based on usages of Maya deictic expressions which reveal that the speaker is sensitive to social considerations and to whether he shares visual field with the addressee, as well as to relative position in the spatial deictic field anchored by his body. I would suggest, however, that egocentricity and sociocentricity, are found on different levels of the system: egocentricity as the orienting principle for deictic terms and sociocentricity as the orienting principle for deictic use.

Different languages may allow more or less play for sociocentric uses in their deictic systems. The English spatial deictic system, for example, is egocentric in form in that the contrasts encoded -- *proximal* and *distal* -- clearly take the speaker and only the speaker as the deictic center. Under sociocentric considerations, the speaker can include the addressee's position in uses of the proximal adverb *here*, but he cannot normally include his own (present) position in uses of the distal adverb *there* (see the discussion of Fillmore's putative counter-example in section 2.1.2).

Sign language specialists, who are always dealing with the spatial properties of visual-gestural language, ought to expect that the sender's position alone is relevant to formational features -- that is, form is necessarily egocentric. The speaker's body as origo of the deictic systems is relevant only at the level of meaning; the signer's body is relevant at the level of form as well. For the subcategories of spatial deixis, semantic distance from the origo

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¹³⁰ The verbs *come* and *go* may shift the deictic center (Fillmore 1975). The claim here is specifically with respect to spatial deictic adverbs.

and physical distance from the signer's body are correlated. Similarly, for temporal deixis, NOW is coterminous with the signer's body, BEFORE lies behind, and LATER lies forward.¹³¹ I claim that person distinctions also take the signer's body as origo both semantically and phonologically, with *first person* being at the signer's body and *second person* being forward of the signer's body. While form is egocentric, use may be sociocentric, taking the addressee's position into consideration. However, the addressee has existence independent of the sender in neither form nor use.

The notion of sociocentricity, although not so labeled, was recognized early on to play an important role in ASL deictic person reference. In Appendix A of the DASL, the following observation says something quite different from the assertion included in the dictionary entry cited in section 3.1, which held that there is no distinction between second and third persons. This passage gives a hint that distinctions can be found between the forms themselves and not just in their interpretation.

First and second persons in signing are the opposite and interchangeable ends of an imaginary but well-defined line of sight. A third person or a fourth -- even a fifth if needed -- is designated by pointing at an angle to that line. (p.281)

Here, as in a previously cited passage from Liddell (section 3.3.2), the use of the word *person* differs in an important way from the first mention to the second. I would argue that this difference reflects the differing linguistic statuses of first and second persons, on the one hand and third, fourth and

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¹³¹ The LSB signs are: NOW, [5_a 15_a ^z], the two supine B-hands moving together and separating in the space just in front of the signer's body; LATER, [G_t < ^{af}], the contralaterally-oriented G-hand, palm in, arcing forward; BEFORE, [B[^]_t t[#][B⁻]], the upright B-hand toward the frontal plane of the signer's body moving toward the signer while closing to a bent B-hand. This last sign in an emphatic performance can move pass the signer's torso (by raising the elbow). In this variant, the B-hand may not close to the bent B-hand but only pronate.

fifth persons, on the other. Even the predications reveal an intuition about the difference: first and second persons “are” but the third, fourth, or fifth person “is designated by.” That is, in contrast to the other “persons,” the first and second persons exist by virtue of the act of address itself.

A second issue involves whether or not the line of sight is imaginary and therefore unobservable. There has been a suggestion in sign language linguistics, with which I fully concur, that phonological elements be restricted to observable phenomena.¹³² Under this methodological constraint, if the line of sight -- i.e. gaze -- is not an observable phenomenon, then it cannot be a phonological feature of signs. However, the line of sight is a trajectory calculated with respect to the position of the signer’s eyeballs, an observable phenomenon. While the DASL description attests to the sociocentric nature of deixis, which is relevant at the discourse level, there is no need at the level of phonological description to appeal to the fact that discourse is jointly constructed by signer and addressee.

But signer’s gaze direction and handshape position may not be enough; the positions of head and chest contribute crucial information as well -- all observable phenomena and all describable with reference to the articulators. From gaze, head, chest, and handshape position can be derived the coordinates which serve to distinguish instances of pronominal reference. In the case of pronominal reference to participants, the angle of the four coordinates will typically approach zero while in instances of pronominal reference to nonparticipants, there will be a disjunction of some of the coordinates such that, considering those in disjunction, the angle will always

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¹³² Engberg-Pedersen, an adherent of this view, says (SLLING 9/94), “All you can see is manual and non-manual linguistic signals. That is what we should analyse, because that is where the meaningful distinctions are made.” An example of phenomena that are not observable are the discrete sections of the signing space some analysts use to account for person reference in conversation and narrative.

be significantly larger than zero so that in any given stretch of discourse instances of pronominal reference to nonparticipants will contrast with instances of pronominal reference to participants. First and second person pronouns are, respectively, the proximal and distal members of an opposition within the plane at the vertical axis of the signer's body..

4.3.2 Laterality as a phonological feature

Linguists working on sign languages have been concerned for some time about the mechanism proposed to account for spatial contrasts on the morphological level whereby referential entities can be distinguished by appealing to the laterality of the human body. Currently, phonological description of lexemes does not include mention of such contrasts. That is, there are no two signs which, under any of the phonological models proposed, contrast by virtue of one being produced on the ipsilateral side of the body and the other on the contralateral side. Phonological description does appeal to laterality in designating the dominant and nondominant hands, but reversals of this opposition do not result in a minimum pair. Laterality is implicit in the Symmetry Constraint mentioned in section 4.2.2.1. Morford, Singleton, and Goldin-Meadow (1993:244), citing Frishberg (1975), point out that "signs produced below the neck are typically symmetrical about the body's vertical axis."

I argued in section 4.2.2.3 that the contrast possible between forms articulated on one side of the signer's body or the other is not a matter of the set-internal contrasts of the personal pronoun system. Here I want to make a somewhat different argument about laterality as it enters into the contrast between the forms of the first and second person pronouns, on the one hand, and the form of third person pronoun, on the other: namely, that crossing the midline of the body contrasts phonologically with not crossing the midline.

Evidence for this is a near minimal pair, LSB signs GOVERNMENT, [[ ] B[^] x^v] and BLOUSE, [[ ] B[^] x,v,x]. Both have the (edge of the) supine B-hand at the chest location moving down. They differ primarily in that GOVERNMENT crosses the midline of the body from contralateral shoulder to ipsilateral hip.¹³³ If the hand moves from ipsilateral hip to contralateral shoulder, it is an error in the performance of the sign GOVERNMENT. The hand moving from ipsilateral shoulder to hip without crossing the midline of the body is the sign BLOUSE. In casual conversation, BLOUSE may form a near minimal pair with the sign WHITE [/ B[^] x^v]. If the supine B-hand of WHITE falls short of its articulatory target ([/ = forearm), then it may appear to take the contralateral side of the chest as its place of articulation. WHITE [/ B[^] x^v] and GOVERNMENT [[ ] B[^] x^v] do not form a minimal pair, although the notation indicates otherwise, if by that term is meant that a switch of place of articulation would result in one being confusable with the other.

Articulation on the contralateral side of the torso (without disambiguating context) being more readily interpretable as WHITE than as BLOUSE demonstrates that the distinction between *forearm* and *torso* as places of articulation is less salient than that between *ipsilateral* and *contralateral*, a fact not captured by Stokoe notation. Similarly, the hand moving between ipsilateral shoulder and contralateral hip -- either upwards or down -- is unlikely to be interpreted as GOVERNMENT erroneously performed, although the form may occur as a classifier verb construction. This is explicable in terms of the salience of laterality to the system.

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¹³³ Stokoean notation does not capture this phonological distinction which serves to differentiate the pair. The difference in the movement -- [x^v] indicates 'move down in contact' and [x,v,x] indicates 'contact, move down, contact' -- is not sufficiently salient in context to differentiate them.

It is well-known that the sets of features that Stokoe and more recent analysts have posited as the formational contrasts of signs do not definitively identify all and only phonemic elements. Some of the features may turn out to be merely phonetic and others not now included, among these *laterality*, may turn out to be phonemic.

4.3.3 Body coordinates in narrative

I am arguing that particular configurations of gaze, head, chest, and handshape coordinates serve to distinguish the three persons of the personal pronoun system of ASL and LSB. I find support for my analysis even in other analyses which have rejected the relevance of body coordinates to person distinctions. With respect to the distinction between second and third person pronouns, Meier (1990:185) mentions and rejects the criterial role of gaze and the handshape oriented forward along the midline of the signer's body for second person or off the midline for third person. In section 4.2.2.3.4 I provided detailed counter-arguments to Meier's claims. Here I want to suggest that Meier brings up these body coordinates because they are so readily observable in typical signed conversations. They are the formational features of the canonical form of the sign. He argues against their criterial role on the basis of conversational configurations which move away from the prototypical configuration identified in the DASL.

The canonical form of the sign READ, [B_t> V_b< ^v], has the prone V-hand oriented toward the palm-in B-hand, and a downward movement. In a situation where the thing being read is a banner strung high across a city street, the B-hand would drop out, the V-hand would orient upward, and the movement would be rightwards. The canonical forms of many signs are altered by situational factors of both the conversational and the narrative settings.

With respect to narrative, Lillo-Martin and Klima (1990:194) mention the signaling value of “the shift in the orientation of the signer’s shoulders, head, and/or eyes.” In *reference shift*, the signer establishes a *deictic center* relevant to the narrative -- to put it in Lyons’ (1977:579) terms, a *deictic projection* from the conversation to the narrative. Within the narrative, points to self are first person pronouns, but in terms of the current conversation, they may be third person pronouns. Those may translate most naturally into English first person pronouns which refer to a character in the narrative who happens to be the same individual as the current sender. In such cases, the signer structures the narrative in a way that leads the addressee to make that connection. Compare the several uses of the first person pronoun in the following LSB example.¹³⁴

- (4.8) gaze forward
 YESTERDAY I SEE ANN
gaze right
 1 [I YOU LOOK-FOR [M: durational]] 1
gaze left
neg
 r [“well” HIDE I] r
gaze forward
topic neg
 I WANT AVOID NO

‘Yesterday I saw Ann. (Ann:) “I’ve been looking for you.” (Me:) “Well, I haven’t been hiding.” I wasn’t trying to avoid her.’

The first use of the first person pronoun refers to the individual who is the current sender as current sender. Jakobson (1957:4) labels every use of a verb a “narrated event,” so that every utterance is already two-leveled, consisting of the speech event and the narrated event. The first narrated event, then, is the ‘seeing.’ The two levels of event each have participants. With respect to first person, Jakobson says, “[F]irst person signals the

¹³⁴ No nominative/accusative distinction for pronouns has been identified for either ASL or LSB.

identity of a participant of the narrated event with the performer of the speech event...” This analysis goes even further than Liddell’s proposal of Surrogate Space, in that Jakobson characterizes all uses of the first person pronoun as involving both a real world entity and a mental construct.

The second use of first person pronoun in the example refers to a reported sender who is not the same individual as the current sender. The association of the reported sender with “Ann” is made through conversational implicature. The only overt signals are the leftward body shift and the rightward gaze. To assure the proper assignment of characters’ roles, LSB signers may follow the body shift with a glance back to the addressee while signing a nominal or pronominal, and then proceed with the predication(s).

In Jakobson’s terms, the first reported sender (Ann) is both a participant of the narrated event (the ‘looking for’) and the performer of the speech event of the reported conversation. From the perspective of the reported conversation, then, the reported sender is first person. However, the performer of the speech event in the current conversation is not the same as the participant in the narrated event so that in terms of the current conversation the appropriate pronoun would be third person, rather than first person.

The attribution of a verb of saying to translations of this kind of example is made post hoc on the basis of the content which follows the reference shift. If nondiscursive activities are reported, such as ‘walking,’ ‘approaching,’ or ‘hitting,’ as in example (4.6) from section 4.2.2.3.5 repeated here, then no verb of saying is included in the translation.

(4.6) YESTERDAY INDEX_S SEE_j GIRL. WALK _jPERSON-WALK-TO_k

gaze down

mm gaze i
[WALK. LOOK-UP_i

gaze i
MAN _jPERSON-MOVE-TO_S HIT_S INDEX_S LOOK-AT_k, SCARED.]

'Yesterday I saw this girl. She walked by in front of me. She was strolling along, then she looked up and saw this man come up to her. He hit her. I watched this -- I was scared.'

Activities, including the nondiscursive ones, are attributed to characters in a narrative by a reference shift alone, as indicated by gaze behavior, possibly accompanied by movement to left, right, or center; by reference shift preceded by a nominal; by reference shift preceded by a personal pronoun. The use of nominals and pronominals, in the context of reporting activities, momentarily shifts the deictic center back to the current conversation; it is the signer as current sender and not as a character of the narrative who is making the nominal or pronominal reference. (Multiple embeddings of speech events and narrated events can complicate things even further, but in predictable ways.)

Meier's transcription of this example does not indicate a shift left, as was indicated by the *l* subscript flanking the brackets in example (4.4) in section 4.2.2.2. Perhaps, he intends to convey that the shift to narrative was signaled only by the gaze behavior. However, two permutations of example (4.6) in his own text do include the *l* subscripts, and he does not contrast them with (4.6) regarding the presence or absence of *shift left*. This leads me to infer that a leftward shift probably should have been transcribed.

More importantly, the last three signs are included in the bracketing, but the absence of transcribed gaze behavior suggests that this is the coda which returns the deictic center to the current conversation. The signer is not reporting that he said as he witnessed the event, "I'm watching this -- I'm scared." He is saying it in the context of the current conversation, according

to the translation Meier provides. Therefore, it seems to me, these three signs should be outside the bracketing. Then the use of the first person pronoun in that sequence is the simpler case of the character of the narrated events (the 'watching' and the 'being scared') being identical to the performer of the speech event. This is to say that there is not an additional level of speech event present in this sequence as is the case when the current sender is reporting what he said in a narrative.

This more complicated situation is found in example (4.8). In the third use of the first person pronoun, the performer of the speech event of the reported conversation, the participant of the narrated event (the 'hiding'), and the performer of the speech event of the current conversation are all the same individual. The isomorphism between the levels of participants masks the fact that this use of the personal pronoun is not identical to the first use (in the narrated event of 'seeing').

In section 4.2.2.3.3, I cited evidence that while the current addressee's rights are abrogated during the performance of a narrative, he remains a shadow figure. Similarly, the current sender and the reported sender co-exist. The signer can move between the conversation and the narrative, and thus between the two senders. This claim is not unlike one Liddell (1995:29) makes, "The character which is easily overlooked is the reported signer ... [when it is] the signer herself at some other place or time." Although we differ in our analyses of the phenomenon, we agree that there is a distinction to be made between the signer as current sender and the signer as reported sender even where those two senders are the same signer.

The use of the second person pronoun in example (4.8) refers to the reported addressee. Jakobson says that "the second person [signals] identity with [one of the participants in the narrated event and] the actual or

potential undergoer of the speech event.” As was noted in section 4.2.2.3.3, it is through conversational implicate that the association is made between the second person pronoun in this instance of shifted reference and the current sender. If the encounter being reported had not involved the current sender, the turns at talk would likely be explicitly associated with one or the other of the characters by preceding that character’s turn with a nominal or pronominal, as in example (4.9).

- (4.9) gaze forward
 YESTERDAY CITY HAPPEN TOM MEET JOE WITH BOB
- gaze fwd   gaze right
 l [TOM   I YOU LOOK-FOR [M: durational]] l
- gaze down   gaze left
                                          head shake
 r [JOE   “well” HIDE I NO] r
- gaze down   gaze left   blink   Q
 c [BOB   WE-TWO GO-TO RESTAURANT YOU WANT COME-ALONG] c
- gaze forward   blink
 TRUE JOE WANT AVOID   PRO-3_{rt} OWES MONEY PRO-3_{lf}
- ‘Yesterday downtown Tom ran into Joe and Bob. Tom: “I’ve been looking for you.” Joe: “Well, I haven’t been hiding.” Bob: “We’re going to a restaurant. Want to join us?” It’s true that Joe wanted to avoid (Tom). He owes him money.’

Occasionally, these peculiarities of reference shift confound translation and, more importantly, analyses based on those translations. The PUT-EARRINGS-ON case (section 3.2.1) and the JESUS-DREAM case (section 3.4.2) are two examples. It is crucial to analysis that the various levels of events be properly identified. While there are conceptual similarities between a narrative which uses reference shift and the current conversation, they are not equivalent. The reported senders, addressees, and nonparticipants differ from their counterparts in the current conversation, yet analysts have not addressed the dissimilarities between the different levels of participants.

These complexities merit further investigation. My intent at this time is only to raise the issue.

Narratives can also be told without reference shifts. The example of a narrative about people seated around a rectangular table (section 3.4.1) is such a case. In fact, it is common in story-telling to move back and forth between the “close-up” on the action of shifted reference and the “long view” or “wide angle” of the current conversation.¹³⁵ The difference between the two kinds of narratives fits Bühler’s distinction between *Mohammed goes to the mountain* and *The mountain comes to Mohammed*. Liddell identifies the difference as being between *surrogates* and *tokens*. Yet, despite the conceptual differences between uses of the personal pronouns in ordinary conversation and in narratives involving deictic projection, the phonological features -- including the alignment of body coordinates -- of each of the personal pronoun signs is consistent across cases.

Although I question the adequacy of the Surrogates and Tokens model, it is clear that there is a contrast between referents introduced into narrative by reference shift and those not so introduced, in that the former are treated in some measure as present referents. It is not simply that sign languages encode the present/nonpresent distinction with respect to the nonparticipant but rather that a shift of the deictic center to the time and the place of the narrative allows the nonpresent to be treated as present.

In chapter 5, I will present evidence that the present/nonpresent distinction is encoded in the LSB pronominal forms themselves. Thus, the distinction is a matter of grammar as well as one of conversational practice. While the LSB personal pronoun system is more similar to spoken language systems than previous analyses of such systems in other sign languages

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¹³⁵ The videotape, *Creative Uses of ASL*, shows just this technique.

allow, it is with respect to the present/nonpresent distinction that we find the most significant departure from systems attested in spoken languages.

5. Deictic and anaphoric reference in Brazilian Sign Language

5.1 Introduction

To this point, I have been making the case for linguistic universals in sign languages as regards personal pronouns. Like Meier and Engberg-Pedersen -- although on importantly different bases -- I argued that there is convincing evidence that at least some sign languages have grammaticized first person pronouns. In contrast to them and to all other analyses so far proposed, I claimed that at least ASL and LSB have also grammaticized second person pronouns.

The evidence I presented supports my claim that sign languages as a group cannot be taken as refutation of the widely-espoused hypothesis that all natural languages have grammaticized the conversational roles of both sender and receiver. Given that ASL has been seen as a counter-example with respect to the grammaticization of a second person pronoun and that this status has influenced analyses of other sign languages, my reanalysis should provoke reconsideration of these as well. Whether particular sign languages are counter-examples remains an empirical question; the discussion in chapters 3 and 4 provides a basis for investigation.

Furthermore, I suggested that there are systematic differences between G-handshape points to nonparticipants in gaze behavior and muscle tension of the hand which distinguish demonstratives from third person anaphors, so that the LSB personal pronoun set is in fact a three-term system. Massone (1993b) observes similar differences in Argentine Sign Language pronouns, and some members of the hierarchy of pointing signs Engberg-Pedersen (1993b) establishes may turn out to be categorically demonstratives and third person anaphors. Van Hoek (1992) reports that

the ASL signers she worked with had no trouble distinguishing personal pronouns from deictic adverbs, although the basis on which they did this was not clear to her. She does not mention whether they could do so as well for personal pronouns and demonstratives. This is, of course, a more difficult distinction to establish both syntactically and semantically. If the formational features that provide criteria for the distinction between adverb and personal pronoun can be isolated, perhaps demonstratives will fall out in the intermediary role I suggested they play between those two extremes (section 2.3 and section 3.3.2).

While all spoken languages so far described have been found to have both first and second person pronouns, many do not have a formal third person pronoun, i.e. a pronoun which encodes the nonparticipant but is unmarked for spatial deixis (Anderson & Keenan 1985). Usually, one member of the set of demonstrative pronouns comes to function in a way that is spatio-deictically neutral. I argued that this is what we find for sign languages as well.

Finally, I have offered the body coordinates model not only as an account of the set-internal contrasts of the personal pronoun systems of LSB, ASL, and perhaps other sign languages but also as an explanatory device for understanding the relationship between narrative space and conversational space. Although my empirical work focuses on LSB, I have drawn heavily on the ASL literature in the discussion of universals because ASL pronouns have been most extensively studied and the relevant ASL scholarly literature is widely accessible to sign language specialists and nonspecialists alike who may want to corroborate the interpretations I have made of other researchers' work.

I am not implying, however, that sign languages have identical personal pronouns systems, nor do they have identical conversational conventions for maintaining reference in connected discourse. Having established in the foregoing chapters that at least ASL and LSB have grammaticized both first and second person pronouns, I turn in this chapter to a fuller presentation of the several LSB grammatical mechanisms and rhetorical practices for making deictic and anaphoric reference. Here I discuss language-specific forms rather than universals. While in the preceding chapters I have been mainly concerned with the theoretical underpinnings of the work, what follows here is largely descriptive. Informed by both the general semantics literature and the earlier sign language analyses, I examine my LSB data with a view to identifying the systematicity of contrasts which semanticists have suggested are relevant to person deixis.

5.2 LSB data

The LSB data consist primarily of video-recordings of naturally-occurring conversational interactions. Supplemental to the video-recordings are insights derived from intensive participant-observation carried out within the Brazilian Deaf community over a period of several years. My first contact with the community dates to July-August, 1985, with subsequent contact from December, 1986 to January, 1987. These encounters, approximately six weeks each, occurred in the cities of Belo Horizonte in the mid-central region, Recife in the northeast, and São Paulo in the south. It was not until April, 1992, however, that fieldwork began in earnest.

At that time, I was able to spend ten months in Rio de Janeiro, the de facto capital of the Brazilian Deaf world. It is in Rio de Janeiro that INES (Instituto Nacional de Educação de Surdos), the oldest and largest deaf school, operates; it is the Universidade Federal do Rio de Janeiro that first offered sign language classes through a public university and continues to do so; it is in Rio de Janeiro where FENEIS (Federação Nacional para a Educação e Integração dos Surdos), the national deaf advocacy organization, was founded and is headquartered; and it was there on the beach at Copacabana that the vision of members of the Companhia Surda do Teatro, a local deaf theater group, took form as a grassroots movement, Surdos Venceremos (We, Deaf, Will Overcome), which brought hundreds of deaf people and their supporters together for the first large public demonstration demanding official recognition for the sign language.^{136,137} Through my participation in the activities of these entities, I was able to observe LSB in myriad everyday interactions.

That participation laid the groundwork for my fruitful collaboration during the year August, 1993 to August, 1994 with deaf and hearing members of a Rio-based research group on the development of the first LSB instructional materials available in Brazil. As a consequence of this relationship, I had the opportunity to videotape signers native in LSB, a total of more than 40 hours. Discussions on specific aspects of the personal pronoun system and related topics with members of the group who are

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¹³⁶ Some years prior to this event, deaf students at INES held a demonstration which also sought language rights. The potential for impact on the public consciousness and conscience was muted by the fact that the demonstration was confined to the school grounds.

¹³⁷ Brazil provides constitutional guarantees to its native peoples with respect to language rights. Surdos Venceremos sought to have those guarantees extended to the Deaf community.

fluent native signers contributed additional material. It is on this body of data that I draw in making the analysis which follows.

5.3 Personal pronouns

The LSB personal pronoun set distinguishes three persons: first, second, and third; and three numbers: singular, dual, and more-than-two or multiple. It does not mark gender, although third person pronouns can be preceded by the signs MALE or FEMALE¹³⁸ when that distinction is relevant. The first person plurals encode the inclusive/exclusive distinction. These are familiar distinctions attested in spoken languages; perhaps unique to LSB, or to sign languages generally, is the encoding of the present/nonpresent distinction.

The relevance of present/nonpresent to person deixis was discussed in section 2.4, where the notion was used to distinguish the conversational participants from the nonparticipant. There it was noted that first and second persons are necessarily present but third person is not. While this characterization is clearly valid, it does not preclude the possibility that particular languages distinguish between present and nonpresent within the third person category.¹³⁹

Fillmore (1975) proposes the category *audience* to capture the fact that addressers are sensitive to the presence of others in the conversational

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¹³⁸ The sign MALE [l B_t x#[O~]] is made at the chin by the B-hand, thumb extended and opposed, palm in, making contact while closing to flat O-hand. The sign FEMALE [c A_t xf] is made at the cheek by the A-hand, thumb extended and in contact, moving forward.

¹³⁹ Levinson (1983:72) observes that the Australian language Dyirbal has alternate vocabulary required in the presence of taboo kinsmen, whether or not the kinsmen are addressed. If the alternate vocabulary includes third person pronouns, the encoding of the present/nonpresent distinction on the nonparticipant is part of a more general system of social deixis. Levinson also notes that the Philippine language Samal has particular demonstratives used to locate objects near to present nonparticipants. He does not mention whether these contrast with other demonstratives used for objects at nonpresent locations so it is not clear that Samal explicitly encodes the present/nonpresent distinction. In any case, these are spatial deictics and not person deictics.

setting. He offers this category in a reconceptualization of the divisions within person deixis. While Benveniste (1971) and Lyons (1977) see the addresser and addressee as positive categories and define the nonparticipant negatively with respect to these two, Fillmore adds audience as a third positive category. Among the characteristics audience shares with addresser and addressee is that of being necessarily present. Levinson (1983) divides audience into *overhearers* and *bystanders*, where the distinction seems to be that the latter, but not the former, are members of the conversational group. These two subcategories require the nonaddressed person to be present as against *target*, which does not. Neither analyst cites examples of third person pronouns which contrast necessarily along the dimension of present/nonpresent, however, leaving the question open to investigation.

The LSB personal pronoun set includes just such forms. It systematically differentiates between present and nonpresent referents not only on the level of conversational practice but also of pronominal forms -- that is, it grammaticizes the distinction. The explicit encoding of the present/nonpresent distinction is perhaps the most significant difference in the domain of person deixis between languages in the visual-gestural modality and those in the auditory-vocal modality. Both levels -- practice and forms -- will be discussed in the following sections.

5.3.1 Forms of the singular

Analyses of pronouns in sign languages have focused almost exclusively on singular subject/object forms. I suspect this is due, at least in part, to an assumption that plural pronouns are merely composites of a form of the singular plus a plural morpheme, so that to elucidate what is baffling about the singulars would go most of the distance to explaining the

plurals. For a similar reason, possessive pronouns and adjectives have been little studied. The narrow focus on subject/object singulars has skewed analysis, as evidenced by models that present phonological descriptions of the subject/object singulars which are aberrant with respect to the rest of the lexicon. To avoid this shortcoming, I will treat the full inventory of LSB person deictic and anaphoric forms. In addition to the assumption that the other pronouns do not offer interesting material from which to draw analytical insights, another contributing factor to the preoccupation with the analysis of singular subject/object pronouns is their resemblance to nonlinguistic pointing.

The form-based analyses of personal pronouns examined in chapter 3 all propose that the G-handshape is pointing at something, be it a spatial locus or a real or imagined entity. The significant differences in the analyses lie in the details. Ahlgren's meaning-based analysis provides no description of the forms under consideration, so nothing can be inferred about the issue of *pointing* vs. *pointing-at*. Only Meier comes close to identifying regularities of form grounded in the articulatory array presented by the signer. However, he fails to establish a similar case for the non-first-person pronouns, and falls back into the prevailing view that what the G-handshape is pointing at is relevant to linguistic description. My claim is that it is not. In the rest of this section, I argue for a boundary between phonology and interpretation; I argue for the pointing hand as a phonological element independent of whatever object is pointed at, including the theoretical and the hypothetical.

Greftegreff's challenge (1992) to Stokoean and more recent phonological descriptions of those signs which likely have their origins in nonlinguistic pointing (see section 4.2.2.3.2) reflects the difficulties which

analysts continue to confront in accounting for such forms as part of the linguistic system. Recall that Greftegreff's hypothesis is that these signs are better described as deictic points to particular objects. What Greftegreff has done is to take the idea that "the G-handshape of the personal pronouns is pointing at something which is relevant to linguistic description" to its logical conclusion: namely, that, for a whole host of signs -- verbs and nouns, as well as pronouns, the G-handshape is *pointing-at*. While such a uniform approach has its appeal, any gain is offset by a loss of explanatory power, given the differences in the linguistic functions of deictic points. For example, the LSB sign PLASTIC, a point to the front teeth, is an adjective; the sign SEE, a point to the upper cheek, is a verb; the sign NOSE, a point to the nose, is a noun. They occur in different syntactic slots. More worrisome yet is the prospect of trying to incorporate the "particular objects" into linguistic description. I have already argued the inutility of the type/token relationship for this purpose (section 4.2.2.3.2). All linguistic forms must be describable in terms of the systems internal to the grammar of the language and in terms of the articulatory array presented by the signer.

Focusing attention specifically on those "deictic points to particular objects" which are relevant to person deixis, a range of data indicates that a uniform analysis is inadequate. Pettito (1986) shows that there is a developmental discontinuity from prelinguistic to linguistic pointing with respect to overt pronominals specifically as regards volitional referents (discussed in section 2.2). While Greftegreff's analysis places deictic points within the linguistic system, it offers no principled way of accounting for the distinction between *person* and *nonperson* required by Pettito's data. Meier (1982) shows that the mapping of world to sign for verb agreement is

likewise not directly deictic. This is most evident for those verbs where the agent is marked at the end rather than the beginning of the movement (e.g. BORROW, COPY); errors of directionality of movement occur, despite the apparent iconicity of the form. Meier's data demonstrate a relationship between directionality, a phonological element, and agency, a semantic notion, which is not captured by a uniform approach to pointing signs. Newport (1990) reports that a significant difference persists between early and late acquisition ASL signers in the mastery of verb agreement unrelated to overall years of experience with the language. Senghas (1995) documents a similar difference for Nicaraguan signers. She also traces the emergence of the ISN verb agreement system as the language developed from the pidgin to the creole stage. Such findings suggest that the resemblance between nonlinguistic pointing and pronominals masks the linguistic complexity of the pronominals and, further, that any analysis of the data will have to account for that complexity. It is no straightforward matter of pointing at objects.

I examined my LSB data to cull examples of pronominals and prolocatives to show that the phonological description of these forms is independent of the entities and locations referred to. This is not to deny the obvious -- that interpretation of pro-forms relies on features of the conversational setting or of the conversation itself, as much for sign languages as for spoken languages. The data provide a number of examples which show clearly that the handshape in these pro-forms is not pointing at anything. Handshape is at the same level of the linguistic system for all signs, both lexical and deictic. Production and perception of the personal pronoun signs are independent of their referential objects.

The sign [$G^{\wedge f^w}$],¹⁴⁰ glossed FAR, derivative of the distal spatial deictic, [$G^{\wedge f^{\wedge}}$],¹⁴¹ although it requires accompanying gaze on the part of the signer, does not lead to a referential object by inviting the addressee to follow the trajectory of the extended index finger. The distal spatial deictic, [$G^{\wedge \wedge}$],¹⁴² is used only in phrases with a named nonpresent geographical location, for example, the sequence translatable as, "In the United States there, I learned a lot." Unlike most spatial deictic forms, it never takes accompanying gaze, even on first mention of the referent. For [$G^{\wedge \wedge}$] and [$G^{\wedge f^w}$], in fact, the particular object must not be in view and thus cannot provide a terminus for the pointing.¹⁴³ The direction of pointing for both signs is relevant to phonological form but bears no implied spatial relationship to the actual location of the referential object.

More directly relevant to person deixis are the signs, [$G_{<}^a$],¹⁴⁴ glossed NEXT, and [$A^{n[L]}$],¹⁴⁵ glossed THAN (the comparative). Both use the body coordinates relevant to the personal pronoun system (described below in section 5.3.1.1), the latter obligatorily. [$A^{n[L]}$] sets up a comparison between entities so that, for example, where the signer claims to have a given quality to a greater degree than the addressee, the A-

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¹⁴⁰ The sign [$G^{\wedge f^w}$] is made in neutral space by the G-handshape (index hand), fingertip up, moving forward and upward with a twisting motion.

¹⁴¹ The sign [$G^{\wedge f^{\wedge}}$] is made in neutral space by the G-handshape, fingertip up, moving forward and upward.

¹⁴² The sign [$G^{\wedge \wedge}$] is made in neutral space by the G-handshape, fingertip up, moving upward.

¹⁴³ All three of the signs discussed here are restricted to making reference to nonpresent locations and contrast with other forms which make reference to present locations. An example of the latter is [G_f^f], which is made in neutral space by the G-handshape, fingertip forward, moving forward, usually in an arc which terminates not upward but level. This may be similar to the Samal case.

¹⁴⁴ The sign [$G_{<}^a$] is made in neutral space by the G-handshape, fingertip contralateral, supinating.

¹⁴⁵ The sign [$A^{n[L]}$] is made in neutral space by the A-handshape (fist hand), bending back then forward while opening to the L-handshape (thumb and index finger extended from fist in the same plane as the palm).

handshape is held at center chest, opening out to the L-handshape oriented forward along the midline of the body. [A ⁿ[L]] is likely derived from the sequence of numerals: [A [^]], [L_<],¹⁴⁶ glossed ONE and TWO, respectively. NEXT is closely related on the level of both form and meaning to the temporal adverb [G_< ^fa],¹⁴⁷ glossed LATER. On the basis of the current data set, it is not possible to claim that NEXT is derived from LATER or vice versa.

The orientation of the extended index finger of NEXT [G_< ^a] is necessarily at right angles to the direction of movement of the handshape. If anything, it is the dorsal side of the hand that “points” at a particular object.¹⁴⁸ Whatever objects lie in the path of the pointing direction of the extended index finger are not only irrelevant to the grammar, they are also irrelevant to interpretation. The pointing direction of the extended index finger of the final handshape of THAN [A ⁿ[L]], along with the other body coordinates, is relevant to the form of the sign, and a particular object -- sometimes an abstract one like ‘the past’ -- which lies along its path is relevant to interpretation. However, if my hypothesis about the origins of the sign in the number system is correct, then there is no ontogenetic relationship between [A ⁿ[L]] and deictic gesture. The sign [L_f ^b],¹⁴⁹ glossed OTHER, provides support for my hypothesis. It is also probable that OTHER [L_f ^b] has TWO [L_<] as its source, yet it is like NEXT [G_< ^a] as regards the salience to movement of the dorsal side of the hand. The

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¹⁴⁶ The sign [A [^]] is made in neutral space by the A-handshape with extended thumb upward; the sign [L_<] is made in neutral space by the L-handshape, index fingertip contralateral.

¹⁴⁷ The sign [G_< ^fa] is made in neutral space by the G-handshape, fingertip contralateral, moving forward and upward while supinating.

¹⁴⁸ In citation form, the handshape supinates, but under certain modulations it pronates. More generally, then, the movement is a wrist (and forearm) rotation.

¹⁴⁹ The sign [L_f ^b] is made in neutral space by the L-handshape, index fingertip forward, pronating.

semantics of both THAN and OTHER are consistent with the numeral origins hypothesis. Moreover, the L-handshape is not used in nonlinguistic pointing.

These four signs -- LATER, NEXT, OTHER, THAN -- all have a related meaning, 'juxtaposition,' and all represent this meaning as a relationship between two handshape positions. That is, for LATER and NEXT, the hand position changes from prone to supine; for OTHER, from supine to prone; for THAN, from a retracted to an extended. The relationship between the handshape positions must be part of a phonological description of the sign. Working out the details for each of the signs of the notion of juxtaposition is a matter for semantics. The relationship of these two -- form and meaning -- to a particular object is of concern to interpretation.

Perhaps the most compelling evidence that the handshape is not pointing at something emerges from examination of the use of the G-handshape in the verb modulation Klima and Bellugi (1979:284,287,302) label *allocative determinate* (Appendix B, figure 5.1). In this example, JH, an LSB instructor, is calling on students in class. He indicates first one student then a second seated beside the first by pointing toward each one in turn. Although these pointing gestures are consistent with the phonological specifications of the second person pronoun I propose (section 5.3.1.1 below), their linguistic status is arguable since they occur in isolation. Even if they are linguistic, they may be deictic points to particular objects, as Greftegreff suggests. However, when the students are surprised that JH next chooses a third respondent several down from the second, he signs a sequence which begins with each hand in turn executing a G-handshape point forward before moving into the allocative determinate modulation. The meaning is approximately, "It seemed that I was calling

on you in the order in which you are seated but I'm calling on you randomly."

The smooth transition between the single points and the modulated sign, as well as the uniformity in the handshape, orientation, and the size of the movement within the signing space, gives evidence that the single points are input to the modulation, just as are lexical signs. The G-handshape of the example bears the same relationship to the modulated form as the flat O-handshape of the verb glossed as GIVE¹⁵⁰ to its modulated form. On the level of form, deictic signs are fully describable in the same terms as lexical signs. It is only on the level of interpretation that particular objects are relevant. Sign language pronouns serve to pick out, rather than denote, their referential objects, just as do spoken language pronouns; and they do this, just as spoken language pronouns do, by grammatical and conversational conventions at another level of the communication system than phonological form.

Accepting a subset of deictic pointing signs as pronouns leaves us with the question of whether they are demonstratives or personal pronouns. The difference between demonstrative pronouns and personal pronouns is a matter of semantics and pragmatics. Given the importance of this issue, I have already addressed it at some length (section 3.3.2 and section 4.1) and will do so again in the sections specifically dealing with members of the LSB personal pronoun set.

In describing the members of a personal pronoun set, I take the analyst's task to be to set out the criteria that establish the categories, not to exhaustively categorize every possible communicative pointing gesture as

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¹⁵⁰ Similar to the ASL verb depicted in the figure, the citation form of LSB GIVE, [O_a^f], is made by the supine flat O-handshape (thumbtip touching fingertips, which are prominently bent at the metacarpophalangeal joints), moving forward.

either nonlinguistic or linguistic, prolocative or pronominal, demonstrative or personal pronoun. Put another way, the analyst accounts for the types, and not the tokens, by generalizing away from the tokens to the types on the basis of typical features of the tokens. That is the task to which I now turn.

5.3.1.1 Common singulars

The most frequent LSB singular pronoun signs are formed by particular arrays of the G-handshape, head, chest, and gaze coordinates in a single or iterated performance, with iteration indicating emphasis. The handshape reaches its position with a straight, relatively tense movement. In this, it contrasts with the verb GO-TO, which has a relaxed arcing movement. Unlike GO-TO, the movement for the pronouns seems to be only that necessary to make the transition between signs. In some phonological models of ASL, forms similar to the LSB personal pronouns are described as having a hold instead of a movement. While this is also an accurate description of the LSB pronouns as far as it goes, the hold in LSB is preceded by a transition movement which merits mention because it contributes crucial perceptual cues.¹⁵¹

The typical alignment of body coordinates for the first and second person pronouns is longitudinal coordinates of head, gaze, chest, and handshape orientation in the same vertical plane, with latitudinal coordinates for each of the four in parallel horizontal planes which intersect the vertical plane. Within that vertical plane, the first person pronoun has the fingertip oriented toward the chest, usually in contact, at the midline of the signer's body and the second person pronoun has the

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¹⁵¹ Kegl (p.c.1/25/96) pointed out that most phonological models of signs tend to treat only citation forms. From this it follows, then, that the transitional movement, arising as it must in stretches of discourse, does not enter into those analyses. Greftegreff is currently developing a phonological analysis that deals with connected discourse.

fingertip oriented away from the chest at the midline of the body. The handshape for the first person pronoun has the extended index finger close to perpendicular to the palm (bent only at the metacarpophalangeal joint) rather than extended in the same plane as the palm.

The third person pronoun shows a disjunction between the longitudinal chest coordinate in one vertical plane and the longitudinal handshape coordinate in another. The longitudinal gaze coordinate typically shifts briefly toward the handshape coordinate plane before returning to fall in the same plane as the chest coordinate. The head coordinate shifts only slightly toward the handshape coordinate plane before returning to the chest coordinate plane. For nonpresent nonparticipant references, the latitudinal head and gaze coordinates shift briefly to approach an intersection with the handshape coordinate, and the handshape itself usually has the extended index finger perpendicular to the palm. These alterations in form are the grammaticization of the present/nonpresent distinctions.

Performances of the third person pronoun can orient either to the left or to the right off the midline of the body. However, pronouns which do not involve proximal relations pertaining between referents either at narrative time (for nonpresent referents) or at conversational time (for present referents) are typically ipsilateral. Elicited third person pronouns invariably take this side. Yet, pronouns performed toward the contralateral side are easier to produce in that they do not require an external rotation at the shoulder joint, as do those performed toward the ipsilateral side. I suggest that the preference for ipsilateral performance is due to an effort to keep third person pronouns maximally distinct from second person pronouns; a contralateral third person pronoun crosses the

midline of the body. I take this “midline avoidance” as evidence for the salience of the midline to the form of the second person pronoun so that, all other things¹⁵² being equal, signers stay clear of the midline when performing the third person pronoun.

These are typical articulations of the form in my videotaped conversational data and they are the articulations signers give when a form is elicited for nonpresent nonparticipant referents. Under certain circumstances, longitudinal head and gaze coordinates do not shift but remain in the same plane as the chest coordinate, and the latitudinal planes remain parallel.; only the longitudinal handshape coordinate is disjoined. This alignment usually occurs with mentions of the referent subsequent to the first mention. The relationship between these plus-gaze (gaze and handshape in the same plane) and minus-gaze (gaze and handshape in different planes) third person forms will be treated in the next section.

5.3.1.1.1 Deictic terms vs. anaphoric terms

Liddell (1994, 1995) argues that ASL has only deictic terms in deictic usage and does not have anaphors or anaphoric usage of deictic terms. To phrase the claim along the lines of Benveniste (1971:218), Liddell’s claim entails that, contrary to the grammatical facts of all spoken languages so far studied, ASL personal pronouns are a unitary class making no distinction between pronouns which “belong to the syntax of the language” -- i.e. take a linguistic antecedent -- and those that are “characteristic of

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¹⁵² “Other things” are (a) distortions under non-optimal signing conditions (obstructions to movement or in the shared visual field, etc.), (b) politeness or privacy constraints, (c) discourse structure, (d) empathy considerations, (e) verb modulations, (f) prosody-like contrasts. I touched on (a) in chapter 3, on (d), (e), and (f) in chapter 4, and I will touch on (b) and (c) in the present chapter. These descriptions are of the canonical forms of the signs, with the additional mention of phonological form differences under anaphora.

‘instances of discourse’ -- i.e., are contextually-established; ASL pronouns are all the latter. Liddell reaches this conclusion as an outcome of his application to ASL of the model he proposes wherein, for linguistic purposes, all referents are considered to be present in the environment. Liddell, further, assumes that pronominal reference to present entities is always only deictic. That is, that the pronoun serves to pick out the referent anew with each use. I argue that this is not the case for the nonparticipant, no more so for referents actually present in the conversational setting than for those treated as present by linguistic convention. In fact, such a characteristic is central to the pronouns which encode the participant roles in contrast to the nonparticipant, and is not part of the present/nonpresent distinction, as Liddell’s arguments seem to assume.

The ASL linguistic forms Liddell describes are also found in LSB, yet in my data subsequent mentions of nonparticipant referents are quite clearly anaphoric usage in that they are in a relationship of coreference with an antecedent. Their full interpretation is dependent upon features of the conversation itself and not of the conversational setting alone. This much is clear. What is arguable is whether or not they are anaphoric terms, keeping in mind Levinson’s caution against confusing usage with terms.

All third person pronouns are deictic in the sense that they “locate” the referent outside the conversational dyad. Fillmore (1971) offers the insight that all three deictic systems -- space, time, and person -- can subcategorize their members as proximal or distal. He suggests that first person is proximal and second person is distal. This characterization puts third person outside the person deictic system entirely, as Benveniste

argues it rightly should be. Yet in those languages which have a non-first/non-second pronoun which is neutral with respect to spatial deixis, the nonparticipant can be seen to have made its way into the person deictic system. In such three-term systems, the nonparticipant is distal with respect to the participants.¹⁵³

Thus, part of the meaning of the third person pronoun is dependent upon features of the conversational setting, a criterion of deictic terms. However, given that full interpretation of the third person pronoun is typically dependent upon a coreference relationship with an antecedent, we can say that its basic function is anaphoric. This is particularly true of the minus-gaze form of the LSB third person pronoun, which is used for continued pronominal reference. Following Levinson, then, the term is categorizable as an anaphor.

In sign languages, as in spoken languages, gaze has a discourse-level function. It has been claimed that that is its only function.¹⁵⁴ I argue that sign languages differ from spoken languages in that, for the former, gaze plays a second role as part of phonological form. This role results from the grammaticization of the discourse-level function of gaze. At the discourse level, gaze serves to direct the addressee's attention to the object toward which the signer gazes. In many, perhaps most, instances of pronominal reference to nonparticipants, the addressee does not follow the signer's gaze -- or more precisely, glance, given its brevity -- to locate the referential object. Just as for lexical signs, the addressee maintains gaze

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¹⁵³ In Portuguese, for example, which has a three-term spatial deictic system (near-the-addresser, near-the-addressee/medial, far), only the third person may be located with the distal adverb.

¹⁵⁴ Bahan's detailed investigation (1996) of its several functions in ASL shows that eyegaze is even more complicated than I am reporting here for LSB. Bahan's work suggests areas of inquiry for future research on LSB.

in the region of the signer's face. In the case of nonpresent nonparticipant referents, the addressee never looks to the terminus of the trajectory of the signer's gaze. Even for present nonparticipant references, the addressee shifts his attention away from the signer only for the first mention and not for subsequent mentions of the same referent, whether or not the signer produces a plus-gaze or minus-gaze form. The addressee does not follow the signer's gaze, yet there is no indication of conversational breakdown. Here, gaze cannot be functioning at the discourse level, but rather as part of the pronominal form.

The relevance of plus-gaze and minus-gaze to LSB phonology is not limited to the description of pronouns. The relationship between the gaze coordinates and the handshape coordinates is a feature of all signs. For those signs which do not take gaze (in general, open class categories), gaze is relevant to their phonological description as evidenced by the fact that the signer is not free to gaze at the handshape. Under normal conditions of use, the longitudinal head and gaze coordinates fall in the same plane as the chest coordinate and the latitudinal coordinates remain in parallel planes. They do not shift towards the handshape coordinates.¹⁵⁵ Those signs which are plus-gaze are pro-forms. Besides these, plus-gaze is found with mentions rather than uses of open class signs and sometimes with fingerspelling of names, etc. (although not with fingerspelled loansigns,

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¹⁵⁵ Some open class signs, like READ, [B_t V_b ^v •] -- nondominant hand in B-handshape (flat hand), palm towards the signer, dominant hand in prone V-handshape (index and middle finger extended from fist and spread) moves downward -- or MIRROR, [h B_t ^w •] -- at the face, dominant hand in B-handshape, palm towards the signer, twists repeatedly -- have the gaze coordinate in the same plane as the handshape coordinate. Exceptions like these are attributable to the peculiar salience of eyes to the semantics of the signs or to the classifier origins of the element of the sign to which the eyes gaze. Classifiers are arguably pro-forms.

which, as they became nativized phonologically, join the appropriate open class).

The plus-gaze form can be thought of as activating a procedure which serves to shift the conversational focus and the minus-gaze form as activating a procedure which serves to sustain the conversational focus (Ehlich 1982). The minus-gaze forms are unequivocally anaphoric terms under a processing model criterion as well as under Levinson's criterion of basic function. The presence or nonpresence of the referential object is irrelevant to the status of a third person pronoun as either a deictic or an anaphoric term. Thus, Liddell's conclusion does not necessarily follow from his own model. In LSB, the minus-gaze form is an anaphoric term because its basic use is anaphoric -- that is, its full interpretation is dependent upon a linguistic relationship of coreference with an antecedent. Another piece of evidence that the minus-gaze form is an anaphor is that it cannot take emphasis in the form of iteration, as can the other pronouns. The inability to take emphasis is a characteristic of anaphors like the atonal Portuguese object pronouns.¹⁵⁶ The question of the status of the plus-gaze form will be addressed in the next section, along with the possibility that both forms are demonstratives rather than forms of a third person pronoun.

5.3.1.1.2 Demonstratives vs. personal pronouns

Although it is indisputable that the minus-gaze third person forms are related in form and function to demonstratives, that relationship does not preclude their being categorically anaphors, any more than the presence of a referential object precludes anaphoric usage. The next issue is: As anaphors, are the forms necessarily third person pronouns? In this

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¹⁵⁶ In English, only *it* cannot take emphasis under normal circumstances.

section, I continue the comparison of deixis and anaphora, but with a view to its utility for establishing a third person pronoun distinct from the demonstratives.

Heath (1980) describes a four-term demonstrative set for the Australian language Nunggubuyu: PROX(imal), IMM(ediate), DIST(al), and ANAPH(oric). The last of these is a spatial deictic term which functions as an anaphor.¹⁵⁷ As Levinson (1983) observes, a single English token can have both functions. The spatial deictic in, "I was born in London and I have lived there ever since," is deictic on account of its function of locating the speaker outside London, but it is also anaphoric in that it is in a coreference relationship with the antecedent, *London*. It is, however, categorically a deictic term because its basic function is deictic. Nunggubuyu ANAPH differs from this in that it must function anaphorically and cannot be solely deictic. Thus, it not only serves two functions, it is also categorically both -- and at the same time -- a deictic and an anaphoric term.

I described above a similar term in LSB, [G[^] ^], which is used in a noun phrase with a named, nonpresent place. This term locates the signer away from the place -- thus, it is deictic; it also is in a coreference relationship with the noun that names the place -- thus, it is anaphoric. Like Nunggubuyu ANAPH, it can never function solely deictically.¹⁵⁸ This should not be troubling if we keep in mind Bühler's claim that anaphora is derivative of deixis; it is a kind of deixis. Just as mauve, as a specific kind of purple, continues to be purple, so [G[^] ^], an anaphor, continues to be a

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¹⁵⁷ According to Heath, there is a separate personal pronoun set of which ANAPH is not a member.

¹⁵⁸ Unlike Nunggubuyu ANAPH but like *there*, the LSB form belongs to the set of deictic adverbs.

deictic. This being so, neither the minus-gaze element nor exclusive anaphoric function is sufficient to justify categorizing the minus-gaze form as a third person pronoun rather than a demonstrative.¹⁵⁹ The criteria must be drawn from phonology, syntax, and -- most crucially -- semantics.

I argued (section 2.3) that demonstratives and third person pronouns both encode the notion of location, and that they differ in that for the former, the notion is asserted, while for the latter, it is presupposed. In keeping with this characterization, I claim that the criterial feature for the LSB third person pronoun is that location of the referential object is presupposed and not asserted; the pro-form in question does not lead the addressee to its referent by means of location. Neither does it simply lead away from the location of the signer or of the conversational participants, as do uses of *there* which are not also anaphoric. (E.g. "Have you seen my pen?" "It's right there.") For the minus-gaze form at least, location is clearly presupposed. Thus, it cannot be a spatial deictic.

At the present time, my data on the plus-gaze forms are insufficient to determine their linguistic category unequivocally. I cannot yet confirm with certainty my hypothesis that muscle tension in the hand and duration of gaze are criterial in separating the third person pronoun from demonstratives. In future inquiry, I intend to pursue this distinction through close comparison of those plus-gaze forms which the addressee responds to by following the signer's gaze and those which do not elicit this response to see if there are regularities of form in addition to the factor of first vs. subsequent mention of the same referent.¹⁶⁰

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¹⁵⁹ We know that it is not an adverb because of the syntactic slot it fills.

¹⁶⁰ To elucidate this issue, I look forward to Signstream, a computer aid to analysis currently under development (Kegl & Neidle), becoming available to the research community.

5.3.1.1.3 Third person and the present/nonpresent distinction

For tokens of the third person pronoun which refer to nonpresent entities, orientation to the left or right off the midline of the body is determined by discourse-level considerations. For example, in a narrative where a referent will be primarily in the semantic role of *patient*, there is a strong tendency, all else being equal, for the orientation to be toward the signer's contralateral side. For the same reason, in two-handed classifier verb constructions the patient tends to be represented by the nondominant hand. As yet, I have not been able to observe in LSB the tendency Engberg-Pedersen reports for Danish Sign Language whereby the ipsilateral, proximal orientation contrasts with the contralateral, distal orientation in that the former encodes the referent for whom the signer feels greater empathy. The LSB evidence so far is inconclusive, but the possibility warrants further investigation.

For tokens of the third person pronoun which refer to present entities, orientation left or right off the midline of the body is determined by the proximity relations that pertain between the entities. In contrast to the use of orientation discussed in the previous paragraph, proximity relations between entities -- specifically here, between the participants and present nonparticipants -- contribute to interpretation and are not merely an epiphenomenon of language in the visual-gestural modality. Thus, these tokens resemble tokens of the third person pronoun for nonpresent referents in spatial arrays that replicate proximity relations which pertained between entities in the setting of the narrative (see section 3.4.1 for discussion of the phenomenon in narrative). In both uses, mismatches of orientation of the pronoun to proximity relations between entities are ungrammatical. In LSB, as in ASL, proximity relations between entities

are expressed not by the overt prepositional phrases common to some spoken languages, English and Portuguese among them, but by schematic replications of proximity relations using pro-forms (pronouns and classifiers).

Present referents (of all three persons) are obligatorily situated in conversational space by virtue of their being present; nonpresent referents (necessarily third person, taking the perspective of the current conversation)¹⁶¹ may be situated in narrative space by linguistic description, or they may not be. Nonpresent referents being situated in space is independent of the means by which reference is established and maintained. That is, neither pronominal reference nor role shift require that referents be situated in narrative space.¹⁶² Being situated in space gives rise to proximity relationships between referents, present or nonpresent, which aid interpretation. Proximity relations do not pertain to the interpretation of nonpresent referents not explicitly situated in space by linguistic description.

The relevance of proximity relations to interpretation crosscuts the theoretical entities of Liddell's model.¹⁶³ Neither his model nor any of the others so far proposed offer a principled way of accounting for these facts. The arbitrary spatial loci of Lillo-Martin and Klima's model, as geometric constructs, uniformly exclude implications about proximity relations between referential entities as a matter of semantics. A rebuttal to this

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¹⁶¹ In the discussion of the body coordinates model (section 4.3), I set out the relationship between current space and shifted space as regards person deixis.

¹⁶² I pointed out (section 4.2.2.3) that there are positions the signer can shift to the taking up of which does not imply that the reported sender or receiver was so positioned in the narrative setting, and that these positions contrast with others which do entail such implication.

¹⁶³ Although Liddell's early conceptualization of the model (1994) may have allowed for this distinction, the current conceptualization does not.

criticism is that treating proximity relations is not the job of the spatial locus, an element of syntax. To which I would answer that spatial loci are superfluous to analysis, explaining nothing which cannot be better treated as prosody-like phenomena (laterality distinctions) or semantics (proximity relations). Liddell's surrogates and tokens do not improve upon Kegl's body pronouns by taking the mental representation outside the grammar; nor do Lillo-Martin and Klima's spatial loci improve upon Kegl's agreement markers by taking points in space into the discourse representation structure. Person deixis in sign languages is not nearly so extraordinary.

5.3.1.1.4 Text deictic use of the third person pronoun

Text deictic use of the third person pronoun is peculiar because it is performed by one hand and its referent is the sign or sequence performed by the other hand. This use differs from the simultaneous articulation of pronoun and lexical sign previously discussed (section 4.2.2.1) in that the coreference relationship in the text deictic use is between the pronoun and a linguistic element as such. An example of this phenomenon in English is:

- (5.1) I want to tell you that you are a perspicacious judge of character, but don't ask me to spell it.

In LSB, the linguistic element is a handshape, either as a component of a sign or as the name of an alphabetic or, less frequently, a numeric character.

An example of the first case would be the following. In a meeting called to discuss a proposed public march to demand recognition of the sign language, one participant took the floor to talk about what needed to be done. A little into his turn, he stopped himself at the sign MARCH, [A_{bq}A_b

f[55] ·],¹⁶⁴ changed the dominant hand to the G-handshape oriented toward the nondominant hand in the 5-handshape, then supinated the dominant hand in the B-handshape to ask ‘what?’ After a moment’s pause, he proceeded to emphasize that for the march to be successful many people had to attend so the responsibility of the organizers was to get the word out to the community. In context, it is clear that he is calling the addressees’ attention to the (iconic) relationship between the 5 handshapes of MARCH and the idea of many people walking. The sign CITY, [5_{b,>q}5_{b,<} ^{ze}],¹⁶⁵ also iconically represents the movement of throngs of people along the sidewalks.

It is not the case, however, that the 5-handshape as an element of the lexical sign is representing the throngs in the more direct way that a classifier would. It is perfectly felicitous to say, “I went to the city yesterday and the streets were completely deserted,” or, “Nobody turned up for the march.” This being so, the pronoun cannot be understood to be referring to the extralinguistic referential object, but is indeed referring to a linguistic element.

A second example involves a numeric character. A source of namesigns for deaf school children in Brazil, as in France and China, is the order in which they were enrolled in the school. A child who is the eighth student may be dubbed EIGHT.¹⁶⁶ EIGHT, [S_f], is normally

¹⁶⁴ The sign MARCH, [A_{bq}A_b ^{f[55]} ·], is made by the two prone A-handshapes, one in front of the other, moving forward, with repeated opening to 5-handshapes.

¹⁶⁵ The sign CITY, [5_{b,>q}5_{b,<} ^{ze}], is made by the two prone 5-handshapes, one in front of the other, fingertips toward opposite sides, moving simultaneously to center and back to the sides while wiggling.

¹⁶⁶ It is not a straightforward matter to gloss a number sign in its use as a namesign. On the one hand, when an LSB/Portuguese bilingual is asked to translate a signed sequence containing such a namesign, s/he would not write the Portuguese word for the number if the spoken language name were known. On the other hand, many signers do not know the spoken language names of people whose namesigns they do know so neither is it the case that the sign substitutes for the spoken language name.

articulated as a one-handed sign. However, if it becomes necessary to distinguish between someone named EIGHT and someone else named EIGHTY-EIGHT, then the nondominant hand in the G-handshape provides the means. For EIGHT, the fingertip of the G-handshape contacts the S-handshape at its base once, and for EIGHTY-EIGHT, the sign is repeated at a slight displacement in space from the first articulation. The contact between the two hands makes this example different from the others described here, but conceptually it seems sufficiently similar to be considered under the heading of this section.

More typical are text deictic references to alphabetic characters, as in the following examples. Recounting his visit to a researcher in another city, a signer identified her by first giving her namesign and then fingerspelling her spoken language name with his dominant hand while pointing at the dominant hand with his nondominant hand. It is not simply that the pronoun and the fingerspelled name are coreferential since the intent of both is to call the addressee's attention to the referential object, i.e. the researcher; although in a general way this is true, interpretation of the fingerspelled name is a two-step process and the text deictic pronoun is relevant only to the first step.

The pronoun calls the addressee's attention to the fingerspelling itself (step 1); the link between the fingerspelling and the referential object is a matter of inference (step 2). The fingerspelling is akin to a mention of the name more so than to a use of that name. It is equivalent to, "I 'm Gerry, g-e-r-r-y," where the spelled word does not refer to the person with the name but "refers" only to the name itself. To articulate the name of an alphabetic character is to refer to the alphabetic character. A sequence of such articulations is only just a sequence of references to characters. Left

to the addressee is the task of decoding the message. The spelling is not equal to the saying, evidence of that being the superstitious practice of spelling a word to ward off the bad luck saying the word may bring.

In a second example, the signer, identifying the personnel involved in a research project, fingerspelled a name with his dominant hand. Immediately thereafter he pointed with his nondominant hand to the dominant hand, which remained poised in the air holding the final manual alphabet handshape of the name, before he proceeded with his comments. Following a text deictic use of the third person pronoun, a signer usually returns to normal handedness (5.2a), but may continue with another sign or two performed by the nondominant hand (5.2b).

(5.2a)	(5.2b)
Dom: M-Y-R-N-A SMART	Dom: M-Y-R-N-A
Non: PRO (to dom.)	Non: PRO (to dom.) SMART

The signer could have fingerspelled the name then signed an ordinary third person pronoun, i.e. away and off the midline of the body rather than towards the dominant hand. In that case, the referent is introduced into the discourse by the fingerspelled name, requiring the two-step process as before, but the pronoun is anaphoric, not text deictic, in that it and the antecedent both refer to the same referential object. The third person pronoun, not text deictic, can occur in the simultaneous articulation, as mentioned. (Again, the (a) structure is more common.)

(5.3a)	(5.3b)
Dom: M-Y-R-N-A SMART	Dom: M-Y-R-N-A PRO(-away)
Non: PRO(-away)	Non: SMART

This is not a text deictic use of the third person pronoun because the pronoun is not referring to the fingerspelling but to the same extralinguistic referential object as the fingerspelling. (Neither is the pronoun referring to the handshape of the sign SMART. The two are in a subject-predicate relationship, not a coreference relationship.) In this example, the fingerspelling is closer to a use of the name than a mention. (The text deictic use of the pronoun signals that the fingerspelled item is closer to a mention.)

Brazilians do not use fingerspelling of short spoken-language names as namesigns as Americans do, but a look at the American practice is illustrative of this Brazilian example. It would be odd to treat pronominal references not oriented toward the other hand as being text deictic with an American name like B-E-N since that sequence of handshapes stands as the referent's namesign. As such, it is equivalent to fingerspelled loan signs. In the Brazilian case, the signer chose to use the fingerspelling of the referent's spoken language name, in lieu of the namesign, to introduce her into the discourse. Having established the antecedent (albeit through the two-step process), pronominal reference can proceed normally.

The question arises as to whether the text deictic use is of the third person pronoun or a demonstrative. In English, both can be text deictic. ASL has a similar form in a similar use to the LSB which thus far has received little attention. Although the LSB form is often plus-gaze, it may occur as minus-gaze, which I have argued is clearly indicative of a third person pronoun. Consistent with the minus-gaze third person form, in this use the form, whether plus- or minus-gaze, does not take emphasis as either greater muscle tension in the hand or iteration. Since the plus-gaze form shares with the minus-gaze these peculiarities of form and function,

it is appropriate to categorize both as forms of the third person pronoun in a text deictic use.

5.3.1.2 Special uses of the second person pronoun

The second person pronoun has three uses aside from the basic one of simply encoding the role of the addressee; it is used in an impersonal 'you' sense, as a vocative, and as a discourse-deictic affirmative response. I am using the term *discourse deictic* in contrast to *text deictic* because, while the use of the third person pronoun just described is deictic for a piece of the previous text as text, the use of the second person pronoun to be described here is deictic for the total propositional content of a previous signer's utterance. So it differs in the scope of what it refers to and in that it is necessarily uttered by someone other than the signer who has provided the propositional content referred to. The distinction between the two should become clear in the detailed discussion which follows brief discussions of the impersonal pronoun use and the vocative.

The body coordinates of the impersonal are clearly those of the second person pronoun but the G-handshape has the index finger perpendicular to the palm like the third person pronoun which takes a nonpresent referent, and the transition movement is foreshortened.¹⁶⁷ In the impersonal use of the second person pronoun, the referent is also nonpresent in the sense that reference is not limited to those present.¹⁶⁸ This is the nondeictic-nonanaphoric use of a deictic term of Levinson's (1983:68) analysis. Boyes-Braem (SLLING 2/8/95) observes that signers of German Swiss Sign Language (DSGS) sometimes direct the point to midspace for reported

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¹⁶⁷ This more compact handshape contributes to foreshortening the movement.

¹⁶⁸ The nonfirst bent G-handshape pronouns signal that the information is all dependent upon the sender; there is nothing "out there." This factor unifies the use of the bent G-handshape across the three persons. (See section 5.3.1.1 for comments about the bent G-handshape in first and third person forms.)

speech in contrast to the point toward the current addressee. This appears to be a use related to the LSB impersonal in that, again, the form is foreshortened and the addressee is not present.

Levinson (1983:70-71) divides vocative use into *summonses* and *addresses*. His example of a summons is, "*Hey you*, you just scratched my car with your frisbee"; of an address, "The truth is, *Madam*, nothing is as good nowadays." Levinson indicates that the English second person pronoun cannot be used as an address, but this is inaccurate. It can be, although the use may be infrequent: "Look, you, I'm tired of haggling." The LSB second person pronoun, usually iterated, functions vocatively only as a summons.

The distinction I am making between text deictic and discourse deictic has not been made for English; the two terms are used interchangeably. While not analyzing the distinction as I do, both Lyons (1977) and Levinson (1983) examine data which show the distinction. Levinson treats them as varieties of a single phenomenon. Lyons does as well, as evidenced by his labeling convention: pure vs. impure textual deixis. His terms present one phenomenon as being an aberrant version of the other. Yet it is surely the aberrant version, i.e. *impure deixis*, that is more common in everyday talk, as a review of relevant examples demonstrates.

I see three different phenomena here. The first two refer to a piece of the text -- what I am calling text deixis; the third refers to the propositional content of a text -- what I am calling discourse deixis. In the first type, a pronoun refers to its antecedent as a linguistic item and not to the same referential object as the antecedent, as in the example of English text deixis given in the previous section and repeated below (a). This type differs from

ordinary anaphora in that it takes a use of a lexeme and treats it like a mention. In a related type, a pronoun does not refer to the same referential object as the antecedent but reassociates the linguistic expression with a different referential object having the same semantic features (b). The reassociation of the referential object of the antecedent also requires a reassociation of the possessive so that *his* refers to the first man, but as part of the antecedent of the pronoun, the reference of the possessive must be understood as being to the second man. Perhaps it would be more precise to call this an instance of impure anaphora. In the third, the pronoun is deictic for the proposition -- what I am calling a discourse deictic use (c).

(5.4a) I want to tell you that you are a perspicacious judge of character, but don't ask me to spell it.

(5.4b) The man who gave his paycheck to his wife was wiser than the man who gave it to his mistress.

(5.4c) A: You ate the last piece of chocolate cake.
B: That's a lie!

The first two examples may be thought of as reference to the words themselves, which are associated with an extralinguistic referential object by a process of inference. The process draws on the connection between use and mention in the one case. In the second case, it draws on the possibility of uncoupling linguistic items from their referential objects. These two seem to me different in kind from the third example, with its antecedent as the propositional content.

Portuguese also has this distinction. Text deictic use employs the personal pronouns, and grammatical gender is dependent upon what is construed as the antecedent.

(5.5) A gente me chama Tany: t, a, n, y.

'Folks call me Tany: t-a-n-y.'

(i) Muitas pessoas não o escrevem certo.

'Many people don't write it right.'

(antecedent: *o meu nome*, 'my name')

(ii) Muitas pessoas não a escrevem certo.

'Many people don't write it right.'

(antecedent: *a soletração*, 'the spelling')¹⁶⁹

For discourse deictic use, there is a special set of demonstrative pronouns, remnants of a neutral grammatical gender, as in this example.

(5.6) Não gosto de estudar. Por isso, as minhas notas não foram boas.

'I don't like to study. Because of this, my grades weren't good.'

The Portuguese situation is more clear-cut than the English since different linguistic items serve the two purposes. In the English case, one can say, "Don't ask me to spell that," or "Don't ask me to spell it," and "It's a lie" or "That's a lie." Nuances of meaning can be teased out but it is more a matter of use preferences than grammar.

LSB has separate forms for text deictic and the discourse deictic uses. As in Portuguese, the former takes the third person pronoun (discussed in section 5.3.1.1.4). LSB differs from Portuguese (and many other spoken languages) in not employing a demonstrative for the latter. Instead, the second person pronoun serves this purpose. In this, LSB also differs from ASL, given that one of the uses of ASL THAT,¹⁷⁰ [Y ⁿ],¹⁷¹ is the discourse deictic use. Although no other language has been described as having a second person pronoun which allows discourse deictic use, Boyes-Braem

¹⁶⁹ These examples are grammatically correct but not colloquial speech since the object pronouns are often omitted. A better speaker of Portuguese could have come up with better examples, but these are adequate to the purposes at hand.

¹⁷⁰ There are doubts among ASL researchers about the appropriateness of the gloss that will not be discussed here.

¹⁷¹ ASL THAT, [Y ⁿ], is made in neutral space by the Y-handshape (thumb and little finger extended from each side of fist), nodding.

(p.c. 2/26/95) notes a conversational use of a DSGS form that may also turn out to be a second person pronoun.

I categorize the LSB form as a second person pronoun on the basis of the body coordinates, which are closest to those of the second person pronoun. However, the handshape of the pronoun in the discourse deictic use is at a sharper upward angle than the orientation typical of its basic use, and the performance of the sign is always emphatic. Emphasis takes the form of a constrained rebound following the forward movement, like a jab.

The second person pronoun can be used alone as an affirmative response to the conversational contribution of the immediately preceding signer, now in the role of addressee. It cannot be used to affirm the conversational contribution of a preceding signer not now being directly addressed. LSB has other signs which are also discourse deictic affirmative responses: CORRECT, [F_f ⁿ],¹⁷² and IT-IS-fs, [E_f | G_f ⁿ].¹⁷³ A comparison of the three sheds light on the differing patterns of their use.

When CORRECT is performed in neutral space just in front of the signer's torso, it affirms the immediately preceding signer's proposition. However, it has broader uses. In an iterated but unemphatic performance, it has the rhetorical properties of a desultory "sure, sure, sure" in English. This use seems to be deictic less for the previous propositional content than for the speech act within which the content was conveyed, and less

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¹⁷² The sign CORRECT, [F_f ⁿ], is made in neutral space by the dominant hand in the F-handshape (thumb and index finger touching at the fingertips, other fingers extended and spread), held extended fingertips forward, nodding.

¹⁷³ The fingerspelled loan sign IT-IS-fs, [E_f | G_f ⁿ], is a compound sign made in neutral space the first component of which is the dominant hand in the forward-facing E-handshape (thumb opposed to palm, fingertips resting along the side of the thumb) changing to the forward-facing G-handshape, which bends at the metacarpophalangeal joint.

enthusiastic in its affirmation. CORRECT can be modified to incorporate person marking so that it means “You’re right” or “S/he’s right,” but not “I’m right.”¹⁷⁴ It can also be used with an overt argument, including the first person pronoun. In either of these cases, CORRECT need not immediately follow the turn in which the proposition so adjudged was uttered as long as that proposition can be assumed to be readily recoverable. For example, in a classroom where several students in turn have answered a question, the teacher can go back to say that a certain one gave the correct answer no matter what position the student’s response took in the order of responses. In this context and more generally, CORRECT stands in a relationship of antonymy with WRONG, [B_a P_a x<].¹⁷⁵

Unlike CORRECT, IT-IS-fs cannot be modified to incorporate person marking nor can it take an overt argument. It usually serves to affirm a proposition that it immediately follows. However, in its emphatic form, IT-IS-fs rebuts an immediately preceding assertion which has contradicted the prior proposition, a use not possible to either CORRECT or the second person pronoun. IT-IS-fs is in a relationship of antonymy with the one-handed form of the sign DIFFERENT [R_b >[V]].¹⁷⁶ These two signs can function as affirmative and negative responses to some yes/no questions as well.

While both CORRECT and IT-IS-fs are assessments of propositional content, the former explicitly attributes the proposition to a proponent.

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¹⁷⁴ CORRECT oriented towards the signer has an augmentative meaning, and is not equivalent to the person marking possible with the nonfirst referents.

¹⁷⁵ The sign WRONG, [B_a P_a x<], is made by the dominant hand in the supine P-handshape (extended index and middle fingers, thumb touching proximal interphalangeal joint of the middle finger) striking the nondominant hand in the supine B-handshape as it moves to the contralateral side.

¹⁷⁶ The sign DIFFERENT, [R_b >[V]], is made in neutral space by the dominant hand in the prone R-handshape (index and middle fingers extended and crossed, other fingers curled into the palm) moving towards the ipsilateral side while opening into a V-handshape (index and middle fingers extended and spread).

Rather than being an assessment of propositional content, the discourse deictic use of the second person pronoun is more a judgment of the addressee as the proponent of the proposition. The contrast between it and CORRECT might be schematically represented this way: “You’re **right**” (CORRECT); “**You’re right**” (second person pronoun).

Given the complexities and the alterations in form, it may be argued that what I am calling a discourse deictic use of the second person pronoun is better described as a separate sign derivative of the second person pronoun. That analysis must be considered. To do so, I review the relationships between the source signs and the derived signs previously presented.

The sign FAR, [G[^] f[^]w], although likely derived from the distal spatial deictic, [G[^] f[^]], adds an iterated rapid rotation (w) to the forward (f), upward (^) movement. FAR is a spatial adverb like its source sign but more emphatic.¹⁷⁷ The nondeictic pronoun/adjective NEXT [G_< a], which may have its source in the temporal deictic adverb LATER, [G_< f[^]a],¹⁷⁸ has simplified the movement of the canonical form by dropping the path movement (indicated by f[^]). (In a modulated form of NEXT, path movement reappears as person marking.) NEXT has not only become nondeictic but also has moved word class although it retains a sense of temporality. The comparative THAN [A n[L]] has its likely source in a sequence of numeric signs but it is not a compound and it is not a number. In fact, the number

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¹⁷⁷ Analysis of my present data is inclusive about whether FAR is necessarily deictic, or can be used to locate with respect to a center other than that of the current conversational setting, as in “Is your house near the beach.” “No, it’s far.” My impression is that the sign that would be used in this case is SEPARATE, [B[~]_tB[~]_t :], two bent B-handshapes, palms in, diverge.

¹⁷⁸ It is also possible that NEXT is the source sign and LATER, the derived. What is of interest here is the form and meaning relationships between the two signs and not the direction of derivation.

set which provides the source signs is not the one for representing enumerated entities but for representing the Arabic numerals themselves. This set does not allow pronominal or classifier uses.

To resolve the issue of whether the discourse deictic form of the second person pronoun is a special use or a derived sign requires a broad-based and thorough-going survey of the LSB using population to obtain confirmation of the source-sign/derived-sign relationship of a substantial number of signs, and then requires the development of a metric for establishing the boundary between various uses of a single sign and separate signs. The metric would need to take into account both social and linguistic facts. Such an effort is beyond the scope of the current work. Because the discourse deictic form continues to depend crucially on the semantics of pronominal address, I will refer to it as a special use of the second person pronoun until such a time as a metric for finer evaluation is available.

5.3.1.3 Shielded third person form

The shielded third person form is a two-handed sign performed to the left or the right off the midline of the body: one hand in the G-handshape contacts the other hand in the B-handshape, fingertip to palm, [B G ^x]. Which hand assumes which handshape is determined by the position of the nonparticipant who is the referential object in relationship to the positions of the participants. Both handshapes are typically held radial side down; when the referential object is positioned to the side and behind the signer, the B-handshape is held ulnar side touching the signer's torso near the shoulder.

The use of one hand to shield the other, a conversational practice of signers akin to whispering among speakers, occurs with other signs as

well. For these signs, the shielding extends over stretches of discourse. Not so for the shielded third person pronoun; the duration of the B-handshape component equals that of the G-handshape and the sign is preceded and followed by unshielded stretches of discourse. Furthermore, for other non-body contact signs,¹⁷⁹ the active hand does not contact the B-handshape during shielding as it does in producing the shielded third person form. In this sign, we see the grammaticization of a discourse-level function in a phonological form.

The first use of this form in an utterance typically is preceded by a nominal, and thus its linguistic category -- adverb, demonstrative, or personal pronoun -- may be open to some doubt. The fact that the form in subsequent uses can stand alone as an argument of the verb is evidence that it is a pronoun. Given that the form is restricted to use in reference to a person, I categorize it as a personal pronoun.¹⁸⁰ This is consistent with the claim I made (section 2.3) that the presence of the feature *person* is criterial for distinguishing between demonstratives and the third person pronoun and not the absence of the feature *location*, a claim which is in turn consistent with the hypothesis of semanticists that the third person pronoun develops from a demonstrative. Moreover, it does not have the

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¹⁷⁹ Body contact signs are those which are articulated on the body. Among the personal pronouns, only first person is a body contact sign.

¹⁸⁰ It may seem that I am here confusing the commonsense notion of person with the grammatical notion. In section 3.2.1, I suggested that a justification for considering Kegl's body pronouns to be personal pronouns lies in the fact that they are based in a commonsense notion of person and that the grammatical notion must arise from the commonsense notion. Likewise, the LSB shielded third person pronoun is person deictic because it encodes person as a semantic category and not persons as particular human beings, as in Liddell's comment (cited in section 3.3.2) about "fifteen different pointing directions ... [for] the fifteen different individuals." More importantly, the shielded third person pronoun shares many features with the ordinary third person pronoun, and thus it is reasonable to consider it a variant of the ordinary third person pronoun. The label I chose for the form underscores this relationship.

sustained eyegaze or tensed hand muscles that appear to be characteristic of demonstratives.

Ferreira Brito (1995:182) considers this form a polite form. Caldas (1992:72) mentions the form but does not specify its use as being a matter of politeness. Both attribute the use to the addresser's concern with being seen by the referent. Clearly, the function of this form is not to show deference or social distance but solely to obscure the act of reference. It is used in those situations where the addresser does not want to be observed (by nonparticipants) to be making reference to a present person. Because the form is well-known among signers, its referent is almost without exception a non-signer. However, if the nonparticipant were unlikely or unable to see the form -- as, for instance, a nonparticipant whose back is to the addresser, the referent could be a signer. What determines the form's use is a concern with being observed, whether by the person referred to or others. This being so, the form encodes Levinson's category *overhearers*.^{181,182} It is, then, better described as a covert form, and is among a number of forms and strategies that LSB signers use to maintain the privacy of their conversations. Others will be described below.

5.3.2 Dual pronouns

I claim that the LSB personal pronoun system has a grammatical category of dual number. The evidence for grammatical dual number in LSB is found both in the forms of the personal pronoun system itself and in the modulations for number on verbs. The dual is a fully grammaticized category, as opposed to the trial, which is a composite sign since it simply

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¹⁸¹ I take the term *overhearers* to be a label for a deictic category that does not restrict the linguistic signal to the vocal.

¹⁸² Levinson does not stipulate that the overhearer must be a referent so I am assuming that this is not required.

substitutes the relevant number handshape for the G-handshape common to the singular and the multiple and does not have reflexes in verbal modulations.

Caldas (1992:8) lists the singular, dual, and plural in her presentation of the conventions she uses to transcribe her data. Several of her examples have third person dual pronouns and/or dual verbal inflections (p.65). However, no argument is made to support these distinctions.

Klima and Bellugi (1979:281) briefly discuss the dual inflection for ASL verbs and they report that some signers also produce a trial inflection. The example they include to illustrate the dual inflection is a repetition of the sign with characteristic alterations as compared with two separate performances of the same sign (Appendix B, figure 5.2). They say that the verb is directed toward two or three distinct loci. Significant unremarked differences between two separate performances of the sign and a single performance of the dual inflection in the figures provided are the absence of displacement of the signer's body for the second component of the sign and a foreshortening of the movement of both components. Given these elements of the articulation, the locations of the endpoints of the movements appear to be epiphenomenal.

Such forms occur in LSB as well, and do so even in contexts where no previous pointing signs allow an analysis of coreference between the dual inflected verb and spatial loci associated with antecedents. A triplicated performance of a verb sign is the multiple inflection and not a trial; a sequence intended to mean three individuals were agents or patients of a particular action would necessitate not the nondisplaced, foreshortened

form, but three articulations of the verb or a single articulation of the verb with appropriate additional lexical material.

A different expression of the dual in LSB, not mentioned in the Klima and Bellugi account of ASL, is the two-handed performance of what is canonically a one-handed sign. For example, in certain contexts with two agents or two patients, two hands replace the single hand of GIVE.¹⁸³ Similarly, the sign LOOK-AT¹⁸⁴ can take singular, dual, or multiple subject inflection, but not trial. The reciprocal is a special use of the dual in which, rather than two agents acting in unison or two patients being acted upon in unison, two referential objects are each agent and patient alternately yet simultaneously as the sign is performed not with a simple doubling of the articulation but with the inversion of features of one component vis à vis the other.¹⁸⁵ Besides being restricted to one-handed signs performed in neutral space, other factors yet to be identified may play a part in this dual inflection. At the present stage of our understanding, what is clear is that dual number is grammaticized in the verb system.

Number incorporation is found in LSB pronouns and classifiers. With classifiers, for example, the G-handshape held fingertip up refers to a long, narrow upright object. The V-handshape, fingertips up, refers to two such objects; the W-handshape to three, and the 4-handshape to four or more. The situation for the pronouns is more complicated.

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¹⁸³ See footnote 15 for a description of the sign GIVE.

¹⁸⁴ The sign LOOK-AT, [m V_t x,bf], is made by the dominant hand in contact at the mid-face in the V-handshape (index and middle fingers extended and spread, other fingers curled into the palm), palm toward the signer, pronating as if moves away from the signer. The multiple modulation of the sign replaces the V-handshape of both hands with the 4-handshape and the contact with the midface is deleted.

¹⁸⁵ Klima and Bellugi do discuss the reciprocal, but they do not analyze it as a special use of the dual. Indeed, crosslinguistically in oral languages, reciprocal is more linked to reflexive than to dual. This may be an area where signed and spoken languages systematically differ.

In contrast to the classifiers, the G-handshape as an element of a personal pronoun form does not necessarily encode singularity; it is the handshape of one variant of the dual and also of the common multiple. The variant of the dual has the G-handshape flexing at the wrist: for the combination of sender and nonparticipant, articulation is near the shoulder, palm towards the signer; for sender and recipient, articulation is in neutral space in the vertical plane at the midline of the signer's body, palm towards the signer; for two addressees or the combination of addressee and nonparticipant, articulation is in neutral space in a chest-high lateral plane intersecting the midline of the body, palm up; for two nonparticipant referents contiguous to each other, articulation is in neutral space off the midline of the body, palm up. As can be seen in these descriptions, the inclusive/exclusive distinction is encoded by virtue of the relationship to the midline of the articulation of the first person forms, and the first/non-first distinction is encoded by palm orientation.

The G-handshape variant of the dual for non-first persons resembles the non-first multiple pronouns (discussed below); the difference is that the movement of the dual is accomplished solely by wrist flexion and not by the linear translation of the handshape through the signing space. Wrist flexion is handshape internal movement, in contrast to linear translation, which is path movement. The difference between the two is addressed in some treatments of phonology (Uyechi 1995). This near homopheny does not extend to first person dual since the movement for the first person multiple approaches a full rotation of the handshape, evidence perhaps of the first/non-first distinction.

The second and more common variant of the dual has the P-handshape in the same articulation as described for the G-handshape

variant. The choice of the P-handshape is evidence of the grammaticization of the form, because the P-hand is not used in the number sets and it is used in the possessives. I have not been able to ascertain which use of the P-handshape -- duals or possessives -- emerged first, but signers seem to feel that these are the more proper.^{186,187} I will discuss this observation in more detail in section 5.3.4. The fact that the P-handshape has two extended fingers may well have played a part in the emergence of this dual variant, but that alone falls far short of explaining its use.

Although the performance of the duals is influenced by the presence of referential objects in the conversational setting, the extended finger(s) are not pointing at these objects. This is most apparent in first person duals, where palm orientation and the direction of movement, but not necessarily the fingertip, orient toward the signer. Given the orientation of the P-handshape in that variant of the first person dual, it would have to be the middle finger braced by the thumb that is pointing at the sender -- an odd way to point at oneself. Moreover, while for the first person singular pronoun in its canonical form the handshape makes contact at the place of articulation, both variants of the first person duals are non-body-contact signs. This demonstrates that there is not only little relationship between these signs and nonlinguistic deictic pointing, but also that the dual is neither merely a personal pronoun with incorporated number sign nor a number sign with person marking.¹⁸⁸

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¹⁸⁶ Signers are doubtless aware of the fact that the other variants bear a close resemblance to nonlinguistic gesture.

¹⁸⁷ Only the P-handshape variant of the dual was taught in the LSB classes I observed.

¹⁸⁸ Although nonlinguistic deictic pointing to oneself can also be non-body contact, the practice seems to be intended to underscore one's physical presence in the interactional setting in a way that goes beyond even a gestural use intended to shift interlocutors' attention to oneself as a social presence, i.e. an interactant. In this, it contrasts with the more typical body contact nonlinguistic deictic pointing to self. The LSB duals do not stand in this relationship to the (body contact) singulars and plurals.

Performances of the first and second person duals which include nonpresent referents show no attempt to utilize spatial loci that could be associated with antecedent singular pronouns. This is to say that the point in geometric space that can be plotted from the performance of a preceding singular third person pronoun is not a target for the performance of a dual which has a partial coreference relationship with the singular pronoun. The extent of the observed correlation is that the side on which the antecedent pronoun was performed will determine the side on which the dual is performed.¹⁸⁹ And, of course, there can be no spatial locus to serve as a target for a performance of duals which include reference to a lexically introduced antecedent unaccompanied by a deictic pointing sign. Performances of duals which include reference to present nonparticipants are influenced by the position of the nonparticipant vis à vis the participants; again, this is a matter of laterality and not of spatial loci. A third person dual pronoun, although it may be performed either to the left or right, cannot straddle the midline of the signer's body, a fact which contradicts the claims that there is no formal distinction between second and third person. Reference to two agents or two patients that are not contiguous cannot take the form of a dual but must be conjoined singulars. (See section 4.2.2.3 for a related discussion.)

Evidence that grammaticization is not an all-or-nothing proposition comes from my observation of usage patterns which suggest that the use of the multiple may be acceptable for triads but is wholly unacceptable for dyads. There is no quadral or quintal, nor can the 4-hand or the 5-hand refer to an unspecified number of individuals acting in unison, a meaning

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¹⁸⁹ This is only evidence for the salience of laterality in the system and not for "punctuality."

these handshapes contribute when they are part of classifier constructions.¹⁹⁰

Benveniste (1971), among others who have looked at these issues, drew a distinction between first and non-first in part on the basis of the plural facts. First person plural, which is typically not an aggregation of like entities -- i.e. addressers -- is thus atypical as regards plurality in general. Not so non-first person. Second person can be an aggregation of like entities -- i.e. addressees -- and third person is necessarily an aggregation of like entities -- i.e. nonparticipants. Silverstein (1976) sees the plural facts differently. He argues that for the participants of the discourse -- both first and second persons -- plural is arrived at by tallying up semantically established entities, as against the nonparticipant, for which plural is arrived at by linguistic coreference considerations. I point out in my discussion of Silverstein (section 2.4) that all three persons can have plurals that combine contextually-established and linguistically-established referents.

The forms of the LSB dual instantiate a number of these combinations. As would be expected on the basis of Benveniste's insight, first person cannot be two senders; in the event that each of two signers used the dual simultaneously to refer to him- or herself and the other, that form would be either a first person inclusive or first person exclusive, depending on the details of its articulation as outlined above. First person inclusive is, as Silverstein's claim requires, a tallying up of contextually-established entities; whether first person exclusive is likewise a tallying up

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¹⁹⁰ In my Vista College ASL classes of the early 1980s, we were taught that the number handshapes up to 5 could be used pronominally, with the 5-handshape also allowing a meaning like, "many individuals." This may, then, be a difference between the grammars of ASL and LSB, or it may merely be the blurring of the line between fully grammaticized forms and composite signs.

of contextually-established entities in all performances depends on the analysis of pronominal reference to present nonparticipants. As I argued in section 5.3.1.1.1, pronominal references to nonparticipants typically depend upon a linguistic relationship of coreference with a preceding lexical item or demonstrative pronoun, regardless of the presence or nonpresence of the nonparticipant. In such cases, the first person dual exclusive is a combination of a contextually-established entity and a linguistically-established entity.

Second person dual can be a duality of addressees -- thus a tallying up of contextually-established entities -- or it can be an addressee plus a nonparticipant, with the same considerations concerning present nonparticipants applying here as did for the first person exclusive. There seems to be a formational difference between the two types of second person dual. For a duality of addressees, the movement of the sign has the midline of the signer's body as its midpoint, i.e. the midline is the fulcrum which anchors the flexion; for the combination of addressee and nonparticipant, the midline becomes the extreme rather than the midpoint of the arcing movement. If this difference is systematic and not accidental to the data I am currently working with, then the LSB personal pronoun system encodes *audience* in the way it is ordinarily understood, 'an assembly of listeners.'

Here a form for a plurality of addressees may systematically contrast with a form for the combination of addressee and nonparticipant. If so, the LSB system would encode audience as a person deictic category but perhaps not as Fillmore envisioned and certainly not as Levinson did, given his bifurcation of the category into *bystander* and *overhearer*. It is clear that the LSB second person dual as a summing up of addressees grants its referents identical conversational rights and obligations. Still, the

formational differences may not be sufficiently robust to warrant categorizing the two as distinct pronouns. The case for the second person multiples is stronger, as will be advanced below.

5.3.3 Multiple pronouns

I pointed out in the introductory comments to discussion of the personal pronouns that few analyses have looked beyond the singulars to determine what semantic distinctions or other constraints may be relevant to plural personal pronouns. With respect to the duals, I noted particularities of form and meaning as evidence for the grammaticization in LSB of that person deictic category; I turn now to the multiples.

First person multiples are necessarily amplified person in Benveniste's (1971) sense of being a collectivity of unlike entities.¹⁹¹ They are combinations of: (1) sender, recipient, and nonparticipant; (2) sender and more than one recipient; (3) sender and more than one nonparticipant. They encode the inclusive/exclusive distinction in that crossing the midline of the body contrasts with not crossing the midline so that in the former instance reference includes the addressee and in the latter it does not. All three formally encode the present/nonpresent distinction through a feature of horizontality. These two distinctions interact in interesting ways as should be apparent in the description of their forms.

All forms have the G-handshape moving in an arc; these are the defining formational features of the multiple in contrast to the singular and the dual. For collectivities like (1) where the nonparticipant is present, the G-handshape begins in contact, fingertip to center chest, arcs away in a

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¹⁹¹ There are contexts such as theatrical performances in which a number of actors may sign a first person plural pronoun in unison, but there is no form which encodes the meaning of a collectivity of senders. Instead, one of the amplified person forms is adapted to a specific dramatic effect.

chest-high horizontal plane, and terminates forward at about the midline of the signer's body.¹⁹² The longitudinal head, gaze, and handshape coordinates are disjoined from the chest coordinate during the arcing.¹⁹³ There is no form for such collectivities where the nonparticipant is nonpresent. For collectivities like (2), the G-handshape begins in contact, fingertip to center chest, arcs away in a chest-high horizontal plane, crosses the midline of the signer's body, and terminates forward on the opposite side. All longitudinal body coordinates remain in the same vertical plane.¹⁹⁴ Here gaze is neither fixed, as it is with the first and second persons singular and dual, nor glancing as it may with the third person singular or dual, but sweeping. For collectivities like (3): where all nonparticipants are present, the G-handshape begins in contact fingertip to center chest, arcs away in a chest-high horizontal plane, and terminates forward well short of the midline; where all nonparticipants are nonpresent, the G-handshape begins in contact, fingertip to ipsilateral shoulder, arcs close to the body, fingertip oriented up, and terminates well

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¹⁹² When the arcing is ipsilateral, the contact may be shifted ipsilaterally from center chest to the shoulder, an anticipatory assimilation which is not distinctive. The assimilation occurs in connected discourse contexts and not in citation form. When the arcing is contralateral, the contact is not shifted contralaterally. This asymmetry is evidence for the salience of laterality to the phonology.

¹⁹³ When the arcing is contralateral from contact, rather than ipsilateral, there is a portion of the handshape's arcing that is not matched by the head and gaze, resulting in a lag before the head and gaze coordinates are again in the same plane. This disjunction is a phonetic fact that does not alter the phonemic contrasts within the set of personal pronouns.

¹⁹⁴ In all but very precise performances of the sign, the arcing movement of the chest is more subtle than those of the head, gaze, and handshape. This effect is more pronounced when the sign moves contralaterally rather than ipsilaterally. The result is that on a phonetic level the chest coordinate is disjoined briefly from the others. Evidence that it is a matter of phonetic detail is the laterality difference. If the sign's movement is ipsilateral, a disjunction of the chest coordinate would risk producing a form that looks like a third person pronoun. I argued in section 5.3.1.1 that ipsilateral orientation is more closely associated with the third person pronoun than is contralateral. I believe this weighs against the tendency for disjunction of the chest coordinate in performances of the second person multiple oriented ipsilaterally. For those oriented contralaterally, the disjunction is not distinctive.

short of the midline.¹⁹⁵ In the first case, the form is plus-gaze and in the second, it is minus-gaze.¹⁹⁶

The second person multiple can be either a collectivity of addressees or the combination of a single addressee plus nonparticipants. In the first case, the arcing of the G-handshape in a chest-high horizontal plane, palm contralateral, begins forward on the contralateral side, moves through the midline, and terminates on the ipsilateral side. The longitudinal body coordinates remain in the same vertical plane, and gaze sweeps. In the case of the amplified second person multiple, restricted to present nonparticipants, the arcing of the G-handshape in a chest-high horizontal plane, palm contralateral, begins forward at the midline and moves ipsilaterally or contralaterally, then returns to the midline. The longitudinal handshape, head, and gaze coordinates are disjoined from the chest coordinate during the arc movement. These forms, then, more clearly than the duals, encode 'an assembly of listeners' in contrast to addressee plus nonparticipants. In interactional terms, the conversational rights and obligations differ between the two second person multiples. Only the addressee of the amplified second multiple is a *ratified participant*, to use Levinson's term -- that is, one who can take up the turn at a turn relevance point without upsetting the rhythm of the interaction by doing so,

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¹⁹⁵ The same tendency for anticipatory assimilation to the ipsilateral side is found as was described in footnote 58 above. With nonpresent nonparticipant referents, assimilation is no longer merely a tendency, as the description of the form reveals.

¹⁹⁶ Meier (1990), citing Padden, comments that the ASL first person plural can only include reference to nonpresent nonparticipants. If this is so, then it follows that there are no pronouns that encode the other theoretically possible combinations. Recent discussions I have engaged in with ASL researchers reveal that similar distinctions with respect to both horizontality and movement forward along the midline may be found in the ASL pronominal system as well but I am unaware of any research specifically treating the issue.

whereas any referent can do so equally appropriately in the other form.¹⁹⁷

As for amplified second person with nonpresent nonparticipant referents, I have been unable to identify an instance in my naturally-occurring data, nor was I able to elicit such a form.¹⁹⁸

The third person multiple, a collectivity of like entities, i.e. the nonparticipant, has the G-handshape moving in a chest-high arc forward off the midline of the signer's body. For reference to present nonparticipants, the G-handshape is horizontal; for reference to nonpresent nonparticipants, the G-handshape has the index finger held perpendicular to the palm so that the finger takes a downward angle.

The sign TUDO-fs ('all') also can be articulated with the body coordinates and movements described for the multiples. In these cases, the G-handshape is replaced by the sequence of T-hand and O-hand linked by the wrist rotation characteristic of TUDO-fs so that TUDO-fs is embedded in the multiple forms. This periphrastic plural does not allow a distinction to be made between the second person multiple as an assembly of addressees or as addressee plus nonparticipants. The referents of this form, in the usual case, are present.

The presence or nonpresence of the referent figures significantly in the forms appropriate to all three persons. Only first person allows a combination in which members differ from each other along this dimension, and that combination must be first person exclusive. All

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¹⁹⁷ On an interactional level, there are differences in gaze even for the all-addressees form, depending on whether or not the signer is inviting a member of the audience to respond. If she or he is making that invitation, gaze sweeps from one to another of the members; otherwise, gaze typically sweeps just above their heads. This difference in lateral plane for gaze does not seem to be distinctive on the level of phonological form.

¹⁹⁸ I prefer naturally-occurring data. But for paradigmatic gaps like this one, I would set up narrative scenarios. However, if a consultant did not fairly readily produce a form, I did not press the issue. To do so risks the consequence of the consultant producing a nonce form.

nonparticipant referents must be to one side or the other of the midline; like the third person dual, the multiple cannot cross the midline. The specific side off the midline is determined by the relative position of the nonparticipants to the participants.

It might appear that it is stretching the bounds of linguistic description to argue that these forms are grammaticized pronouns and not conventional gestures. Several factors support the linguistic status of the forms, however. First, there is no gestural equivalent for the first person multiple articulated at the shoulder. Moreover, this form always occurs as part of a longer sequence of fully lexicalized signs where it stands in the argument relation of subject to the verb.¹⁹⁹ The absence of solo occurrences may be because the multiple (and perhaps the dual) does not allow gestural use in the Fillmorean sense, where the sender intends to call attention to himself.²⁰⁰

Second, the arcing movement need not -- in fact, typically does not -- physically encompass all the referents within its sweep; the arc movement itself is sufficient to generate an interpretation. For example, in a classroom situation where the instructor is addressing the whole group of students seated in a wide semi-circle in front of him, the arc of the second person multiple may be quite abbreviated but the reference is to all those present; a student wouldn't stand a chance of arguing that he was not required to do an assignment because the instructor's arcing index finger

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¹⁹⁹ Whether this form can function as an object pronoun remains a question. I have not found it to do so in my naturally-occurring conversational data and attempts to elicit it as an object were unsuccessful. It is possible that there is influence from Portuguese, which allows unfilled argument positions where the meaning is clear from context, but this is unlikely given the level of control of Portuguese of my informants. Interestingly, ASL shows similar patterns, even though English requires overt arguments (Lillo-Martin 1986).

²⁰⁰ Although it seems most natural to the first person singular, gestural use of the first person plural can be readily imagined for both Portuguese and English, but not for LSB.

didn't include him within its scope of movement. Likewise for third person referents, the scope of the arcing movement bears no direct relationship to the spatial locations of the referential objects beyond the positional coordinates of left and right off the midline of the signer's body.

Finally, echoing and extending Meier's argument that accepting one use of a form as linguistic demands the acceptance of related uses as also linguistic, there is no precedent in gesture for the conventions described here for referring to the nonpresent. Gestures for this purpose generally require that there be an association available to the addressee between some present object or location and the nonpresent referent: for example, the chair the nonpresent referent habitually occupies when present or has just vacated. This is not so for the LSB first person multiple exclusive nor the third person nonpresent; interpretation depends crucially upon elements of the conversation or the conversational setting in the sense of its mental representation, and is not limited to physical props within the physical setting -- although these may be utilized in some instances. If we accept the forms for referring to the nonpresent as linguistic, how can we withhold that status from those other forms with which the nonpresent forms make up a contrast set? From a semantic perspective, it would be odd indeed if a language encoded only the nonpresent with or without the sender, and failed to encode non-sender present referents.

Rather than being outside the linguistic pale, I suggest that these LSB forms underscore the complexities of reference to amplified person familiar to semanticists. The several multiple forms encode distinctions that arise from the semantics of person reference; they are not random or irrelevant. The dimensions which divide the domain of person deixis in LSB are just those that are crosslinguistically most central: sender vs.

recipient vs. nonparticipant; singular vs. dual vs. multiple; inclusive vs. exclusive; present vs. nonpresent. Nothing is introduced that is new to the domain of person deixis in natural languages; no radical parameters need to be postulated just for LSB. The fact that LSB has not conflated the semantic categories (such as second plural and second formal), so that forms are less polyfunctional than in English²⁰¹ or Portuguese (or many other languages), may be related to the semantic perspicuity hypothesis that Gee and Kegl (1982) put forth (see section 3.2.1) which holds that there is a near isomorphism between semantic structure and surface structure.

Aside from this difference, many of the restrictions on use of these LSB pronouns are shared by spoken language pronouns. For example, just as it is impossible to use an LSB second person multiple to an audience without referring to that audience in its entirety, it is impossible to use the Portuguese second person plural pronoun 'vocês' to an audience without referring to the audience in its entirety. In neither case can the sender mean, "You and you and you, but not the others here present and attending to the talk"; to do that, the sender must use a series of second person singular pronouns. Likewise for the nonparticipant form, a sender cannot make pronominal reference to some but not others of a group in a sequence like, "See those men? They're professional baseball players." And she cannot say, "You're professional baseball players," in reference to nonparticipants. In terms of LSB personal pronouns, this means that the sender cannot cross the midline of the body and still have felicitously produced a form interpretable as a third person.

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²⁰¹ In certain contexts, the English first person plural is understood as necessarily being 1st+2nd. For example, "Let's go," or "It's us or them."

LSB provides a variety of linguistic means to accomplish referential ends not encoded by the personal pronoun system. To refer to sets of referents for which the referential objects are some present and some nonpresent, the signer can introduce the referents by definite description, proper name, or singular demonstrative or personal pronoun, and then refer to them collectively by GROUP, [BB ^x]²⁰². Or she can introduce them in these ways but associated with the temporal anaphor described below (section 5.4.1). These periphrastic plurals are similar to the periphrastic (colloquial) English *you all* and *you guys* which make explicit again the plural meaning lost along with the singular ‘thou’ in that they fill a paradigmatic gap. Brazilian signers familiar with Portuguese third person pronouns, *ele* and *eles*, readily produce the combination of singular pronoun plus GROUP, suggesting that they are reanalyzing the latter as a morphological plural marker. Some even consider GROUP alone to be a third person plural, and without regard to the presence, nonpresence, or partial presenced of its referents. Purists complain that this is wrong, but only time will tell whether a future inventory of LSB personal pronouns may present GROUP or some other sign as a third person multiple no longer sensitive to the present/nonpresent distinction.

5.3.4 Possessives

The LSB possessives use the body coordinates to distinguish among the three persons in the same way as do the subject/object pronouns. First person possessives can have one of three handshapes: P, G, B; second and third person possessives use either P or G. The movement for first person possessives is to contact at center chest; the contacting region for the P-

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²⁰² The sign GROUP, [BB ^x], is made in neutral space by the two curved B-handshapes contacting at the ventral side of the wrists.

hand variant is the tip of the middle finger; for the G-hand variant, the tip of the index finger; for the B-hand variant, the palm. The movement for the non-first possessives is path movement away -- along the midline for second person, off the midline for third. The P-hand variant has, in addition to the path movement, a simultaneous internal movement: an abrupt pronation (a flicking). It is the dorsal side of the P-handshape that is salient to the distinctive flicking movement, not the fingertips.

In the discussion of the dual (section 5.3.2), I mentioned that signers seem to see the P-hand forms as more proper, in a sense, more languagelike.²⁰³ This perception is due, I believe, to two influences, one negative and the other positive. The negative influence is the resemblance of the B- and G-handshape forms to nonlinguistic gesture. The positive influence is the P-handshape in the sign PRÓPRIO ('own, real'), [B_> P_< x[!]],²⁰⁴ the manual alphabet equivalent of the initial letter of the "cognate" Portuguese word (*próprio*). PRÓPRIO would seem to be related in meaning to the possessives and thus a likely source for the P-handshape in the form of the possessives.

Like the P-hand possessives, the G-hand possessives occur in all three persons; unlike the P-hand possessives, the distribution of the G-hand possessives is restricted. To inquire of someone, "What's your name?", either the G-hand or the P-hand possessive may be used, with the G-hand variant seen as core LSB. However, to inquire of someone about a name written on a piece of paper, "Is that your name?", only the P-hand

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²⁰³ During a lesson on the possessives, the instructor taught only the P-handshape forms for all three persons. Later, with the lesson done, when she was actually using a first person possessive as opposed to teaching it, she produced the B-hand variant and not the P-hand.

²⁰⁴ The sign PRÓPRIO, [B_> P_< x[!]], is made by the dominant hand in the P-handshape, palm contralateral, sharply striking the palm of the nondominant hand in the B-handshape, palm ipsilateral.

possessive is permissible. One explanation is that in the latter case the sign NAME is a noun, but in the former case, it can be either a verb or a noun, a kind of zero derivation pertaining between the two since the forms are identical. The G-handshape form, then, would not be a possessive but a subject pronoun.

If the explanation holds, the LSB speech act for asking someone's name would be like the Spanish, "Como se llama?" ('What do you call yourself?'), not like the English.²⁰⁵ Were this all there is to it, the issue would be resolved by interposing a careful transcription of the data between the level of the speech act in one language and the level of the speech act in another. The LSB case, however, is not so straightforward.

The LSB sign, [B_>B_< ^x ·],²⁰⁶ for 'house/home' is the same as for 'live/reside' so that the distinction between "Where do you live?" and "Where is your house (located)?" cannot be made with this sign. The explanation for the ambiguity is resolvable in just the way I suggested for NAME: HOUSE/LIVE is a noun/verb pair in a formal relationship to each other of zero derivation. A third fact is not so easy to account for. Kinship terms as well can take either G-hand or P-hand possessives and there is no question of word class. If it were only kinship terms and NAME, I would propose that they are nouns and that the variability between the G-hand forms and the P-hand forms can be accounted for by taking LSB to be in transition

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²⁰⁵ During a workshop for LSB instructors, Cheri Smith, long-time ASL instructor, instructor-trainer, and co-author of the ASL curriculum *Signing Naturally*, commented that the laissez-faire attitude of earlier days about which ASL form, G-hand or B-hand, to teach or reinforce in the classroom had in more recent times given way to an insistence on the use of the G-hand pronoun in the context of asking someone's name on the grounds that G-hand form is correct ASL and the usage of B-hand possessives, an influence from English. The ASL curriculum is atheoretic, however, with respect to the linguistic category of NAME.

²⁰⁶ The sign [B_>B_< ^x ·] is made in neutral space by the two B-handshapes, facing each other, contacting twice at the fingertips.

from or to the encoding of the alienable/inalienable possession distinction, but the HOUSE/LIVE data do not fit easily into such an explanation.

Yet I would suggest that the explanation is indeed to be found along the lines of alienable/inalienable possession. Many possessions cannot take the G-hand form. Those that do -- name, home, family -- are those things most central to a person's existence. My hypothesis is that the G-hand forms in the noun/verb pairs are, at least diachronically, subject pronouns and the lexical sign is a verb. The fact that the linear order is the same for these as for possessive-possession sequences erodes the boundary between the two syntactic structures and contributes to a reanalysis of the G-hand form as a possessive. That reanalysis leads to the extension of the use of the G-hand form, now a true possessive, to other possessions along the lines I outlined.

Some facts about the sign NAMESIGN, [fl n],²⁰⁷ support my hypothesis. Like the personal pronouns and possessives, NAMESIGN uses the body coordinates for person marking. It can have neither a separate possessive modifier nor a pronominal argument.²⁰⁸ In this, NAMESIGN differs from NAME. It cannot be a verb with agreement marked by the body coordinates because it can have lexical adjective modifiers (usually predicatively). I suggest that it is a special case of inalienable possession. Its semantic fit among those things most central to a person's existence is good. One might even plausibly propose that, given obligatorily possessive marking, NAMESIGN -- by virtue of its encoding the notion of in-group name

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²⁰⁷ The sign NAMESIGN, [fl n], is made by the closed X-handshape (index finger bent at the interphalangeal joints, thumb filling the space thus created) nodding.

²⁰⁸ It can be coreferential with a nominal in a topic-comment structure but not in a subject-predicate structure.

-- shows that the thing most central to the lives of LSB signers is their Deaf identity.

Sequences with the B-handshape variant can also be syntactically ambiguous. The B-hand variant occurs commonly in responses to queries like, "What's your name?/What are you named?" and "Where's your house?/Where do you live?" This form is not only identical to the B-hand alternate of the first person singular but also shares with G-hand pronouns the dubious honor of being at least cursorily indistinguishable from a nonlinguistic gesture; in this case, the gesture which may accompany Portuguese possessives. I have mentioned that emblems in the repertoire of hearing Brazilians are imported into LSB as lexical items (chapter 3, footnote 24). However, once the form enters the LSB lexicon, it becomes subject to linguistic modulations in just the same way as are signs whose source is not in the gestural repertoire of hearing people. I suggest that that is the case of the B-handshape possessive.

In sum, the P-hand variant is preferred in those contexts where a contrast between subject/object pronouns and possessives is deemed necessary either on linguistic or social grounds. An illustration of this point: in a videotaped letter in LSB from a brother to his sister, both fluent native signers, informing her about some boxes he shipped to her address, the brother explains that some of the items are presents for family members and friends but others are not for anybody else to touch; they're his. And he signs MINE with an emphatic P-hand possessive (along with some mitigating nonmanuals). It is clear in the context that what he is emphasizing is not agency, as would be implied by an emphatic G-hand or B-hand pronoun, but possession. For this purpose, only the P-hand variant will do.

Turning to the plurals, only G-handshape possessives occur as dual and multiple inflections of the first person, and are identical to the subject/object pronouns of those inflections. Although the simplification in handshape variability results in case leveling, in practice first person plurals do not seem to be much used so the communicative damage of case leveling is minimal.²⁰⁹ The P-handshape variant is common for the dual and multiple inflections of the non-first persons: in the dual, as a repeat and sideways displacement of the flicking; in the multiple as an arcing movement. The same conditions pertain with respect to amplified person and the presence/nonpresence of referents as were noted in the sections on dual pronouns (section 5.3.2) and multiples (section 5.3.3), and the same solutions apply.

The plural facts just described pertain to the possessors. Portuguese, unlike English, doubly marks number on the possessive: for the possessor and for the possession (e.g. *nosso livro*/our book vs. *nossos livros* /our books). LSB may mark both the possessor and the possession. While there is no morphological plural marking on nouns,²¹⁰ I observed a signer to use

²⁰⁹ I have noted that Brazilian Portuguese-speakers tend to use a singular pronoun in contexts where I believe American English-speakers would use a plural. That is, Brazilians speak as individuals and Americans speak as part of an aggregate: e.g., ‘I moved last week,’ vs. ‘We moved last week,’ where the speaker, his/her spouse and children moved together from one shared domicile to another. This observation is in conflict with the stereotype of the American as fiercely individualistic and the Brazilian as strongly tied to the family. The observation struck a chord in discussions with Americans long time resident in Brazil. Should the observation hold for Brazilian Portuguese-speakers, it does not necessarily follow, however, that deaf Brazilians share the trait or are even aware of it in their hearing compatriots.

²¹⁰ Signs glossed CHILDREN [B_v ^v · >] (prone B-hand moves down several times while moving ipsilaterally) and THINGS [U_t < >^e] (U-hand, palm in, fingertips contralateral, moves ipsilaterally while fingers wiggle) are usually treated as lexical items but they may be better analyzed as having plural marking in the repetition and linear displacement of the hand. However, there is no singular ‘child.’ The signs BOY [l B_t x#[O~] | B_v ^v] (first part: at chin, B-hand, palm in, makes contact and closes to flat O-hand) and GIRL [c A` x^f | B_v ^v] (first part: at cheek, A-hand with thumb extended and in contact moves forward) are compounds with a classifierlike second part. The source sign for THINGS is likely the

the singular to say 'their child' in reference to the single child of two people, the dual to say 'their books' of two people who each had a book, and the multiple to say both 'your books' and 'your school' to a group of students matriculating at the same school. LSB may not consistently mark number, as Friedman (1975) claims is the case for ASL. Further research is needed to clarify this point.

Finally, there exists another area of uncertainty: exactly what is the syntactic relationship between the elements of an LSB possessive phrase? LSB possessives can be either determiners or pronouns, depending upon the syntactic slot they fill. Yet, syntactic slot is not always a straightforward matter to decide because modifiers occur both pre-nominally and post-nominally. Post-nominal possessors can be either attributive or predicative. However, the larger context of the discourse, nonmanuals, and prosodic cues such as rhythmicity serve to disambiguate among possible interpretations of a sequence.

Variability with respect to sign order of possessor and possession occurs only with pronominal possessives. Lexical possessives (presumably because they are not case-marked) obligatorily precede the possession. For example, MAE-fs CHILD means 'the mother's child,' not 'the child's mother.' LSB differs from Portuguese in this way -- a difference which caused considerable difficulty to the Portuguese-speaking LSB students.

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sign SAME [U_{v,f} ^e] (prone U-hand, fingertips forward, wiggling), a modifier and not a noun. THINGS is the second part of the compounds glossed ANIMALS [l 5_v ^x · | V_< ^{>e}] (first part: at chin, prone 5-hand makes contact twice) and FRUIT, [l C_t ^a · | V_< ^{>e}] (first part: at chin, C-hand, palm in, supinates twice), literally 'lion things' and 'apple things,' respectively. THINGS comes close to being a true plural marker in these signs because it is not a classifier and there is another sign, [G_vG_v ^{+~} ·] (two prone G-hands cross alternately and repeatedly), which means approximately 'material goods.' Yet, its very limited distribution in this function argues against that status for THINGS.

5.3.5 Alternate forms

A limited number of other handshapes may replace the G-handshape. These substitutions are not free but are subject to a variety of constraints, some grammatical, others social. They bring with them, then, nuances of meaning which overlay the semantics basic to person deixis in much the way predicted by Fillmore and Levinson. In the following sections, I examine these alternate pronominal forms.

5.3.5.1 B-handshape alternates and politeness

The most frequent alternate forms of the singulars replace the G-handshape with the B-handshape; the body coordinates remain the same. For first person, the B-handshape, palm towards the frontal plane of the signer's body, contacts center chest once or twice with the palmar surface. The second person form has the B-handshape supine with fingertips oriented away along the midline of the body. The third person form has the B-handshape supine, fingertips oriented off the midline of the body.²¹¹ No iteration occurs with second and third person forms. As mentioned in the previous section, iteration indicates emphasis. Another form emphasis takes for the first person is a forceful contact of a tensed handshape to chest. For second or third person, emphasis takes the form of a constrained transition movement with a tense and abrupt termination, also with tensed handshape. Emphatic use of the second and third person alternate pronouns is infrequent.

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²¹¹ The handshape coordinate is determined by the direction of movement of the handshape. The first and second person forms move along the midline of the body even though they differ in the part of the handshape that is salient to the movement: palm for first person and fingertips for second person. Accounting for handshape orientation in the linguistic description of a sign has sometimes seemed unsystematic since the same handshape occurs with different orientations. Handshape orientation is not a property of handshape but of the sign as a whole.

Brazilian signers avoid using the common pronouns in many conversational contexts. For this purpose there exists in LSB a variety of options, among which the B-handshape personal pronouns are just one. These forms occur in contexts where the addressee's attention is already focused on the referent. It is not, however, a simple matter of new vs. old information; politeness considerations are paramount. All three B-handshape pronouns can be used as polite forms. When the addressee's attention is already focused on a particular referent, politeness considerations may influence pronoun choice. That is, when the referent is accessible, use of the G-hand pronouns may be felt to be impolite. The G-hand pronouns may contrast with the B-hand pronouns along the lines of the distinction Fillmore (1971, 1975) made between gestural and symbolic uses. Situational factors, however, play a pivotal role in determining which form is used.

Ferreira Brito (1995:196) claimed that pointing is not socially proscribed among deaf people, as it is among hearing people; my LSB data reveal that the situation is actually more complicated. I have extensive video-recordings of two different interactional settings. The site of both is a small, private day school for deaf children in Rio de Janeiro where NC, one of the people recorded, is employed as a theater arts teacher. LSB, the sign language component of a bilingual education program, is utilized in the school as a medium of instruction. The activities recorded, although independent of the central mission of the school, are not unrelated to it.

One setting is a classroom, where one or more Deaf instructors teach LSB to a group of seven to 15 almost exclusively hearing adult non-signers. The hierarchical relationships between the instructors and the students are complex. In the educational context, the instructor is the superior vis à

vis the student, but in the larger society, the hearing person is the superior vis à vis the deaf person by virtue of strength of numbers of hearing over deaf, by the prevailing view of deafness as a pathology, and by socio-economic measures.²¹² Deaf people, either individually or as a group, are not prominent in the public eye and they have little political or economic clout even within those sectors which most crucially affect them -- such as schooling, a bastion of oralism for decades.

Despite the interest in LSB evinced by their participation in the course, these students have scant understanding of, or curiosity about, the linguistic status of LSB. Their purpose for taking the course is frequently instrumental: they intend to work professionally among the deaf as counselors, speech therapists, teachers, and the like. Such professionals, overwhelmingly hearing people, wield considerable power over deaf people -- an all too obvious fact of deaf life to both sides. Others of the students are parents of young deaf children, who are struggling with the stigma of disability in the family. Only one of the students out of a total of more than thirty maintains social relationships with deaf individuals outside the family. Finally, all three of the Deaf teachers are young adults with general education levels at or below those of their students: one has completed a secondary school program at a night-school adult education facility and the others are currently studying at the secondary level now available at INES. The deaf teachers have limited Portuguese skills. While this fact is irrelevant to the conversation-based teaching methodology of the

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²¹² In Brazil, official socio-economic indices specifically about deaf people are not compiled and there seems to be no scholarly research on the topic, but the perception was widespread among deaf people I met over the years that their life chances were restricted by deafness. Overwhelmingly, they were employed in low-paying jobs, and a number of those with professional training reported experiences of blatant discrimination in hiring on the basis of deafness. The Brazilian situation, then, is not unlike that reported for the United States (Schein & Delk 1974), but even more extreme.

LSB classes, it is viewed as a significant failure in the wider society and even among some deaf people.²¹³ There are about 30 hours of recorded material in this interactional setting.

The second interactional setting is a working group of Deaf and hearing researchers with long-term personal ties to each other and to the Deaf community. The group met weekly in the evening in the same school where the LSB classes recorded were held. Despite actual and potential tensions within the group, differences in hearing status, age, formal education, and linguistic repertoire are muted by a shared commitment to the goals of the research endeavor, which is the development of LSB teaching materials, and a consensus about roles appropriate to each of the members. Besides the members of the working group, various other deaf people familiar to the group members were recorded as they were present during meetings. Two hours of each of six meetings over a three-month timespan were recorded in this setting.

B-handshape forms for all three persons are frequently seen in the classroom setting and absent in the research group setting. This is not to imply, however, that G-handshape pronouns are infrequent in the classroom setting. The data demonstrate only that G-handshape first and second person pronouns are used between close familiars, and are less likely in other settings. The G-handshape third person pronoun is often avoided for making reference to present nonparticipants in two situations: one, when the referent is not a familiar of the signer, and two, when the signer does not wish to be overheard.

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²¹³ For a brief history of the shift in deaf consciousness from a conceptualization of the “model deaf person” as a competent speaker of Portuguese to a conceptualization of the “model deaf person” as a competent signer of LSB, see Berenz (forthcoming).

In section 5.3.1.3., I argued that, along with a number of other forms and strategies to be discussed below, the shielded third person pronoun occurs in the second situation; that is, it is a covert form. My evidence was that the form is used solely to hide the act of reference, usually from nonsigners. Here I am arguing that the polite forms are instead the B-handshape pronouns, the evidence being that they are used to make reference to nonfamiliar of the signer. They are *distance* forms in the Brown and Levinson (1987) sense that contrasts interactional styles of camaraderie, deference, and distance.

The third person B-hand pronoun encodes *audience*, in Fillmore's sense of someone other than the addressee who the signer is aware is attending to the talk; in Levinsonian terms, the form encodes *bystander(s)* and not *overhearer(s)*. The form is used for referents present in the conversational space or, in narrative space, for referents who were present at narrative time. Its use in narrative is marked, conditioned more by a claim (relevant to the current conversation) that the reported sender was being polite than by whether or not she or he had actually used the form at the time reported in the narrative. It is not used for other nonpresent referents.

A B-handshape alternate also occurs with the second-person plural where the referents can be assumed to be attending to the signer. Here there is no dual/multiple distinction. Like the common second-person multiple form, the handshape moves in a horizontal plane through neutral space from contralateral to ipsilateral -- which is to say, it crosses the midline of the signer's body. It does not occur in contexts of amplified person; the B-handshape alternate of the second person plural only encodes a plurality of addressees. There is no first person form and a third person

form occurs only in restricted contexts such as introductions, and without the dual/multiple distinction. The asymmetry in LSB politeness forms and their uses for the three persons is consistent with politeness phenomena in spoken languages (Forchheimer 1953, Ingram 1979).

In a speech act-based study of requests, Ferreira Brito (1995:159-200) claims that politeness considerations among the members of the Brazilian Deaf community are based solely on the notion of *intimacy* or *familiarity*, and that *power* differences and *social distance* play no role. The study is an analysis of deaf consultants' responses to a set of scenarios described by the researcher. Ferreira Brito concludes that deafness levels all other distinctions of social class, relative ages of interactants, and the like.

My study shows that familiarity and social distance are poles between which conversational practice moves, depending on factors like social setting and hierarchical relations between interactants. Moreover, on the basis of video-recorded naturally-occurring interaction, I am able to locate the reflexes of politeness within the grammar itself in the set of B-handshape personal pronouns.

A polite form has been described for ASL, [B [∇]], which takes the supine B-handshape moving in a smooth descent from just below the shoulder to about the waist for first person (ulnar side of the hand may be in contact with the torso), away along the midline of the body for second person (fingertips to the contralateral side), away off the midline of the body for third person.²¹⁴ It is most frequently seen in formal introductions or ironic uses that draw on the incongruity between the current conversational situation and formality (DASL, pp.23-24).

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²¹⁴ For all three persons, it is the radial or ulnar side of the hand and not the fingertips that "point."

The ASL polite form is formationally similar to the second of the two LSB signs glossed PERSON, [u 8` >] [bC ˇ].²¹⁵ The first of these, PERSON_a, means 'human being' and the second, PERSON_b, means 'embodied human being.' When accompanied by wh-question marking (brows furrowed, chin thrust forward and up, shoulders raised), PERSON_a is the interrogative pronoun, 'who' or 'whose'²¹⁶; PERSON_b also has some pronominal properties. Unlike most common nouns, it takes an adjectival modifier only predicatively and not attributively. It stands in a linguistic relation of coreference to an antecedent in a discourse like: "Here's my friend Myrna. PERSON_b is deaf."

The ASL polite form also has a sense of the 'embodied human being.' Stokoe et al (1965) note that the B-handshape pronouns contrast with the G-handshape pronouns in that they are used only to refer to persons present and in view at conversational time or such persons at narrative time, an aspect of meaning that has not been taken up in analyses of ASL personal pronouns. A gloss for the B-handshape pronouns that better reflects this condition on use is: 'I, here present'; 'you, here present; 's/he, here present.' The ASL sign PERSON, [BB ˇ],²¹⁷ is formationally and conceptually related to LSB PERSON_b but it seems to have no pronominal function, unless its use as an agentive suffix can be so considered. Neither

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²¹⁵ The first sign, PERSON_a, [u 8` >], is made by drawing the middle finger across the forehead from contralateral to ipsilateral side, with the other fingers extended and spread but not in contact with the forehead. The second sign, PERSON_b, [bC ˇ], is made by the curved thumb and index finger (other fingers curled into the palm), ulnar side down, moving downward from about eye level to mid-torso in a vertical plane in neutral space: at the midline of the body, palm in, for first person; midline of the body, palm out, for second person; off the midline for third person.

²¹⁶ Case distinctions are not encoded. A fingerspelled loansign, QUEM-fs ('who'), cannot be used as a possessive.

²¹⁷ The ASL sign PERSON, [BB ˇ], in citation form is made by the two B-handshapes radial side up, palms parallel and facing, separated by several inches, moving down from just below the face to the mid-chest.

LSB PERSON sign can be used as an agentive suffix. ASL and LSB both encode the notions of politeness and embodiment, yet they each do so differently -- as one might perhaps expect from their status as genetically related but separate languages.

5.3.5.2 Assimilated handshapes and colloquial forms

Two idioms which have their origins in sequences of a lexical sign and a possessive show handshape assimilations between their components. The sign (BE-)'POSS'-DECISION is made up of a first part, [u P_t ^x],²¹⁸ which never occurs alone, and a second part, the P-handshape possessive.²¹⁹ It is likely that the first part is the verb THINK [u G_t ^x] with an anticipatory assimilation of the handshape to the P-hand of the possessive. The compound signs are: first person [u P_t ^x | [ ] P_t ^x]; non-first persons [u P_t ^x | Ø P^b], the distinction between second and third persons being determined by movement on or off the midline (representable by [bf] for second person [b< / >] for third person). Adapting the notation to represent the sign's articulation rather than its separate components, the first person form could be rewritten as a two touch sign with a change of tab [u P_t ^{x,v,x} [ ]], where movement to the final tab position is shown as path movement downward [v]. The non-first-person forms can be rewritten as [u P_t ^{x,bf} Ø] to show the change of tab from upper face to neutral space accomplished by path movement forward [f]. The rewritten notation better conveys how the signs actually appear -- that is, as unitary forms having path movement linking two places of articulation. These signs mean, "X must think for X-

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²¹⁸ The component [u P_t ^x] is made by the P-hand, palm in, in contact by the middle fingertip with the forehead.

²¹⁹ It is difficult to characterize the syntactic relationship between the two parts of these signs. The thematic role of the pronominal is that of *experiencer* so it is not simply a possessor. Both idioms have a predicative function.

self,” where “X” is one or the other of the grammatical persons, depending on the body coordinates. The first person form can also have the meaning (BE-)EGOTISTIC, which is not limited to first person reference, e.g. with a second person pronoun before or after the sign, it is the accusation, “You think only of yourself.” When reduplicated, the sign means, “You always think only of yourself.” Similar in meaning to (BE-)’POSS’-DECISION is the second idiom (BE-)’POSS’-PROBLEM [L bD x^b>, [V]!] ,²²⁰ likely to have originated as a sequence of PROBLEM [L G x^b> .]²²¹ and the P-hand possessive.²²² Here handshake assimilation affects both the lexical part of the sign and the pronominal. The bD-handshape is likely an assimilation of the G-handshape under the influence of the P-handshape of the possessive, while the V-handshape is an assimilation from the P-handshape under the influence of the bD-handshape. This sign is used only with non-first arguments (again, the distinction between second and third being determined by movement on or off the midline).²²³

Person marking for these signs is a matter of directionality with respect to the midline of the signer’s body. The extended fingers of the P-handshape for the non-first-person forms do not point to the referent and

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²²⁰ (BE-)’POSS’-PROBLEM [L bD x^b>, [V]!] is made by the index finger of the dominant hand in contact at its ulnar side with the radial side of the index finger of the nondominant hand moving from proximal to distal phalange while pronating, then opening sharply to the V-handshape (flicking open). I notate the final handshape as a V-hand because it has extended index and middle fingers, but the spatial relation between those fingers actually looks more like a P-hand without thumb contact at the proximal phalange of the middle finger, i.e. index straight but middle finger slightly bent at the metacarpophalangeal joint.

²²¹ Articulatorily, the difference between the G-handshape and the bD-handshape is the degree of flexion of the interphalangeal joints of the middle finger. The lesser flexion of the bD-handshape anticipates the opening to the final handshape in (BE-)’POSS’-PROBLEM.

²²² The handshake change from the D-hand to the V-hand is the transition to the possessive element of the sign. The flicking likely originated as a nondistinctive phonetic detail of the transition to the P-handshape possessive. That flicking is now the sign’s most salient element.

²²³ The sign has a connotation of opprobrium, which may account for the absence of use with a first person argument. In this it is like ‘lurk’ or ‘skulk.’

only the middle finger points to the first person, sometimes without indicating first person reference. While the extended fingers of the V-handshape are oriented toward the referent, one or both of the fingers may not actually point to that referent. Furthermore, it is unlikely that for nonpresent nonparticipants the extended fingers of one of these idioms and that of a coreferential personal pronoun will hit the same punctual target. Spatial loci cannot account for coreference in these cases.

So far in this section I have treated handshape alternates motivated by the process of phonological assimilation. Besides this, considerations of articulatory ease allow for the replacement of the G-handshape by the A-handshape with extended thumb [A']. The articulatory condition which most strongly motivates A'-handshape substitution is the handshape orientation required by the position of the referent with respect to the signer, usually, a referent on the signer's ipsilateral side and approximately parallel to or behind the frontal plane of the signer's body. For this reason, the A'-handshape rarely occurs in second person pronouns or in third person references to nonpresent nonparticipants. It is most common in pronominal references to present nonparticipants. Although I cannot say categorically that A'-hand never occurs in first person pronouns, such a substitution would be very marked. I label the thumb-point pronoun a colloquial form because it typically occurs in interactional contexts of casual conversation and because it is never the form LSB consultants offer in an elicitation of personal pronouns.

5.3.6 Ambiguity, sloppy identity, nonsyntactic anaphora and LSB

Ambiguity and sloppy identity are treated by Lillo-Martin and Klima (1990) as a single issue; they do not look at the ambiguity of personal pronouns and possessives in structures that contain quantifiers, for

instance. Preliminary analysis suggests that for an LSB sequence translatable as, 'Each woman enjoys playing with her child,' interpretation of the possessive seems to be ambiguous between 'her own child' and 'the child of some woman not included in the reference of *each*.' The possibility exists that there are slight but significant differences in orientation of the handshake for the two interpretations that would render them unambiguous. As my present data set is inadequate to address this question fully, it remains open for future investigation. However, the point stands that the Lillo-Martin and Klima analysis does not address ASL sequences containing quantifiers, nor does it explicitly exclude them, yet their conclusions are stated in very general terms.

Possessives even in sequences without quantifiers are subject to multiple interpretations. In an LSB sequence translatable as, 'The women love POSS child,' there is an ambiguity between an interpretation of the possessive as being coreferential with the women and an interpretation of the possessive as being coreferential with an extrasentential antecedent.²²⁴

Even excluding quantifiers and plural noun phrases, as I pointed out in my detailed exposition of their paper (section 3.4.1.2), ASL signers' use of renaming and regrouping to keep nonparticipant referents distinct from one another is evidence that conversational practice -- and not the personal pronoun system -- provides a means to this end. To the extent that referential indices are relevant to ASL, they are relevant in just the same way as for spoken languages. This characterization applies as well to LSB.

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²²⁴ If the women are present in the conversational setting and contiguous to each other, POSS could be modulated for dual or multiple number, as appropriate. In that case, there would be no ambiguity in the interpretation of the possessive, although there may yet be in the interpretation of the possessee since it is not clear if the women have the same child or children or each has her own. This latter fact is, of course, immaterial to the issue at hand; I mention it only to recognize that the sentence is ambiguous, even when the interpretation of POSS is not.

On the basis of spoken language data, Gensler (1977) argues for a frame semantic approach to the analysis of anaphora as a way to provide a uniform treatment of all anaphora, including instances of sloppy coreference (see section 2.1.2). He suggests that all coreference can be understood contextually and that linguistic reflexes of it, where they exist, are redundant. Although the linguistic reflexes Gensler is talking about are feature specifications such as gender and number, these specifications are a motivation for the assignment of referential indices. For example, one interpretation of the sentence, “Mary greeted John as she arrived,” would assign the same referential index to *Mary* and *she* on the basis of gender and number features, while in the sentence, “Mary greeted John as he arrived,” *John* and *he* could have the same referential index on the same bases. Sign languages, could they be shown to have syntactic means (such as referential indices) to eliminate ambiguity in the use of personal pronouns, would be evidence against Gensler’s proposal.

Ferreira Brito (1995:121) argues that in an LSB sequence translatable as, ‘Paul told John that his wife fell,’ there can be no ambiguity in the interpretation of the possessive because it is signed to one side or another, each of which has already been associated with one of the lexically introduced referents. On the basis of such data, she claims that LSB differs from Portuguese in that unambiguous reference is a feature of the personal pronoun system. It is not mere chance that in Ferreira Brito’s example and in Lillo-Martin and Klima’s example²²⁵ there are only two referents. Beyond that limit, it is difficult to get examples where anaphors occur alone

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²²⁵ See section 3.4.2 for a detailed discussion of this example.

without renaming or regrouping. There are none in the naturally-occurring LSB data I am analyzing.²²⁶

I suggested (section 3.4.1) that contrasts in the side-to-side dimension may be similar to prosody in spoken languages. Alternatively, laterality may in fact be a phonemic distinction (section 4.3.2). It clearly has uses at other levels of the system.²²⁷ Both Greftegreff and Engberg-Pedersen have expressed concern about the use of laterality at the discourse level without its seeming to be distinctive at the phonological level (SLLING 9/94). As Engberg-Pedersen puts it:

In all spoken languages that I know of, inflections and derivations are expressed by phonological material that is also found in simple lexemes. Affixes may be more restricted in their use of phonological material (in spoken Danish affixes tend to include no other vowel than schwa, for instance) or may use processes such as reduplication not seen in base forms. But still the material used to express modifications is included in the material used to express base forms.

Recognizing the phonemic status of laterality would resolve this dilemma.

LSB does not encode gender, grammatical or natural, on its personal pronouns and possessives. Number agreement may pertain between the possessive and the noun it modifies and not between the possessive and its referent(s) so that in many cases these features neither confound nor clarify coreference. Therefore, test cases dependent on these features

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²²⁶ In viewing a video-recording of an ASL signer (Kegl's archival data) describing numerous individuals in three generations of an American deaf family, I observed that references to these individuals did not rely on spatial loci; pointing signs were accompanied by renaming and other lexical signs.

²²⁷ At the syntactic level, laterality provides a means of conjoining phrases and clauses; at the semantic level, it provides a means of displaying empathy with one third person referent as against a second third person referent (in Danish Sign Language and probably others); at the pragmatic level, it provides a means for setting up comparisons of entities, propositions, etc.; at the discourse level, it provides a means for moving between registers as, for instance, when a lecturer steps to the side to make a comment unrelated to the topic at hand (literally, an a-side).

cannot be called upon to confirm Gensler's proposal. Nevertheless, the LSB sentences discussed here provide good evidence for the proposal because while their interpretation is ambiguous with respect to linguistic relationships between anaphor and antecedent, ambiguities can be expected to be resolvable within the semantic frame.

5.4 Special anaphors

LSB *temporal* and *spatial anaphors* are distinct systems apart from the personal pronoun system. They are formationally similar, utilizing similar handshapes and movements, but differ in handshape orientation. For each, the active hand in the G handshape contacts the extended fingers of the base hand. The base hand of the temporal anaphors is oriented approximately parallel to the frontal plane of the signer's body; the base hand of the spatial anaphors is oriented approximately perpendicular to the frontal plane. The orientation difference is consonant with a contrast between the encoding of *temporality* in a vertical plane and the encoding of *spatiality* in a horizontal plane which affects other signs as well (AROUND-THAT-TIME, [5_< ^z •]; AROUND-THAT-PLACE, [5_b @]).

To avoid confusion, or to allay confusion already created by my choice of terms, I should explain here at the outset that the temporality of the temporal anaphors is meta-temporality; pronominal reference is temporally ordered internal to the anaphor itself and not directly with respect to the *now* of the conversation (e.g. 'the first mentioned,' 'the second mentioned,' etc.). However, a chronology of events external to the anaphor can condition use so there is more to the semantics of the forms than simple sequentiality. Even in such cases, the present moment has no privileged position in the order, as it does in matters of temporal deixis.

Likewise, the spatial anaphors rely primarily on the notion of proximity relations between the entities they refer to, and only secondarily on proximity to a deictic center established at the sender's location, as is typical of spatial deixis. These LSB anaphors give new meaning to Lyons' (1977) notion of *deictic projection*, whereby the deictic center is shifted away from the participants of the conversation.

It should be borne in mind that the central topic of this study is person deixis. Levinson (1983) observed that many linguistic forms may be categorizable in more than one deictic category. To put it the other way around, the LSB special anaphors draw on more than one deictic category in their function of maintaining coreference relations. The means by which they do this is temporality, in the one case, and spatiality in the other, yet their essential function falls within the domain of person deixis.

It was with some misgivings, due to the dissonance between the use of the notions here and the more usual understanding of temporality and spatiality as deictic phenomena, that I chose the labels *temporal anaphor* and *spatial anaphor*. Despite the misgivings, I persist in this labeling because the forms do crucially use temporality and spatiality to establish coreference relations between themselves and their antecedents. How they do so is the topic of the next two sections.

5.4.1 Temporal anaphors

The LSB temporal anaphors are a set of four related signs, none of which encode the notions *sender* or *receiver*. They do not necessarily encode a semantic notion of *person* but rather of *individuated entities*. Like the English pronoun *one*, they are third person by default; verb agreement uses the body coordinates of the third person. I treat them in this study of person deixis because their equivalents in other languages have been

included in previous influential studies of personal pronouns without regard to the significant differences between them and personal pronouns both in form and meaning. My intent is to make explicit those differences. Beyond that aim, the temporal anaphors are of interest to the study of person deixis inasmuch as they provide a means for maintaining coreference relations in connected discourse.

Unlike *one*, the temporal anaphors are both definite and specific. Instead of person, they encode sequential notions equivalent to 'the first one,' 'the second one,' up to 'the fifth one.'²²⁸ They bear a surface resemblance to gestural enumeration on the fingers, the likely source of the form. As would be expected of a linguistic item, however, they exhibit properties quite different from gesture. The temporal anaphors can make reference to present or nonpresent concrete and abstract entities, with the stipulation that the several entities referred to must be construable as members of a semantic set on an equal footing with each other. For example, in the set "my favorite things," I could include freedom (a concept), the company of friends (a proposition), long walks (events), and rich desserts (concrete objects). I could then go on to compare and contrast different members of the set. The constraint is that the signer must develop discourses about each entity in parallel fashion.

These signs are made by the dominant hand in the G-handshape making sequential contacts, fingertip to fingertip, with the nondominant

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²²⁸ The LSB temporal anaphor set encodes a maximum of five individuated entities. Beyond this maximum, ordinary number signs are used. In this regard, LSB differs from ASL which, in allowing the reversal of the base hand/active hand relationship (to be described shortly), doubles the maximum. LSB signers would understand an extension of the temporal anaphor accomplished in the way ASL does it, but for Brazilians the extension is a nonce form, as is the utilization of the gaps between the fingers (as ASL poet Patrick Graybill does in his autobiographical comments (Poetry in Motion videotape, Sign Media)). From the standpoint of LSB grammar, both extensions are interpretable clever innovations but not grammaticized.

hand held palm towards the signer's torso, fingertips oriented ipsilaterally, in one of a small set of handshapes. This set is similar to, but not identical with, the handshapes of the number systems. Even though the set of anaphor handshapes is not identical to the sets of number handshapes, the anaphor set does encode numeric values two through five in the following way (using the notation convention in section 3.4.1.2): 'two' [I M], 'three' [I M R] or [T I M] or [M R P]²²⁹, 'four' [I M R P], 'five' [T I M R P].²³⁰ The fingers may all be extended at the onset or they may open one by one from the closed handshape as the dominant hand approaches.

The nondominant hand is the tab (Stokoe's term) or the place of articulation. It is not a location in the sense of a spatial locus, as it would be in the Lillo-Martin and Klima analysis. Location is metalinguistic in that the hand is used to represent the mental space of the discourse. The positions on the nondominant hand cannot be spatial loci because they encode semantic information independent of the referential object. Lillo-Martin and Klima (1990) subsume the ASL forms corresponding to my LSB temporal anaphors in their analysis of personal pronouns. Even if spatial loci were relevant to personal pronouns, such an account of the temporal anaphors ignores the semantics of chronology which is, at least for the LSB forms, so clearly relevant to meaning. The base hand positions of the temporal anaphors are semantically much richer than mere Chomskyan referential indices.

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²²⁹ Conditions on use of the variants of 'three' will be explained below.

²³⁰ In Stokoean notation, [I M] is the V-handshape, [I M R] the W-handshape, [T I M] the 3-handshape, [M R P] approximately the F-handshape, [I M R P] the 4-handshape (a variant of the 5-handshape), [T I M R P] the 5-handshape.

The nondominant, or base, hand is the tab, much as it is for signs like WRITE, [B_{a,>} bO_f ^{rx}>],²³¹ where the B-handshape is a classifier-like element. For the temporal anaphor also, the positions on the nondominant hand are not places but entities. The close relationship between the two, as well as the distinction between them, was remarked by Lyons (1977:693).

[P]laces are not entities, though they may be hypostatized and treated as entities in particular languages.... As places are not entities, so entities are not places; but, in so far as they occupy space, entities may serve to identify the spaces they occupy.

The positions of the temporal anaphors may identify the spaces they occupy -- as in the a sequence where the verb GIVE moves among them with the meaning, "(something) was moved from the-second-of-the-set-of-four to the third-of-the-set-of-four," with the 'from' and the 'to' establishing a path linking locations as it would in "from here to there."²³² But, as Lyons cautions, this does not turn entities into places. The positions of the temporal anaphors are morphophonological elements of the sign with their origins in the classifier system, a system which represents entities and not places.

Furthermore, there is no mapping between the positions on the nondominant hand and real world locations of entities, nor is there any interplay between these positions and the vectors or points that have been proposed to be associated with the personal pronouns. The only sense in which location plays a role is as an epiphenomenon; given that the signs are articulated in space, they must be located somewhere.

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²³¹ The LSB sign WRITE [B_{a,>} bO_f ^{rx}>] is made by the thumb and index finger of the dominant hand touching at the fingertips, other fingers curled into the palm, moving up and down in short strokes across and in contact with the palm of the supinated nondominant hand in the B-handshape, fingertips facing ipsilaterally.

²³² See section 3.4.1.2 for additional analysis of this type of structure.

In conversation, there may be an interplay between the temporal anaphor and a token of one of the personal pronouns if a coreference relationship is established, but this interplay is a matter of use. For example, in explaining who will work on a project, the signer could say, “The-second-of-the-set-of-five is me,” or “You are the-first-of-the-set-of-three.” In such cases, the pronominal represented by the string of English words connected by hyphens and the personal pronoun corefer, but each refers on the basis of different semantic notions and they do so by means of distinct forms.

These hyphenated strings are complicated glosses from an English perspective, but they are true to the meaning of the sign. It has been noted that the translation of a sign’s meaning into English sometimes requires strings of words and vice versa. (The English word *neither* has no single lexeme equivalent in LSB.) I give these glosses to highlight the fact that these signs are not related to the personal pronouns on the level of form or of meaning. Translation of these forms into spoken language personal pronouns (as is commonly done), while adequate to the task of conveying communicative intent, misleads linguistic analysis.

As mentioned, the set of handshapes utilized for the nondominant hand is related to a set of classifiers for referring to long, narrow objects. Handshapes [I M], [I M R], [I M R P] of the temporal anaphor set are found among the classifiers; these handshapes also occur in the number sets. Numerality is, of course, the unifying theme. Significant differences between the temporal anaphor set and the classifier set are that the latter have the orientation of the fingertips upward with palm orientation variable, [I M R P] can mean four or more, and there is a semantic association of the ventral and dorsal sides of the fingers with fronts and

backs respectively of referential objects. I pointed out (section 4.2.2.1) that for some signs, the nondominant hand is a morpheme that can be separated out from one sign to be utilized as a classifier for another sign. While there is a motivated relationship between the handshapes of the set of temporal anaphors and those of the classifier system, the relationship is not close enough for the base hand of a temporal anaphor to become a classifier in the following sign.

The temporal anaphor forms serve to establish a chronology of referents based on the order in which they are introduced into the discourse. If that order is relevant only to the discourse itself, either extreme position can occur initially. However, when the ulnar-most position is first, the orientation of the nondominant hand is supinated rather than the canonical radial side up. An exception to this is [M R P], which cannot begin with M but only with P, yet is performed with either orientation. [T I M R P] also exhibits restrictions.

If the order begins with T, the orientation of the nondominant hand is palm toward the signer; if the order begins with P, orientation is palm up. When the total number of entities is known at the outset, as indicated by the fingers already being outstretched rather than opening as the dominant hand approaches, there is a preference for T to be the initial position. When the total number of entities is not known at the outset, as when a list of entities is generated on the spot rather than pre-established ("What are the reasons we did that exercise?" "What places around the country have you already visited?"), the signer, having started off with the index finger of the base hand radial side up, may pronate the base hand to indicate 'the fifth one,' putting the thumb at or below the height of the positions already established in order. In this way, the signer avoids the

contradiction between this use of the temporal anaphor and the number signs.²³³

However, if the order is relevant outside the discourse -- as, for example, birth order in narratives about family or listing of presidential succession in an organization, then the initial position is the one closest to the radial side of the hand. It is only in situations like the latter that [T I M] rather than [I M R] is used to indicate three positions.²³⁴ Although the semantics of this variation are not entirely worked out, it is clear that T-initial sequences are most strongly associated with immutability of the order. In all cases, for the first pass through the order, each position indicated must be contiguous to the previous one.

Referents are introduced by proper name (namesign or fingerspelled spoken-language name), definite description, or deictic pronoun. As each is so identified, that referent is associated with one of the positions on the base hand as the active hand contacts it. Subsequently, active hand contacts to these positions alone suffice to identify the referent. The

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²³³ The signs for counting 1 and 2 differ from signs for indicating the equivalent number of entities. For counting, the number 1 is the extended thumb and the number 2 is the extended thumb and index finger, both held palm towards the torso. For indicating the number of entities, a single entity is indicated by the extended index finger and two entities by the extended index and middle fingers, both held fingertips up. Palm orientation appears to be variable for the second set.

²³⁴ Even in these situations, I am not convinced that [T I M] is core LSB and not a borrowing from ASL, "ratified" by the native forms for 1 and 2 in the set for representing Arabic numerals. The only other sign I have found in LSB with the [T I M] handshape is BIRD-FEET. (HORSE uses these three fingers but the index and middle fingers are touching not spread. Another variant of HORSE uses only the index and middle fingers. Thus, the first variant is better analyzed as the U-handshape with thumb extension.) Evidence that [I M R], which is found both in the set for representing entities and the one for representing Arabic numerals, is the native handshape is found in a set of three signs derived from the first three handshapes of the Arabic numerals set. These signs rank the professional abilities of athletes individually or collectively as a team: EXPERT, INTERMEDIATE, AMATEUR. All have the nondominant hand in the S-handshape palm down with the dominant hand in the appropriate number sign traversing the dorsal side of the nondominant hand from the radial side to the ulnar and back with an abrupt movement. However, since the status of [T I M] as native or borrowed is not relevant to the linguistic analysis of the temporal anaphor set, I include it here with this caveat.

positions are available to attribute other information like age, fingerspelled name, or namesign if it is a one-handed sign normally performed in neutral space. Certain verb signs can move among the extended fingers (see section 3.4.1.2).

Subgroupings of the referents can be indicated in a number of ways. The active hand can grasp contiguous fingers to make some attribution unique to the referents associated with those positions. The B-handshape can separate I and P from M and R: to predicate something about the referents associated with I and P, the ventral side of the B-handshape contacts the dorsal sides of I and P; to predicate something about the referents associated with M and R, the ventral side of the B-handshape contacts the ventral sides of M and R. The G-handshape can move across contiguous positions (three or more) to create a subgroup of those positions. The sign TODOS-fs ('all') can circle in front of the nondominant hand to encompass all referents.

The notion of temporality encoded in the temporal anaphors is not deictic because it does not take the moment of the speech act as its point of departure. Instead, their claim to deicticity rests, perhaps precariously, on their anaphoricity. They are hybrids and elusive of classification. To my knowledge, more has been reported here than has ever been said before about such forms in any sign language. More yet remains to be discovered, of course.

5.4.2 Spatial anaphors

Although the spatial anaphor set resembles the temporal anaphor set in that it has the nondominant hand as a base with the dominant hand in the G-handshape contacting positions on the base, and in that full interpretation of its forms depends upon a linguistic relationship of

coreference with an antecedent, there are important differences on the levels of both form and meaning.

On the level of form, the nondominant hand of the spatial anaphor set is not variable but is always the 5-hand. Here, the number of extended fingers does not correspond to five referents; it only indicates an aggregation. Typically there are just two referents who stand in a relationship to each other of *figure* and *ground*. The signer introduces the first referent who serves as the ground by definite description, fingerspelled spoken-language name, or namesign. Then the G-handshape contacting a position on the base hand establishes a coreference relationship between this antecedent and the spatial anaphor. Next the signer locates the second referent as to his or her proximity to the ground by touching contiguous positions on the base hand until coming to rest at the position which represents the figure as a certain number of people over from the ground -- that is, 'one-over-to-the-far/near-side-of-the-ground-from-us,' up to 'four-over-to-the-far/near-side-of-the-ground-from-us.'

There is regional variation in the orientation of the base hand: in the Rio de Janeiro dialect, the base hand is prone and the active hand makes contact on the dorsal side of the fingers; in the Recife dialect, the base hand is supine and the active hand makes contact at the metacarpophalangeal joints. 'Far' in the Rio dialect would move toward the radial side of the hand, while in the Recife dialect that would be 'near.' (In the Porto Alegre dialect, I have been told, the form does not exist and I was unable to pursue the issue with other consultants.²³⁵) It is the near/far aspect of meaning

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²³⁵ An explanation for the absence of the spatial anaphor in the Porto Alegre dialect is the influence of ASL in the region through the agency of Concórdia, a prestigious deaf school, with its American-trained faculty and staff (see section 1.3). ASL does not have the spatial anaphor.

that takes sender's position (or participants' position) as the deictic center. Thus, the spatial anaphor has a form-internal ground -- the first referent indicated -- and a form-external ground in the persons of the conversation. On the basis of the latter, the spatial anaphors are also spatial deictics.

The spatial anaphor set is reputed to have its origins in a representation of the layout of a team on the soccer field. Given the Brazilian mania for the sport,²³⁶ it is not surprising that talk about it would be pervasive enough that a special linguistic form emerged for its description, and not surprising that this form eventually came into a more general use.²³⁷

On the level of meaning, the spatial anaphor set is used only to refer to people, although it does not encode notions of sender or recipient, the persons of the discourse.²³⁸ While its semantics necessarily include person in the ordinary sense, it cannot be said to represent the embodied human being, as can Kegl's body pronoun, so that basis for attributing grammatical person is lacking. Moreover, the spatial anaphor set has no close formal relationship with the personal pronoun set, as does the shielded third person pronoun.

The referents of the spatial anaphor must be present and not attending to the talk; thus, it encodes Levinson's category *overhearers*.

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²³⁶ If the reader is among the majority of Americans who missed the World Cup 1994 championship games even though they were played in various locations throughout the United States, let me assure you that it is the rare Brazilian who didn't find a way to follow them virtually play by play. Among deaf Brazilians, then, a form like the spatial anaphor is not merely likely to emerge, it almost assuredly will.

²³⁷ I owe this "etymology" to Ziv (Antônio) Cheriti, the native Brazilian signer and avid soccer fan who first introduced me to its use and later provided this history.

²³⁸ It is possible that the sender or the recipient -- singly or jointly -- could provide the form-internal ground as well as the form-external ground. As with the set of temporal anaphors, in a sign sequence that has a personal pronoun associated with a spatial anaphor, the two coreferential pronouns are different forms that use different strategies to make reference. They are, therefore, of different grammatical categories.

However, like the shielded third person pronoun, a spatial anaphor is employed as much to hide the act of reference from other nonparticipants as it is to hide it from the person(s) to whom it refers and it might be used even when it is unlikely that the person(s) to whom it refers could overhear the conversation. The first person pronoun refers to the sender, but a spatial anaphor does not necessarily refer to overhearers.

The possibility must be considered that the LSB spatial anaphor set is an instance not of person deixis but of social deixis. Fillmore (1975) defines social deixis in terms of the impact of realities of the social situation on aspects of linguistic form. Fearing that social deixis will stray too far into sociolinguistics, Levinson narrows the definition down by stipulating that the impact must result in specific grammaticizations. "Social realities" are kinship, social status, sex of interactants, and the like. The spatial anaphors are not concerned with the social persons of those present in the conversational setting but specifically with the interactional relationships among those present with respect to the conversation.

Levinson (1983:68-69) argues that person deixis should be conceived more broadly to include interactionally-relevant roles in addition to those that are specifically encoded in the grammatical categories of person, to the extent that those roles are grammaticized. Overhearer is one of the roles he offers as a candidate for this more comprehensive category of person deixis. Given that a concern with overhearers is crucial to the LSB spatial anaphors, they are a clear case of the grammaticization of that interactionally-relevant role. They are, on that account, an example of person deixis although they are not personal pronouns.

The motivation for use of the spatial anaphors, like that of the shielded third person pronoun, is not politeness but privacy. Politeness

considerations give rise to the use not of the spatial anaphors but of certain classifiers. When a signer wants to identify a nonparticipant standing among a group of people, she or he uses the 4-handshape, fingertips upright, as a base hand with the ventral side of the fingertips of the dominant hand in the B-handshape making contact along the side of one or the other of the four fingers. Like the spatial anaphors, this deictic use of the classifiers is specific to the representation of people. If the signer wanted to indicate nonhuman long, narrow objects, she or he would use other classifiers.

In section 5.3.5.1 I argued that the B-handshape alternate of the third person pronoun encodes Levinson's notion of *bystanders* because it is used for nonparticipants who may be attending to the talk. In the case of the B-handshape alternates, it is not simply that they could observe the signing activity but that they are positioned vis à vis the participants in such a way that they could themselves move into a participant role. Although signers can understand and be understood at considerable distances, there is a shorter range within which conversation normally takes place. In contrast to that, the classifier use described here is often employed in conversational settings where the referents are beyond the range of normal conversational interaction and the assumption is that they are not attending to the talk, although of course all parties -- participants and nonparticipants -- may be visible to each other.

As I argued for the spatial anaphor, the use of the classifier is not sensitive to the referents alone but to any nonparticipants who may be attending to the conversation.²³⁹ On the same grounds, it could be argued

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²³⁹ Recall that Levinson (1983) mentions the use of special vocabulary among the Dyirbal in the presence of certain kinsmen. Although Levinson says that the kinsmen need not be addressees, he does not specify whether -- if not addressees -- they must be referents. If they

that these classifiers encode the notion of bystanders, forming a contrast with the spatial anaphor in covering the audience categories of overhearers and bystanders.

There is, however, a important difference between the spatial anaphors and this use of the classifiers. The origin of the spatial anaphors in a device used to describe soccer plays, if it is more than folk etymology, is not well-known among LSB signers who use the form for person deixis. Presumably, then, they do not use the spatial anaphors nondeictically nor in deictic projection. This is not true of the classifiers; their primary use is nondeictic. The classifiers are, as Fillmore says (1982:39), *deictic by default* in just those uses where their interpretation relies on the conversational setting.

Despite the similarities between the classifiers and the spatial anaphors, only the latter can be seen to have grammaticized an interactionally-relevant role and thus merit inclusion in the category of person deixis. In this the spatial anaphor differs from the temporal anaphor as well, since the latter does not encode distinctions relevant to interactional roles.

5.5 Pronominal function of phonologically reduced nominals and namesigns

In discourse which has repeated mention of the same referents, nominals often accompany third person pronouns; in narratives, nominals accompany role shift, as the following example, taken from chapter 4 and repeated here, shows.

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need not be referents either, then this practice is conditioned in just the way I am proposing for this use of the LSB classifier.

already been established by means of a definite description or a proper name. (E.g. “My next door neighbor constantly plays his music too loud. The guy shows no consideration for anyone else.” or “Paul constantly plays his music too loud. The guy shows no consideration for anyone else.”) The difference is that the LSB practice uses a phonologically reduced form of the nominal and not a semantically vague term.

Senghas (1995) observed that Nicaraguan signers use what she thought may be a novel rhetorical device, the *deverbal anaphor*. She described the deverbal anaphor as “a reduced, truncated form of a recently-signed verb ... [whose function is] to refer back to the referent in the narrative that last served as the most salient argument (usually the subject) of that verb.” (p.139) Her data come from signers’ retellings of the story of an animated, silent cartoon where the characters’ names are unknown so that names are not available to the story-tellers as a means of making reference and the characters’ physical appearances may not have sufficient detail to provide a ready resource for definite descriptions such as those that are input to phonologically reduced nominals.

Whether or not contexts where action is more salient than appearance are a conditioning factor,²⁴⁰ the conceptual similarity between the deverbal anaphor and the phonologically reduced nominal is remarkable. Perhaps these innovations are not so unique as they appeared to be when Senghas and I independently recognized them in the respective sign languages. The phonologically reduced nominal, however, is not subject to linguistic constraints on what may serve as its antecedent, as is the deverbal anaphor.

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²⁴⁰ In a viewing of other data from the Nicaraguan Sign Language Project archive, I noticed what may be an instance of the use of a phonologically reduced nominal.

The process of phonological reduction central to both the Brazilian and the Nicaraguan practices is not so far afield from the process reported by Klima and Bellugi (1979:16-17) for several American signers performing a story-telling task. In the absence of a conventional sign for 'straitjacket,' the signers initially produced elaborate and varied pantomime, but with repeated mention each signer's sequence became more abbreviated until "the final representation resembles the rhythmic properties of an ASL compound sign." Nor is this process limited to languages in the visual-gestural modality. Clark and Wilkes-Gibbs (1986) report intriguingly parallel results for a psycholinguistic experiment in which pairs of English-speaking subjects who did not share visual field produced increasingly reduced definite descriptions over repeated runs through a series of depictions of abstract shapes. The examples included in their article show reduction in the complexity of the description, as well as the dropping of discourse markers (*okay, or something*) and function words (*the, that*). Since the examples are rendered in ordinary English orthography, the reader cannot discern whether or not any alterations occurred in pronunciation.²⁴¹ Even without that data, we can conclude that Nicaraguan and Brazilian signers are engaging in a conversational practice that is not unique to them.

In fact, Clark and Wilkes-Gibbs' discussion of the bases for reference shows that these signers' practices are well within the confines of the customary. More than that, I draw on their discussion to elucidate the

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²⁴¹ An example of the strategy Clark and Wilkes-Gibbs call *simplifying* shows what might be considered phonological reduction in the use of copular contractions. The subject used contractions in the initial multi-clausal descriptions. Then, in intermediary turns, which show syntactic simplification, she or he used the full form, until, in the final turn, the contraction reappeared. There seems to be an interplay between syntactic simplification and phonological reduction.

difference between the Nicaraguan and Brazilian practices. The authors point out (p.30),

Most objects have both *permanent* or enduring properties, such as shape, color, and personal identity, and *temporary* properties, such as location, orientation, and time of first notice.

These two bases underlie referential practice. I would say that the phonologically reduced nominal exemplifies the first, utilizing (relatively) permanent properties, and the deverbal anaphor exemplifies the second, utilizing temporary properties -- albeit not precisely those identified by Clark and Wilkes-Gibbs.

While not unique, it is nonetheless unequivocal that the process reported by Klima and Bellugi and Clark and Wilkes-Gibbs is conventionalized in the deverbal anaphor and the phonologically reduced nominal to a much greater degree than in the spontaneous creations of the ASL signers and the English speakers. Rather than a stepwise reduction, the Nicaraguans and the Brazilians move directly to the reduced form after the first articulation of the input sequence. Although the output may be novel, the process is so routine that signers can expect their interlocutors to make the jump between the full form and the reduced form without intermediary phases.

The phonologically reduced nominal is related to another kind of substitution common to the conversational practice of Brazilian signers. Because the visual signal is so readily discernible in the setting even to those not included in a particular conversation, LSB signers invent nonce forms for namesigns of nonparticipant referents so as to make reference opaque to possible overhearers. The forms are typically more centralized in the signing space, articulated on or close to the body, and often show

phonological reduction.²⁴² For example, a namesign which has the fingertip of the X-handshape (index finger bent at interphalangeal joints) in contact with the mid-cheek and twisting may become the sign FRIDAY, made by the radial-most side of the X-handshape, palm toward the signer, brushing low on the cheek just to the side of the mouth. Here the substituted sign is more compact than the real namesign. The changed features make the sign less salient in the signing stream, in keeping with the motivation to hide the visible.²⁴³ In contrast to the shielded third person pronoun and the spatial anaphor, which hide the act of reference from nonsigners, the intent of this practice is to hide the act of reference from signers.

Although names and definite descriptions are the most frequent input to substitution and phonological reduction, some signers employ the practice more generally across their turns at talk. Given the fact that there is no small, closed set of phonologically reduced nominals, I make no claim that these forms are grammaticized. At most, these are nondeictic expressions in deictic use. This is a conversational practice in which audience is a discourse-level category.

Even without phonological reduction, LSB namesigns seem to have a pronoun-like function. Brazilian personal names tend to be long: such as, João Henrique, Ana Regina, José Airton, Tibiriçá; deaf Brazilians usually

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²⁴² These features also pertain to the shielded third person pronoun and to the practice of referring to a nonparticipant positioned behind the addresser by a third person pronoun which has the fingertip of the G-handshape contacting the upper torso off the midline of the body (and without intersecting gaze). Sometimes the addresser will even shift his or her torso to position the referent behind in order to use the torso as a shield. In these cases as well, the intent is to obscure the signal.

²⁴³ LSB signers also substitute formationally unrelated signs by associating the real namesign with the substitute in a single act of reference and then using the substitute throughout the remainder of the discourse. These cases do not so readily lend themselves to comparisons of formational features.

introduce themselves by fingerspelling their spoken language name, followed by their namesign. They do not use fingerspellings of spoken language names for their namesigns, as Americans do; *Ana Regina* does not become ANA-fs, nor *Tibiriçá* TIBI-fs. The closest connection between Portuguese and LSB is the use of the manual alphabet equivalent to the initial of the spoken-language name as the handshape of the namesign, and this is rare. The spoken language name, as the proper or public name, and the namesign, as the in-group name, are kept separate.

Frequently in discourse, repeated mentions of a referent take the form of repetitions of the namesign. This is especially true if the referent is attending to the talk, as either the addressee or a nonparticipant. For example, if a signer is reporting a conversation he heard about the referent, rather than using a pronominal, he will repeat the namesign. It is not clear whether this usage is replicating that of the reported conversation or responding to the conditions of the current conversation. It is also not clear whether the practice occurs in discourse other than reported conversation. The several times I observed it were in that context. It may be that keeping reference straight in reported conversations is more complex than in the current conversation, given that there are likely to be multiple third person referents and shifts between the current conversation and the reported conversation. This level of complexity may warrant the use of namesigns where in ordinary conversation pronouns would suffice.

One more use of namesigns I observed was as vocatives. Although vocatives are not personal pronouns, they fit into Levinson's expanded category of person deixis. It has been said that signers do not use namesigns vocatively (Ferreira Brito 1995:181), but this generalization is too broad. As noted in my discussion of the vocative use of the second person

pronoun (section 5.3.1.2), Levinson divides vocatives into *summonses* and *addresses*. A Brazilian signer may use a namesign as an address in a situation where he can assume that the intended addressee is attending to the talk but is among several possible addressees. Several times during the months I was video-recording, a signer, knowing I was monitoring the talk through the camera's lens, used my namesign as an address. If that use seems too specific to support my claim, consider the following use of a nominal as an address. At a conference where I was standing in a cluster of people on one side of the meeting area, a friend on the other side signed, "American, how are you?" Namesigns and other nominals cannot be used to get the addressee's attention, in the way that calling out someone's name does. Summonses come in the form of second person pronouns and special purpose devices for attention-getting (including but not limited to shoulder-tapping, hand-waving, foot-stomping, and table-pounding).

The widespread use of phonologically reduced nominals and namesigns among Brazilian signers is not due to an absence of spatial syntax in LSB. By *spatial syntax* I mean personal pronouns and verb agreement, that is, those linguistic elements which use the body coordinates. These devices are available to the LSB signer and their use is ubiquitous. Neither is it a matter of late acquisition signers being unable to master the spatialized forms; nonspatialized forms are employed even by fluent native, essentially monolingual signers. Rather it is the socio-cultural context that influences choice among devices grammatical and conversational for maintaining coreference relations in connected discourse.

In this chapter, I have described in considerable detail the LSB grammatical forms and conversational practices which enable Brazilian signers to carry out the crucial communicative task of deictic person reference. I have attempted to be both accurate and thorough in my descriptions. However, this is yet a work in progress. To date, the domain of deictic person reference has been little explored in LSB. I hope this work will contribute to a greater understanding of the topic and stimulate additional study that may elaborate or override the current work. Still, the level of description provided here is sufficient to support the grammaticization a three-term personal pronoun system which encodes singular, dual, and multiple number, as well as the present/nonpresent parameter. I have also shown that there are grammatical and conversational reflexes of formality and that these differ from the grammatical and conversational reflexes the purpose of which is to maintain the privacy of signed conversations. I will consider some of the further consequences for linguistic theory in the next and final chapter of this work.

6. Implications of findings from sign language research for theories of deixis

After briefly introducing in chapter 1 the sign language linguistic research enterprise, the Brazilian Deaf community and its language, and the analytic problem pronominal reference has posed, I laid out in chapter 2 the central notions relevant to the semantic domain of *deixis*, with a particular focus on *person*. In chapters 3 and 4, I provided detailed examinations of several of the more important analyses of deictic person reference in sign languages. I also proposed that the body coordinates model accounts for the data better than previous analyses. This model may be useful for sign languages in general. My analysis resolved a long-standing anomaly with respect to the “mismatch” between cultural values of the American Deaf community -- specifically, the precedence of the group over the individual -- and ASL’s purported failure to grammaticize a second person pronoun. In chapter 5 I described the LSB grammatical forms and conversational practices related to deictic person reference and coreference. Now, in chapter 6, I turn to a consideration of the contributions of my study and of other linguistic analyses of sign languages to theories of deixis specifically and to linguistics generally.

The single most obvious contribution made by analyses of sign languages to linguistics as a field is, of course, typological breadth. Sign language researchers are always concerned with *modality effects*, by which is meant influences on grammar and practice attributable to the visual-gestural communication channel itself. They contrast these relatively superficial effects with the possibility of deeper effects: for example, significant cognitive differences between signers and speakers in language processing; significant

differences in conversational organization; or significant differences in social structure reflected in linguistic phenomena.

Research shows higher level cognitive processes to be strikingly similar in signed and spoken discourse (Coulter 1993; Klima & Bellugi 1979). Shared visual field is clearly more important to conversational organization in the visual-gestural channel than in the auditory-vocal channel (see the discussion in section 4.2.1). However, a comparison of sign languages with other unwritten languages may reveal that it is the experience of language usage at a remove that has led to changes in grammar and practice in many modern spoken languages. It is conceivable that a writing system for sign languages in widespread use could lead to some of the same changes. Among studies of social structure based on language data is the work of Massone and Johnson (1991). They argue that kinship terms provide evidence that the culture of the Argentine Deaf community differs from that of the Argentine majority culture on the basis of the fact that Argentine Sign Language kinship terms do not encode the same familial relationships as do Argentine Spanish kinship terms.

In contrast to the concern sign language linguists have consistently shown in developing a cross-modal perspective, linguistics in general remains overwhelmingly, yet unself-reflectively, spoken language linguistics. Linguistic universals are posited frequently (even typically) solely on the basis of spoken language data. As theorists, we must consider these putative universals to be simply working hypotheses until such a time as a sampling of sign language data supports or refutes them. Unfortunately, many students of deixis continue to be ignorant of work on sign languages relevant to their particular focuses of interest.

Ahlgren's (1990) claim that Swedish Sign Language is a counter-example to a linguistic universal proposed by both Benveniste (1971) and Lyons (1977) -- that all natural languages grammaticize the conversational roles of *sender* and *receiver* -- passed nearly unnoticed by scholars in the general field. Similar to Ahlgren's claim in that the semantic notion of person plays no part, Lillo-Martin and Klima's (1990) "personless" analysis of ASL pronominal reference is little known outside the sign language research community. The same nonresponse met Meier's (1990) claim that ASL grammaticizes only the role of sender. Yet each of these is a highly provocative and quite radical departure from expectations based on spoken language data.

Sign languages are a test of linguistic methodology with respect to deictic categories, given the formational and functional similarities between nonlinguistic pointing and pronoun signs. The difference in the communicative modalities of spoken languages and sign languages always allows for the possibility that significant differences in the structure of linguistic systems in the two modalities may be found. The analyses reviewed in chapters 3 and 4 lead to the conclusion that sign languages have pronouns but that they treat pronominal reference quite differently than do spoken languages. Perhaps the differences are due to space being implicit in spoken languages but explicit in sign languages, an explanation Padden (1990:118) considers. However, Padden seems to quickly reject that explanation in favor of the alternative: that is, that space is only epiphenomenal in sign languages and that theoretical constructs already in use to explain deictic phenomena in spoken languages are sufficient to explain the phenomena in sign languages (see section 3.4.1.1).

On the basis of traditional linguistic analysis of structural oppositions of form and function, I have shown that ASL and LSB have personal pronouns distinct from demonstrative adverbs, and set-internal person contrasts within the personal pronoun category equivalent to those of spoken languages. Given the seeming indifference of the broader linguistic community to the findings of sign language research, my analysis, which repositions the ASL personal pronoun system within the range of such systems attested in spoken languages, will have returned the prodigal to the fold before he was ever missed.

The most striking fact about deictic phenomena in sign languages may turn out to be the lack of significant modality effects. For example, I claimed that LSB encodes both 'here' deixis and 'I' deixis. To support my claim, I adapted to the visual medium Bühler's (1982) perceptual criteria for distinguishing the two. I argued that Benveniste's (1971) claim that the 'you' is dependent on the 'I' applies as well to ASL and LSB as to spoken languages and, further, that Fillmore's (1971) insight that the two personal pronouns can be characterized as, respectively, the proximal and distal members of a set is also borne out in ASL and LSB. I suggested that Bühler's (1982) and Lyons' (1977) hypotheses of demonstrative origins for the third person pronoun is likely to hold for LSB, given the conceptual and formational similarities between the two types of pronouns. The third person anaphor can be seen as one extreme of a graded progression of which the other extreme is nonlinguistic deictic pointing, with third person deictics situated between the two extremes. I showed that Benveniste's (1971) notion of *amplified person* is grammaticized in LSB pronominal plurals; LSB first person plurals can only encode amplified person and LSB third person plurals can only encode like entities. The first plural fact is evidence of the

first/nonfirst distinction, as Benveniste says, and the second is evidence of the participant/nonparticipant distinction, as Silverstein (1976) says.

Another LSB pluralization fact recalls the distinction Silverstein makes between the summing up of what he terms *semantically established entities* -- i.e. senders and receivers -- and pluralization accomplished through the rules of anaphora -- i.e. with respect to nonparticipants. I pointed out in my discussion of Silverstein (see section 2.4) that a nonparticipant referent could also be semantically-established. (I also pointed out that *contextually-established* was a better term than *semantically-established* for the distinction Silverstein was making.) Although Silverstein's distinction could not be maintained, the related distinction I found in LSB plurals is with respect to the summing up of present or nonpresent entities. Only the first person plural exclusive allows these two types of entities to be combined, additional evidence of the first/nonfirst distinction.

Besides the issue of the configuration of personal pronoun systems, sign language research can contribute to our understanding of other important areas. In my review of the central notions of deixis, I discussed a number of oppositions between sets of terms and their commonly-accepted meanings, among these *deixis* vs. *indexicality*, *deixis* vs. *anaphora*, and *gestural* vs. *symbolic* uses of deictic words. Sign language data contribute to our understanding of all of these.

With respect to the contrast between the concepts *deixis* and *indexicality* -- that is, that deixis involves grammatical aspects of language and indexicality sees language as social action -- we can say that LSB grammaticizes the notion of social asymmetries among referents. The common G-hand personal pronouns contrast with the polite B-hand personal pronouns and the shielded third person pronoun, which is not a polite form

but a covert form. The use of either a B-hand pronoun or a shielded third person pronoun is an index of a social relation of *distance*. The classifier for 'long, narrow objects' does not encode a notion of social asymmetries among referents. However, its use to refer to nonparticipants can index a social relation of distance.

The grammaticization of covert forms -- the shielded third person pronoun and the spatial anaphor -- may be unique to languages in the visual-gestural modality, a consequence of a conflict between the need to make one's communications intelligible to the addressee and a desire to keep one's communications from being intercepted by onlookers. "Whispering" in sign languages must often be carried out in plain view (see 5.5 for a related discussion).

With respect to *deixis* and *anaphora*, Levinson (1983) employs the criterion of basic use to determine whether a term is a deictic or an anaphor. On the grounds that all referents are treated as present in the environment, Liddell (1994, 1995) argues that ASL pronominal reference is solely deictic. I pointed out (in section 3.3.1) that reference to present entities could also rely on the syntactic relationship of coreference between a pronoun and an antecedent. Pronominal reference to nonpresent entities obligatorily takes an antecedent, but even when the referent is physically present, the signer typically uses a nominal to first identify the referent, as example (6.1) shows.

(6.1) _____ Q

A: KNOW-OF MAN THERE

nodding

B: SURE NELSON

_____ Q
A: KNOW-ABOUT PRO-3 TEACH SIGN-LANGUAGE INES FENEIS CES_{-fs}

_____ Q
B: GOOD TEACHER PRO-3

emphatic

A: CLARO_{-fs}

A: "Do you know that man there? B: "Sure. Nelson." A: "Do you know that he teaches sign language at INES, FENEIS, and C-E-S?" B: "Is he a good teacher?" A: "Of course!"²⁴⁴

To introduce a present referent into the discourse simply with 'See him?' or 'See there?' would be as vague in LSB as it is in English. My observations of LSB conversational practice lead me to conclude that the basic use of the third person pronoun is anaphoric. Under the criterion of basic use, then, the LSB third person pronoun is an anaphor.

This conclusion may be unexpected, since face-to-face communication often privileges the use of deictics over anaphors. One explanation is that the primary communicative task the signer engages in is the effort to keep the addressee's attention on himself. It would not serve this end if the signer were too often drawing the addressee's attention toward other objects in the environment and away from himself. Speakers can afford to direct their addressees' visual attention away, since -- given the auditory-vocal linguistic channel -- the conversation can continue without visual attention on the speaker. Signers do not have that luxury. To reduce the time necessary for the addressee to locate the referent, the signer provides appropriate

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²⁴⁴ LSB, like Portuguese, distinguishes two kinds of 'knowing,' which I have tried to capture with the se rather awkward glosses: KNOW-OF, [l 4^x], at the lower face, the 4-hand makes contact; KNOW-ABOUT, [c B^x], at the temple, the B-hand makes contact.

descriptive information. Following the addressee's successful identification of the referent, coreference usually relies on third person anaphors.

LSB first and second pronouns, like all such pronouns, are deictic in their basic use. However, the use of impersonal 'you,' which Levinson labels non-deictic, is also found with the LSB second person pronoun. For example, an LSB instructor giving his students guidelines for studying fingerspelled loansigns from the list he had just distributed signed the following.

(6.2) HOUSE YOU READ READ PRACTICE PRACTICE MEMORIZE
'At home you read and read, practice and practice, until you memorize them.'

He did not sign a second person multiple, although he was addressing the whole group. In fact, the sequence in context seemed not so much an order or a request as a reflection on how best to approach the learning task, as in "One reads and practices." Nondeictic use shows that LSB personal pronouns combine symbol and index as Jakobson (1957) predicts.

Fillmore (1971, 1975) distinguishes *gestural* and *symbolic* uses of pronouns. A gestural use of LSB personal pronouns would require emphasis in the form of either iteration or a more constrained performance of the sign. Only in context would it be clear if the use were gestural or emphatic. LSB personal pronouns, particularly first and second person, are more often used symbolically than gesturally.

Fillmore's discussion of these uses includes examples where the (spoken) word and the (vocal) gesture are in the same communicative modality. This convergence of lexeme and gesture is the norm in sign languages. Liddell (1994, 1995, 1996) has made a start at trying to tease the two apart. However, the boundary between lexeme and gesture co-articulated in the same communicative channel is difficult to delineate.

On the level of discourse, reference shift in sign languages accomplishes what Lyons calls *deictic projection*. LSB has the means to narrate events either from the point of view of the current conversation or assuming a point of view internal to the narrative. Although signers can relate events without it, they typically prefer the shift. This sign language device is similar to use of the historic present in spoken languages in that it is a more vivid kind of story-telling because events are related as if they were currently unfolding.

Sign language grammars and conversational practices will be similar in many respects to those found in spoken languages, since the signer and the speaker, as embodied beings, share more design features than not. Still, a number of important divergences are to be expected due to differences in perceptual center and communicative modality, and to the consequences of these for social and cultural behaviors of visual-centered perception and communication. It goes without saying that the differences are interesting; what is perhaps less well-recognized is that the similarities are so as well, and perhaps even more so.

To the extent that language gives the analyst a window on the mind, sign language data offer a finer lens which serves to separate out those features that arise in response to the demands of specific communicative channel from those that are truly cognitive. This being so, any study of linguistic universals fails to be universal to the extent it ignores linguistic cross-modal evidence. Therefore, the reanalysis of the ASL personal pronoun system presented here is of crucial importance. The presentation of LSB systems and strategies for making and maintaining reference provides additional comparative material upon which to draw generalizations.

Lines of inquiry touched on in the current work but not fully explicated include the issues of (1) the co-articulation of language and gesture; (2) the precise description of the plus-gaze third person pronoun in contrast to the demonstrative pronouns; (3) subcategorical distinctions within the nonparticipant category, e.g. proximate and obviative; (4) the possibility that marking for plurality on pronouns is not obligatory; (5) sequences of lateral speech acts as typical of multi-party signed conversations, as opposed to sequences of utterances directed to multiple addressees; and (6) the intricacies of shifts between various levels of narrative space and the current conversation, especially with respect to the interpretation of pronominal reference. These issues merit further investigation, which I hope to undertake in the future, along with other interested researchers.

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Appendix A

Terms

laterality

dominant	-- used of hand preferred for signing
nondominant	-- used of hand dispreferred for signing
ipsilateral	-- side of the body of the preferred hand
contralateral	-- side of the body of the dispreferred hand

hand physiology

ventral	-- palm side
dorsal	-- back side, (opposite of palm side)
radial	-- thumb side
ulnar	-- little finger side
phalange	-- bones of the finger
proximal	-- bone of the finger closest to the palm
metacarpophalangeal	-- joints joining fingers to palm
interphalangeal	-- joints between phalanges

Figure 1. From Ann 1992:149.

Formational Features

The set of formational features listed here is an adaptation of Mandel 1993, which itself is an adaptation to ASCII characters of Stokoe notation.

Order of symbols: [L H_{O(O)} M]; if palm and finger orientation differ, that is indicated by putting the symbol for palm orientation first, separated from the symbol for finger orientation by a comma, example: [[] B_{t,<} ^x], 'first person possessive'; orientation sequences not separated by a comma represent composite orientation, example: [G_{f^}], 'distal deictic adverb.'

Location

Ø	neutral (symbol usually omitted)
h	head/face
u	upper face
m	mid-face
l	lower face
c	cheek, ear
[]	torso
/	forearm
p	wrist of the dorsal side of the prone hand

Handshape

A	fist hand: all fingers curled into palm, thumb alongside index finger
B	flat hand: all fingers extended and touching, thumb may be across the palm
C	thumb and fingers bent at all joints, thumb opposed to fingers
E	thumb opposed to palm, fingertips resting along the side of the thumb
F	thumb and index touching, other fingers extended and spread
G	index hand, extended index finger from otherwise closed fist
L	thumb and index finger extended in the same plane as the palm
M	index, middle and ring fingers extended, usually spread, thumb across palm touching the dorsal side of the little finger
O	thumbtip and index fingertip touching, other fingers also curved
P	extended index and middle fingers, thumb touching proximal interphalangeal joint of the ventral side of the middle finger
R	index and middle fingers extended and crossed, other fingers curled into the palm
S	variant of the A-hand, but thumb crosses the medial phalanges of the fingers
U	index and middle fingers extended and touching
V	index and middle fingers extended and spread
W	index, middle, and ring fingers extended and spread
X	hook hand: index finger bent at the interphalangeal joints
fl	"closed X" hand: hook hand with thumb filling space created by hook
Y	thumb and little finger extended from an otherwise closed fist in the same plane as the palm
4	variant of the B-hand, but the four fingers extended and spread, thumb across the palm

- 5 spread hand: variant of the B-hand, fingers and thumb extended and spread
- 8 fingers extended and spread, thumb and middle finger touching; "open 8" hand has thumb extension, leaving the middle finger bent at the metacarpophalangeal joint

Handshape extensions

- ` thumb extension; example, ONE [ A`]
- ~ finger(s) bent at the metacarpophalangeal joints; example, the first person pronoun, [[] G~ x]
- b a lower case b preceding the handshape symbol indicates that the ring finger and the little finger, and sometimes the middle finger are curled into the palm; example, PERSON_b [bC ^]

Handshape spatial relations

- | hands side by side; example, NOW, [5_a | 5_a z]
- q one hand in front of the other; example, MARCH [5~_{bq} 5~_b [55] .]
- dominant hand over nondominant; example, TO-CONVERSE-WITH [S_b-B_b f]

Orientation

- f forward
- t toward
- u upward
- d downward
- < contralateral
- a supine
- b prone

Movement

- a supinating
- b pronating
- f forward
- t toward
- u upward
- d downward
- r up and down
- z side to side
- w twisting
- n nodding/bending
- e wiggling
- [ ] opening to handshape within brackets; example, THAN [A n[L]]
- #[ ] closing to handshape within brackets; example, MAN [l B_t x#[O~]]
- + cross
- : diverge
- @ circular
- . repeat movement

Appendix B

Table 3.1.
From Liddell 1995:34, comparing the properties of surrogate and token

Surrogate	Token
invisible	visible
normal-sized	not normal-sized
has body features	featureless region
exists in Surrogate Space	exists in Token Space
1st, 2nd, or 3rd person role in discourse	3rd person role in discourse only

Figure 4.1.
From Meier 1990:183

Figure 4.2.
From Meier 1990:182

Shifted Space

Figure 5.1.
From Bellugi and Klima 1979:286.

GIVE

GIVE[n:allocative determinate]

Figure 5.2.
From Bellugi and Klima 1979:282.

INFORM as two predicates.

INFORM[n:dual]