Editor's Introduction: Outlining

Considerations for the Study

of Signed Language Contact

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To my knowledge, this volume represents the first book-length collection of various accounts of contact between sign languages, and this brings with it excitement as well as the realization of challenges that lie ahead.[1] As many researchers who are interested in language contact might suggest, it is exciting because these chapters contribute to our understanding of the structural and social aspects of contact and how such contact affects language in the visual-gestural modality. They provide us with information about Deaf communities throughout the world, as well as language data that speak to the ways in which contact is manifested in those communities. This global perspective allows us to examine contact situations in search of commonalties and recurring patterns. It also enables us to see how some outcomes of contact between sign languages might or might not fit the general patterns of contact that have been demonstrated for spoken languages. Perhaps as a way to balance the excitement about this topic, the sobering truth is that we know so little about contact between sign languages. As a result, we are faced with the task of documenting examples of such contact and the challenge of examining the effects of visual meaning creation on linguistic structures that occur in these contact situations. By focusing on this area of inquiry, we stand to gain much knowledge about how language works.

The study of language contact among signed languages forces us to carefully consider how the visual-gestural modality of human communication influences language birth, development, change, and decay or loss from disuse. Sign languages and sign language varieties are emerging in various parts of the world, and they are developing quickly. It is unclear how such rapid birth and development are paralleled in spoken language situations, although likely candidates for

cross-modal comparisons would be spoken language pidgins and creoles. Some varieties of signed language might also be quickly declining in use as a result of influence from other sign languages. This phenomenon is to be expected because it also occurs when spoken languages come into contact, although what we know about these cases is minimal. I suggest that certain characteristics of language in the visual-gestural modality influence the results of contact between sign languages. These factors and some of the relevant works from the literature are discussed in this introductory chapter.

LANGUAGE CONTACT IN SPOKEN LANGUAGE LITERATURE

Language contact has been an active area of linguistic inquiry in the past few decades. Within the last decade alone, several volumes have been devoted to various approaches to the study of contact between spoken languages and the multitude of phenomena that result. For example, one of the authors of a classic work on language contact (Thomason and Kaufman 1988) has published an introductory book on the topic that serves as a useful resource for various students and those who are interested in linguistics (Thomason 2001). Another work presents a framework composed of several models that have been suggested in previous writings to account for various types of contact data — mostly from a code-switching perspective (Myers-Scotton 2002). Holm (2004) presents data from various language varieties as he explores the concept of "semi-creolization," although the author uses the term "partially structured grammars" in that work. As further testament to the importance of publishing entire volumes on the topic of language contact, Cambridge University Press has begun an interdisciplinary series devoted to the topic, and three volumes have been published to date (Mufwene 2001; Clyne 2003; Heine and Kuteva 2005).

Language contact phenomena are as complex as the linguistic repertoires and social situations of the individuals and communities who engage in contact between languages or language varieties. Moreover, there are many lenses through which to examine language contact. One could focus on the social aspect — taking into consideration issues such as prestige, power, and social class, which influence what languages or language varieties are acceptable in any given situation. Alternatively,

one could zoom in the linguistic microscope to examine the numerous and sometimes overlapping types of influences languages exert on one another. Some of these commonly discussed topics are borrowings and loans, interference, convergence, transference, bilingualism, code switching, foreigner talk, language shift, language attrition, and even language decline and death. Keep in mind that these and other frequently used terms are, at times, defined in different ways by different authors. In addition to these topics, some researchers focus on the emergence of new varieties of language (e.g., pidgins and creoles) that arise in contact situations. Some authors focus on lexical items, whereas others address grammatical matters. Those who work on bilingualism could consider the subject at the level of the individual or the community (i.e., societal bilingualism).

The result of significant interest in the topic of language contact — as reflected in the spoken language literature — has been the development of a sizeable and still growing corpus of examples of contact data. In most cases, this reflects contact between languages that are centuries old, although there might also be work on younger varieties such as pidgins and creoles. This is worth noting because many sign languages do not have the long histories of development that characterize spoken language varieties. Furthermore, examples of spoken language contact enable us to examine interactions between structurally similar languages, as well as those that are substantially different from one another. That level of linguistic diversity may not entirely be the case with sign language contact.

LANGUAGE CONTACT IN SIGNED LANGUAGE LITERATURE

Perhaps the most-studied aspect of signed language contact has been the way in which sign languages interact with spoken and/or written languages. The degree of lexical similarity between various sign languages has also been extensively studied, and this is arguably an area of inquiry that is relevant to the study of contact. In particular, lexical comparisons can be useful when considering contact phenomena, although they present the challenge of addressing the role of visual iconicity in the development of sign lexicons. A smaller percentage of works have addressed issues such as the effects of contact between two sign languages, the use

of International Sign (IS) by deaf people from various countries, and language attrition and/or death that result, in part, from contact.

Contact between Signed and Spoken/Written Languages

Some of the earliest writings on contact between English and American Sign Language (ASL) conceptualized the phenomenon as influencing the creation of language varieties that were labeled Pidgin Sign English (PSE) (Woodward 1973b), but a possible diglossic situation in the American Deaf community was also suggested (Stokoe 1970; Woodward 1973a). The label PSE seems to have come about because of the ways in which the purported intermediate varieties of language use, along a continuum of ASL and English at either end, show "reduction and mixture of grammatical structures of both languages as well as some new structures that are common to neither of the languages" (Woodward 1973b, 40). For instance, Woodward identified the variable uses of various structures such as articles, plural markers, and the copula — none of which are common to both English and ASL. That variable use was what Woodward and others referred to as PSE — a label that has continued to be used, at least in some circles, until the present day.

However, over the years, various authors have pointed out that, in several ways, PSE does not seem to resemble spoken language pidgins. For instance, Cokely (1983), by looking at ways in which deaf people interact with hearing people, argued in favor of an analysis that labeled such language use as instances of foreigner talk, judgments of proficiency, and ASL learners' attempts to master the target language. Lucas and Valli (1992) isolated and listed features of both ASL and English in the signing of various informants included in their dyad- and triad-based data. Their analysis suggested that the term *contact signing* was a more appropriate label for varieties of sign language that combine features of ASL and English and exhibit significant individual variation in terms of the occurrence of features. They also pointed out that, despite the individual variation, some linguistic features from ASL and English seldom occur in contact signing, such as ASL nonmanual syntactic markers that occur with topicalization and various bound morphemes from English (e.g., plural *-s*, third-person singular *-s*, possessive *'s*, past tense *-ed*, or comparative *-er*). Fischer (1996) also pointed out that the alleged pidgin, PSE, is the opposite of what is typically found in spoken language pidgins since its vocabulary comes from the substrate (ASL), whereas its grammar comes from the superstrate (English).

The work of Lucas and Valli (1992) represents one of the first extensive discussions of various facets of language contact in and around a Deaf community and was preceded by shorter works on the subject (e.g., Lucas and Valli 1988, 1989, 1991). In their writings, these authors discuss several possible outcomes of contact between a signed and a spoken language, but they are careful to distinguish between those contact phenomena that have parallels in spoken language contact and those that are unique to contact between a signed and a spoken language. They maintain that the latter can be found in fingerspelling, fingerspelling/sign combinations, mouthing, CODA-speak, TTY conversations, code switching, and contact signing (which they also termed *code mixing*). Lucas and Valli also suggest that code switching can occur between sign and spoken/written language as well, but the main difference when addressing it in the signed modality is that the simultaneous use of devices from both modalities (e.g., signs from the visual-gestural modality, along with mouth movements — and perhaps even vocalizations — from the auditory-oral modality) allows for *simultaneous* combinations of various linguistic devices from both languages. This differs from the most common form of spoken language code switching, in which the switching primarily takes place *sequentially.*

Lucas and Valli (1992) also make several other important points. First, the simultaneous or sequential use of ASL and English forms in a signed segment makes it very difficult to determine whether the signer is actually code switching or simply borrowing elements from one language and using them in another. As a result, they suggest the use of a third term, *contact signing,* to describe the result of frequent contact between ASL and English.[2] In their other main themes, the authors discuss issues that arise when one investigates language use by individuals, communities, and societies. One of their suggestions is that the locus of study for contact situations should really be the behavior of the individual, although they also claim that the occurrence of many ASL and English features of contact signing cannot be predicted solely by this method. In other words, one cannot predict which features of contact signing an "average" member of the Deaf community will use in any given situation. Yet, despite the unpredictable nature of an individual's signing in a specific situation, the authors were able to identify various common features of contact signing at the lexical, morphological, and syntactic levels. As a final note, Lucas and Valli remind the reader that, inasmuch as contact situations are dynamic rather than static, a similar (i.e., dynamic)

perspective for the analysis of contact situations is necessary. Such a standpoint would take into account the fact that language behavior can change rapidly based on both the interlocutor and the linguistic background of the language user.

The code switching that some deaf users of ASL and Cued Speech engage in has also been viewed as a form of contact between ASL and English.[3] In this system, consonant and vowel sounds are represented by the hands, and, in theory, any spoken language can be cued. Hauser (2000) describes the signing of a ten-year-old girl who is fluent in both ASL and Cued English and gives examples of how she code-switches between the two forms of manual communication.

Fingerspelling has also been viewed as one of the products of contact between a signed and a spoken or written language, although some researchers highlight the ways in which fingerspelling has been incorporated into the signed language, while others describe it as more of a foreign element that lies outside the core lexicon. Taking the former viewpoint, Battison (1978) addressed the manner in which some fingerspelled words become lexicalized over time, and Akamatsu (1985) stated that fingerspelled words form "articulatory envelopes" that resemble signs in some ways. Davis (1989, 97) also suggests that fingerspelling is, by its nature, an ASL phonological event — not an example of borrowing — because, as he maintains, "ASL morphemes are never borrowed from the orthographic English event; they are simply used to *represent* [emphasis in the original] the orthographic event." Other researchers have also discussed the manner in which fingerspelled items can form compounds with ASL signs (Brentari and Padden 2001; Padden 1998), the suggestion that fingerspelling can be viewed as code switching between ASL and written English (Kuntze 2000), and the claim that fingerspelling can also be considered a form of borrowing (Miller 2001).

Another characteristic of contact between a signed and a spoken language is the mouthing of spoken words while producing signs. Several authors have addressed this phenomenon with data from ASL and English (Davis 1989, 1990), Swiss German Sign Language and German (Boyes Braem 2001), and other European sign languages (see Ann 2001 for a brief discussion of relevant works). In addition, a number of authors have described code switching and code mixing between a signed and a spoken language. For instance, researchers have looked at the manner in which code switching, as a function of the language background and use of the

interlocutor, is performed by deaf adults (Hoffmeister and Moores 1987; Lee 1983) and deaf children (Kachman 1991).

In the present volume, Rachel McKee, David McKee, Kirsten Smiler, and Karen Pointon address contact between deaf and hearing people by discussing how, within an ethnic minority, the hearing members can affect the expression of identity by the deaf users of a sign language. Approximately 40 percent of the deaf users of New Zealand Sign Language (NZSL) have cultural and historical ties to the indigenous Māori culture. However, their deafness has historically precluded them from participation in Māori cultural events and activities. In recent years, the New Zealand deaf population with ties to Māori culture has begun to learn more about the minority culture, including its language-based references. This learning has resulted in an increase in the number of signs that are used in NZSL for references to Māori cultural concepts. However, the situation, which McKee et al. carefully describe, is far from simple inasmuch as the negotiation of new lexical elements by deaf Māori, hearing Māori, and trilingual (Māori, English, and NZSL) interpreters creates a complex interplay that is the perfect setting for a discussion of signed language contact.

Addressing Lexical Similarities between Sign Languages

Several studies that have compared lexical items across sign languages generally agree that sign languages are lexically more similar to each other than are spoken languages. Although this may not be a result of contact between sign languages, some researchers have investigated the likelihood of historical contact (e.g., McKee and Kennedy 2000; Davis, this volume). Higher degrees of lexical similarity clearly hold even for languages that are unrelated and whose users live in very disparate parts of the world. As a result, these works raise questions about the role of visual iconicity in the development of sign languages and in the comparison of sign lexicons.

A high degree of lexical similarity has been observed in comparisons of various European sign languages with Chinese Sign Language and Israeli Sign Language (Woll 1984); comparisons of North American sign languages (ASL and Mexican Sign Language [LSM]) with two from Europe (French Sign Language and Spanish Sign Language) and one from East Asia (Japanese Sign Language [JSL]; Guerra Currie, Meier, and Walters 2002); and comparisons of Spanish Sign Language with the sign languages of Northern Ireland, Finland, and Bulgaria (Parkhurst and

Parkhurst 2003). These works provide a snapshot of the lexical characteristics of sign languages from around the globe.

There is some debate, however, about the degree of similarity. In a comparison of pairs of twelve sign languages, Woll (1984) found that no pair had a similarity score of less than 40 percent, and some pairs showed 80 percent similarity. In their analysis of four different sign languages (Mexican Sign Language, Spanish Sign Language, French Sign Language, and Japanese Sign Language), Guerra Currie et al. claimed that even unrelated sign languages (i.e., those between which no known contact has occurred and which are embedded in hearing cultures that are very different from each other, e.g., LSM and JSL) show modest degrees of lexical similarity. In fact, the authors found that 23 percent of the selected sign lexicons of LSM and JSL were similarly articulated. Guerra Currie et al. suggest, as have other writers, that there likely exists a base level of similarity between the lexicons of all signed languages regardless of the existence of any historical ties. According to them, this base level of similarity may be 20 percent or more.

Parkhurst and Parkhurst (2003) focus on the importance of separating noniconic signs from those that could be interpreted iconically in interlingual lexical comparisons. They looked at four European sign languages (from Spain, Northern Ireland, Finland, and Bulgaria), as well as different dialects of the sign language of Spain (from Madrid, La Coruña, Granada, Valencia, and Barcelona). Among their conclusions is a recommendation for higher thresholds for determining relatedness between sign languages. What likely contributes to varying estimates of lexical similarity is that different authors have not always used the same criteria for their analyses. Despite that, it has clearly been shown that even unrelated sign languages have some lexical similarities, which is likely a result of the iconic nature of some signs.

In a comparison of the sign languages of the United Kingdom, Australia, New Zealand, and the United States, McKee and Kennedy (2000) have demonstrated that ASL is very different, at least lexically, from the varieties that have connections to nineteenth-century British Sign Language (BSL). This is true in spite of the claim that ASL may have been influenced somewhat by BSL of the late-eighteenth and early-nineteenth centuries as a result of the sign language used on Martha's Vineyard, which likely influenced the development of ASL. According to Groce (1985, 73), the "sign language used on the Vineyard seems to have had a considerable time depth and thus may have been based on an English sign language."

Two works in the present volume add to our knowledge of sign language histories by comparing signs from different sign languages. Jeff Davis takes a long overdue look at the signs used by Native Americans of North America during the beginning and development of ASL. Davis first compares signs used by various tribes and, based on an 80 to 90 percent degree of lexical similarity across the systems, concludes that they are variants of a single variety of North American Sign Language — what he refers to as Plains Indians Sign Language (PSL). Additionally, Davis compares PSL to early twentieth-century ASL. That comparison yields about a 50 percent lexical similarity, which, according to the metrics for lexical comparison proposed by Parkhurst and Parkhurst (2003), suggests that PSL and ASL are different languages but may have items that were borrowed from one language to the other in the nineteenth and twentieth centuries. Davis also provides some interesting accounts taken from the writings of nineteenth-century educators such as Thomas Hopkins Gallaudet, and those writings offer valuable information about possible contact and influence between the two North American sign languages.

Another work on the topic of lexical comparisons between sign languages, this time with the focus on two Asian sign languages, is authored by Daisuke Sasaki, who addresses lexical contact between JSL (also referred to as NS, or Nihon Syuwa, in some works but referred to as JSL in this volume) and Taiwan Sign Language (TSL). Historical accounts of the development of TSL cite JSL as one of the sign languages that influenced the development of TSL. Thus, Sasaki compares lexical items with an emphasis on the handshape parameter of articulation, and he further focuses the analytical lens on similarly articulated signs — those that differ only in one phonological parameter (i.e., handshape for Sasaki's analysis) but share the same meaning. Sasaki finds that a number of similarly articulated TSL-JSL signs show that TSL appears to contain handshapes that may be more difficult to articulate than those found in the JSL signs. The author suggests that this is due to conservatism on the part of TSL, which has allowed that language to retain older forms that may have also been a part of JSL but no longer exist in that language because of language internal changes that tend toward efficiency and ease of articulation.

Contact between Two or More Signed Languages

Lucas and Valli (1992) have briefly discussed several possible outcomes of contact between two signed languages: lexical borrowing; foreigner talk; interference; and the creation of pidgins, creoles, and mixed

systems. Whereas these areas of inquiry have not yielded many published writings, there also likely exist unpublished works that provide descriptions of signed language contact. A list of characteristics of signed language that seem to influence such contact is found in the next section, but first I present a review of contact between sign languages in terms of lexical borrowing, code switching, interference, IS as a pidgin, and language attrition and death.

Lucas and Valli (1992) caution that it would be difficult to determine the difference between an instance of lexical borrowing and code switching (or code mixing) in signed language. The issue is that, in spoken language work, borrowings have often been characterized by the integration of the borrowed word into the phonology of the other language, but this integration may not be evident in signed language. The authors maintain that this is because sign language phonologies share many basic components. Thus, in an environment in which two sign languages are frequently used, it might be difficult to definitively determine which phonology (e.g., that of Language A or Language B) the signer is using in some instances. Because of this, the authors claim that using terms like *borrowing* and *code switching* may be problematic when looking at signed language contact situations.

Keeping in mind these points about code switching versus borrowing, my dissertation work (Quinto-Pozos 2002) provides evidence that U.S.-Mexico border signers of LSM and ASL engage in code switching. That work and another (Quinto-Pozos, Forthcoming-a) describe the sequential use of synonymous signs from ASL and LSM for the purposes of re-iteration — much like certain switches described in spoken languages (e.g., see Auer 1998; Eldridge 1996; Pakir 1989). In some cases, the re-iterative switches seem to emphasize a particular sign, and at other times, they appear to be used to ensure that an interlocutor comprehends the message. However, there also seem to be examples of reiterative switches that do not place a focus on the switched item.

In addition, I present examples of nonreiterative switches and the complexity of dealing with items that may be articulated similarly in both sign languages and, as a result, are relatively transparent to the interlocutor (Quinto-Pozos, Forthcoming-a). Examples are various types of points, so-called classifier constructions, commonly used gestures, and the more mimetic-looking examples often referred to as *construction action.* When such meaningful devices exist within the sign stream,

it is not clear how to label a particular utterance (e.g., a so-called classifier construction from Language A or Language B, an emblem from the ambient hearing community versus a sign, or the use of constructed action versus a language-specific lexical item).

As a result, investigators of code switching in signed language face the task of examining the way in which signers switch not only between the two languages but also between meaningful linguistic versus nonlinguistic elements. The latter (e.g., points, other gestural material) may even co-occur with the linguistic devices of the sign languages, and this must be addressed as well. The data presentation and analysis in my work (Quinto-Pozos 2002, Forthcoming-a) focus primarily on lexical phenomena, but ultimately an in-depth syntactic analysis of code switching between two sign languages is needed to compare this phenomenon across languages in the two modalities. For such phrase-level analyses, a framework for treating pointing, the use of gestures, and the use of mimetic devices in signed language must be employed.

Interference is another possible outcome of contact between two sign languages that Lucas and Valli (1992) have discussed. Interference can be described as the surfacing of the articulatory norms of one sign language in the production of another. Some instances of this phenomenon may be evident in the phonological parameters of sign formation. Lucas and Valli (ibid., 35) refer to this type of interference as follows: "It might be precisely the lack of phonological integration that might signal interference — for example, the involuntary use of a handshape, location, palm orientation, movement, or facial expression from one sign language in the discourse of the other." Interference may also be evident at other levels of language structure, such as the morphology or syntax of one or both of the signed languages.

Interference is also treated in my own work (Quinto-Pozos 2002, Forthcoming-b). The analyses focus primarily on the phonological parameter of handshape, the LSM and ASL nonmanual signals that are used for *wh*-question formation, and the mouthing that sometimes accompanies signed language production. The data indicate that signers, like users of spoken language, exhibit features of interference when they articulate items from their nonnative language. For example, a signer who grew up in Mexico signing LSM might sign ASL FAMILY with an LSM F handshape rather than an ASL F handshape. The two handshapes are similar, but they differ in the contact between thumb and

index finger and also in the amount of spread between the nonselected fingers (i.e., the middle and ring fingers and the pinky). In terms of mouthing, signers from Mexico sometimes produce ASL signs while simultaneously mouthing Spanish words, although the production of LSM with English mouthing is also a common linguistic practice of some signers who live along the border. In most cases, whether such interference is always predictable based on the profile of the signer is unclear.

In terms of the creation of mixed systems as a result of contact, it is vital to include discussion of IS, a "type of signing used when deaf signers communicate across mutually unintelligible language boundaries" (Supalla and Webb 1995, 334). Deaf individuals who interact with each other, primarily at international gatherings, use IS for communication. As a result, IS could be said to be "foreigner talk." There do not appear to be native users of IS, which is employed only for restricted purposes. In these ways IS resembles spoken language pidgins, but Supalla and Webb suggest that it is much more structurally complex than spoken pidgins; in some ways IS more closely resembles full-fledged sign languages than pidgin languages.

The complexity of IS has been described in terms of the rule-governed nature of its syntactic structure and various features of its vocabulary. For example, Supalla and Webb (1995) claim that verb agreement, word order, and negation in IS are systematic and rule governed. They report that verbs are frequently inflected and in complex ways. The word order of IS is usually SVO, but it can also be described in terms of other structures in which pro-drop and object function account for the surface structure of the phrases. With regard to negation, Supalla and Webb (ibid., 346–47) claim that a signer of IS appears to use "a limited number of negative devices similar in structure and form to those used in full signed languages." In a more recent work, Rosenstock (2004) looks closely at the structure of IS and finds that it is indeed more complex than one would expect from a pidgin language. Rosenstock also reports that IS contains highly iconic signs, as well as more arbitrary ones that may be loans from full sign languages. By describing a number of grammatical and otherwise communicative devices used in IS, Rosenstock shows that IS contains an "extremely complex grammatical system with a rather limited lexicon" (212). Comprehension tasks conducted during Rosenstock's study show that IS is more easily understood than natural sign languages (for people who do not know those languages), but a significant amount of information is nevertheless not transparent to the

viewer. Additionally, Rosenstock reports that there even seem to be differences between how interpreters and presenters produce IS. McKee and Napier (2002) also address IS, as produced by interpreters at a conference, and corroborate earlier research that claims that IS is structurally complex. In the present volume, Karin Hoyer also discusses IS.

In another study that is included in this volume, Yoel reports an unfortunate outcome of language contact. She focuses on the attrition of Russian Sign Language (RSL) in several individuals who immigrated to Israel and subsequently learned Israeli Sign Language (ISL). The data are taken from Yoel's master's thesis, which was completed in 2001. In the current volume, Yoel examines the situation of Russian Deaf immigrants to Israel from both linguistic and nonlinguistic perspectives. An analysis of language data obtained through two lexical naming tests yields evidence of attrition of RSL, which is attributed to influence from ISL. To understand the causes of attrition, Yoel adopts the social psychology framework of ethnolinguistic vitality as she examines various facets of the lives of the deaf immigrants to Israel. These analyses consider the situations in both Israel and the former Soviet Union. Her conclusions suggest that the attrition of RSL is linked to the types of opportunities that are encountered by Russian deaf immigrants in Israel.

Finally, language death has also been suggested, albeit minimally, to result from contact between sign languages. Much of this contact is a result of the work of foreign missionaries, foreign instructors, and even deaf people from those countries who have learned ASL and other Western sign languages and returned to their own country. Woodward (2000) claims that indigenous sign languages of Southeast Asia seem to be dying out and are apparently being replaced by signed languages influenced by ASL or French Sign Language (LSF). Many sign languages that are used in Africa have undergone significant contact with ASL (Lane, Hoffmeister, and Bahan 1996), although there are also suggestions that even that contact is not threatening the existence of the natural sign language. Schmaling (2001) suggests that ASL in contact with Hausa Sign Language (HSL) in northern Nigeria has resulted in the appearance of some ASL forms in HSL (e.g., loan signs and the use of the manual alphabet for the creation of initialized signs). Despite that, Schmaling indicates that some HSL users have little contact with native signers of ASL and that the influence of ASL on HSL remains limited. Her prognosis is that "Hausa Sign Language will survive as an independent, full-fledged sign language" (192).

That optimistic outlook, however, may not be shared by Nonaka (2004) in her account of indigenous sign languages of Thailand. In particular, she writes of the need to remember sign languages in discussions of language endangerment and in language preservation efforts. Nonaka discusses indigenous varieties of sign language in Thailand such as Ban Khor Sign Language and those referred to as Old Bangkok and Old Chiangmai sign varieties. Whereas the national sign language, Thai Sign Language, seems to be thriving, according to Nonaka, the future of the indigenous varieties is uncertain. It is clear that language contact can result not only in the creation of new varieties but also in the drastic alteration or destruction of others.

CHARACTERISTICS OF SIGNED LANGUAGE THAT LIKELY INFLUENCE CONTACT IN THE VISUAL-GESTURAL MODALITY

Based on various themes that repeatedly surface in writings about signed language contact, I propose that at least three prominent characteristics of signed languages influence the outcomes of contact in that modality. The characteristics are listed in Table 1, and each is addressed in the following section. The three characteristics are not necessarily mutually exclusive, and they may interact to various degrees. Whether or not these characteristics result in contact phenomena — over the long term — that are different from what is observed with spoken languages is unclear. However, they are important points to consider when addressing signed language contact.

The Prevalence of Iconicity

One of the most commonly discussed topics in the field of sign linguistics is the iconic characteristics of sign languages and the various implications of that iconicity (e.g., the effect on language structure, language acquisition, language learning, language processing, language

TABLE 1. Characteristics of Signed Language That Likely Influence Contact in the Visual-Gestural Modality

The prevalence of iconicity
The utilization of gestural (i.e., nonlinguistic) resources
The interlingual structural similarity of sign languages

change). In various cases, the fact that signed language contains much visual iconicity does not seem to alter the way in which it is acquired (e.g., Meier 1982; Newport and Meier 1985) or how it is processed and remembered (Poizner, Bellugi, and Tweney 1981). Despite the fact that iconicity is a prominent feature of sign languages, such languages also develop noniconic ways of communicating information (e.g., Frishberg 1975; Klima and Bellugi 1979; Cormier 2002). However, for the areas of inquiry that deal with signed language contact (either with another sign language or with users of spoken language), iconicity is particularly important because it likely allows people who do not use the same language to comprehend each other more easily than if they relied exclusively on spoken and/or written language. This could have a huge effect on the outcome of such contact.

Iconicity is present in various signed language devices. It is evident in the signs of so-called classifier constructions, which resemble some part of the referent (e.g., Klima and Bellugi 1979; Taub 2001; Liddell 2002; Quinto-Pozos 2007), and it is also present in metaphorical constructions (Taub 2001; Wilcox 2002). Aspects of iconicity are also evident in the ways in which signers use their entire upper bodies to portray postures and movements of an animate referent (Metzger 1995; Liddell and Metzger 1998; Taub 2001; Quinto-Pozos 2007).

Because visual iconicity is so prevalent in sign languages, its role in cross-linguistic signed communication should be carefully examined. The degree of iconicity in signed language can be considered a true modality difference between sign and speech: Both have iconicity, but signed languages are much more characterized by visual iconicity than spoken languages are by auditory iconicity (Liddell 2002). In some cases, iconicity can make certain signs and gestures transparent (to varying degrees) to a nonsigner of a particular sign language. As a result, investigators of signed language contact have to take into account the efficiency gained by having visual iconicity assist in the creation of meaning.

Visual iconicity perhaps allows deaf people to communicate with each other across the globe more easily than hearing people who speak different languages. Pizzuto and Volterra (2000) certainly found that to be the case when they compared the performance of deaf signing versus hearing nonsigning participants from throughout Europe in a test of their ability to comprehend transparent and nontransparent Italian Sign Language (LIS) signs. In general, some LIS signs are transparent to deaf and hearing people alike, whereas others are more difficult to decipher.

However, deaf signers consistently guessed the meanings of signs even though they were not LIS signers. As a result, the authors suggest that the data point to "the existence of potential universals across sign languages" (283). The "universals" that they refer to are mostly due to the prevalence of iconicity in the visual-gestural modality. The Pizzuto and Volterra study seems to echo some of the comments made by early writers on the topic of the interlinguistic intelligibility of sign languages (Battison and Jordan 1976; Jordan and Battison 1976; Mayberry 1978); specifically, it suggests that there are ways in which the viewer of an unknown sign language can understand a portion of what is being communicated. However, this certainly does not mean that sign languages are universal and easily understood by all. Rather, the use of iconic and mimetic forms — interspersed with linguistic material that is more abstract in nature — may allow the nonuser of a sign language to understand at least part of the message.

The Utilization of Gestural Resources

Signers take advantage of commonly used nonlinguistic gestures from the ambient hearing — and perhaps even Deaf — communities. Some of those gestures may become part of the lexicon or grammar of the sign languages as evidenced, in part, by changes in their articulation vis-à-vis the manner in which hearing people use those gestures. However, deaf signers also articulate gestures that, at least on the surface, do not appear to differ from some of those that hearing people use in conjunction with speech. As with iconic devices, such gestural resources — some of which become lexicalized or grammaticized over time and others that remain as gestures — present challenges for the researcher of signed language contact. One challenge for some analyses (e.g., a syntactic account of code switching) is to determine whether a meaningful form is, in some cases, a sign or a gesture.

Various authors have suggested ways in which the gestures — both manual and nonmanual — of hearing people can now be considered as part of a sign language. For example, Janzen and Shaffer (2002) maintain that some hand gestures have been grammaticalized as modals in ASL and that some facial gestures (specifically brow raise) have been incorporated as nonmanual signals that provide syntactic information (e.g., topic markers). McClave (2001) has also proposed that nonmanual signals (e.g., head shifts for direct quotes) in ASL have been influenced by the gestures of hearing people. Casey (2003a, 2003b) has shown that

directional gestures and torso movements of nonsigners are similar to verb directionality and torso movement for role shift in signed language. She suggests that directionality in ASL (and other sign languages) originates from nonlinguistic gestures, but first- versus non-first-person distinctions have been grammaticized; thus not all of the directional gestures can be considered purely gestural.

Another way in which signers use the common gestures of the hearing communities in which they are situated is through their use of *emblems* or *emblematic gestures*. These meaningful gestures have been discussed by various authors (e.g., Efron 1941; Ekman and Friesen 1969; Kendon 1981, 1988; de Jorio 2000; McNeill 2002), who have described them as culture-specific displays that normally follow standards of form. In some instances, they actually substitute for spoken words, but they can accompany speech as well. Pietrosemoli (2001) writes about the emblems (or "cultural signs," in her terminology) that hearing Venezuelans commonly use and that signers of Venezuelan Sign Language (LSV) also produce. She reports that the emblematic signs appear to reflect a code switching of emblems with linguistic items or a borrowing of the emblems into LSV. Pietrosemoli suggests that code switching and lexical borrowing are related to deaf Venezuelans' interaction with hearing Venezuelans and the concept of politeness. She employs the Brown and Levinson (1987) model of politeness as a framework to show that the use of some emblematic signs by LSV signers is intentional (but not face threatening), whereas some serve as face-threatening acts. Additionally, she describes how cultural misunderstandings, due to the mutual inaccessibility of the languages in question, are the result of the use of emblematic signs.

In Quinto-Pozos (2002, 2004), I note that emblematic gestures alternate with lexical signs of LSM and ASL in the discourse of some deaf signers who live along the U.S.-Mexico border. For instance, the emblem that I have glossed as "well" (see Figure 1; consisting of palms turned upward and an optional shrug of the shoulders and/or tilt of the head to one side) occurs with high frequency in the contact data, and the emblem was produced by signers of both LSM and ASL.

Specifically, that emblem appeared 236 times within a data set of 6,477 lexical items, which translates into a frequency of approximately 36 per 1,000 signs. By way of comparison, the most frequent non-pronominal lexical item in the ASL corpus described in Morford and MacFarlane (2003) was NAME, with a frequency of 13.4 per 1,000 signs.

FIGURE 1. *The emblem/gesture* WELL *as produced in the LSM-ASL contact data.*

In the Morford and MacFarlane data set, WELL occurred with a frequency of 7.5 per 1,000 signs, although those authors seem to have considered that item an ASL sign as opposed to a commonly used gesture. One of my points (Quinto-Pozos 2004) is that emblems such as "well" should be categorized separately from the lexical signs of a sign language because it is not clear whether they are signs of the language (i.e., borrowings) or emblems that have been code switched. This could be particularly important if linguistic studies were to use emblems for data-elicitation tasks. The interaction of emblems with linguistic structures has been studied minimally at best; and at this point it is unclear whether they are processed differently than lexical signs.

Ways in which signers direct or "point" signs — either to present or hypothetical entities — should also be considered in signed language contact analyses. According to some accounts (e.g., Liddell 2002, 2003), some signs are directed at physically or conceptually present entities and can be described along linguistic and gestural parameters. The gestural parameters are presumably understood, at least to some degree, cross-linguistically, and this could impact cross-linguistic communication. Liddell (2002, 75) suggests that "Signers know where things are and direct signs toward them through the ability to point. The handshapes, orientation of the hand(s), the type of movement (straight, arc), are linguistically defined. The directionality of the signs is not linguistically defined. It is variable, depending completely on the actual or conceptualized location of the entity the sign is directed toward."

If Liddell's account is accurate, the variability of the directional component of the sign provides a challenge for contact researchers because they normally rely upon fixed linguistic components of lexical material (e.g., signs, words) from the two (or more) source languages to investigate the forms that the lexical items in the contact variety take. If there are no fixed components for directionality in some signs, as Liddell suggests, then the investigator must devise other means to determine what is influencing what in those cases.

The Interlingual Structural Similarity of Sign Languages

Based on the sign languages that have been studied thus far, it seems that the majority (if not all) share various structural features. Lucas and Valli (1992) suggest that sign language phonologies are more similar to each other than spoken language phonologies, and Newport and Supalla (2000) point out that sign languages show more typological similarity to each other than spoken languages, at least in terms of their morphological structure. If one uses an agreement analysis for sign language verbs, signs languages seem to favor object agreement over subject agreement.[4] Additionally, sign languages tend not to use lexical items for spatial descriptions (e.g., where a spoken language would use a preposition) but rather use the signing space for indicating such relationships. All sign languages seem to have a subset of verbs that do not indicate subject and object by using the sign space, and those verbs — commonly referred to as "plain verbs" — rely on word order for indicating the subject and object of a verbal construction within a clause (Padden 1983). However, certain sign languages have auxiliary verbs that indicate subject and/or object in the sign space — thus providing a way for most (if not all) of the verbs in those languages to use pointing for grammatical relationships (Rathmann 2000). Finally, all of the sign languages studied thus far contain so-called classifier constructions, which allow the signer to communicate various types of information such as figure, ground, motion, location, orientation, direction, manner, aspect, extant, shape, and distribution (Schembri 2003).

There are, of course, some differences across sign languages. For example, differences in phonetic inventories and phonological processes exist, but, compared to phonetic and phonological variations across spoken languages, they seem to be relatively few. As mentioned earlier, some sign languages have auxiliary verbs that aid in the use of the sign

space to depict grammatical relationships, while some do not. Basic word order across sign languages is not as uniform as the use of space for showing grammatical relationships in conjunction with the verb (Newport and Supalla 2000). Moreover, signers certainly use nonmanual signals (e.g., head tilt, eyebrow raise and furrow) in different ways for grammatical and prosodic functions. As an example, a *wh*-question in ASL requires a brow furrow, whereas the same type of question in LSM requires a backward head thrust.

Some writers have suggested that the similarities among sign languages may be partly due to the fact that they are relatively young (it is believed that the oldest sign languages currently in use date to approximately the eighteenth and nineteenth centuries and that the youngest have been created within the last twenty to thirty years). Their histories are thus not long enough to show evidence of significant divergence (Newport and Supalla 2000; Meier 2002; Aronoff, Meir, and Sandler 2005). The similarity across sign languages is true for those that are genetically related, as well as those that are purported to have developed with little or no historical or genetic relationship to other sign languages.

OTHER CONSIDERATIONS FOR THE STUDY OF SIGNED LANGUAGE CONTACT

One must also keep in mind various other points when studying signed language contact. Several sociolinguistic factors make them unique and different from most spoken languages. Whether or not these factors influence the outcomes of signed language contact, they should be considered in discussions of this topic.

As with all sociolinguistic studies of sign languages, one must remember that the vast majority of users were not exposed to signed language as infants or young children. In the United States the likelihood that a deaf child will have deaf parents is roughly 4 to 8 percent (Mitchell and Karchmer 2004), and those are the children who are generally exposed to ASL from birth. Whether similar percentages of native deaf signers exist in other countries with Deaf communities — either emerging or established — is unclear, although Karin Hoyer's chapter in the present volume suggests that it is certainly not the case for Albania.

Another point has to do with the role of education and/or foreign assistance in the development of sign languages. In various Deaf com-

munities throughout the world, the indigenous sign language or visual-gestural system of a community has been influenced by foreigners who, often with the best of intentions, have brought their ability to communicate in sign. Having collected data in Mexico, I know firsthand the challenges of trying to communicate with a user of another sign language without using the one with which I am more comfortable. Regardless of whether one does it intentionally, it is possible that a foreigner will introduce new elements into a sign language. Woll, Sutton-Spence, and Elton (2001) claim that education is a common domain for this type of influence, and they touch upon the influence of Gallaudet University and its students as vessels of such impact. The influence of foreign signing visitors upon a Deaf community is perhaps more common than we imagine, and this is the very type of situation that Hoyer describes in her chapter in this volume.

Karin Hoyer examines the case of Albanian Sign Language and its growth from pre- to post-Communist Albania. She suggests that the Hoxha regime did not allow for the development of a community of deaf people who could create a full-fledged sign language over time. Hoyer suggests, rather, that in predemocratic Albania, deaf people relied heavily on fingerspelling, with a few indigenous signs that may have been influenced largely by the emblematic gestures of the ambient hearing culture. After contact with other Deaf communities through International Sign (and perhaps other sign languages), the sign system of Albanian Deaf people became lexically richer. Hoyer also states that the use of the new signs (now referred to as Albanian Sign Language or AlbSL) occurs mostly within the social spheres of urban males in Albania, while females in rural areas are the least likely to be using AlbSL.

Jean Ann, in collaboration with Wayne H. Smith and Chiangsheng Yu, provides us with another interesting situation in this volume. They show us that, in a specific context, a variety of a sign language can spring up quickly but later disappear if the sociolinguistic environment is not strong enough to support it. Specifically, Ann et al. write about a deaf education setting in Taiwan and the use of Mainland China Sign Language (MCSL) by instructors and students at the Ch'iying School for the Deaf in southern Taiwan. That school has an interesting history: It was established by a deaf man from Mainland China in the 1960s, and the language of instruction for fifteen to twenty years was a variety of MCSL. However, the school closed in the early 2000s. This situation is particularly noteworthy because the Ch'iying signers, upon leaving school after

the sixth grade, had to learn Taiwan Sign Language (TSL) in order to interact with other deaf people in Taiwan. One of the authors' goals was to determine whether the MCSL of the Ch'iying signers had any recognizable effects on TSL. In addition to providing the reader with a rich history of the establishment and various facets of the Ch'iying school, Ann et al. present excerpts of Smith's unpublished writings on the Taiwanese school and other historical accounts of TSL.

A FEW FINAL WORDS

There is much to be learned by studying contact in the visual-gestural modality. Although research on certain aspects of this topic has been occurring for years, the present volume adds examples and data from sign language communities around the world that are affected by their interaction with other sign languages. This area of inquiry is ripe for study.

One of the challenges of creating a book-length treatment of this complex topic is that there is a dearth of published materials on which to build. As a result, the reader will notice that various authors throughout this volume rely on information that has been obtained via personal communication with colleagues, other professionals, and members of the Deaf communities in which they work. The reporting of this type of information is vital to the documentation of contact phenomena, and that documentation must begin somewhere. In the future, more systematic reports are needed. My hope is that this book will encourage researchers to undertake some of that investigation.

This volume only scratches the surface of the multifaceted topic of language contact in the signed modality. We can learn much about the human capacity for language by studying this topic, and we do not need to look far to find examples of such contact. Further research in this area will add to the wealth of knowledge that we have already gained by studying languages that are produced without sound.

NOTES

1. This introduction has benefited from the comments of Ceil Lucas and Richard P. Meier. I would like to thank them for their suggestions. Any misinterpretations of the literature and omissions are, of course, my own.

2. Sofinski (2002) also describes contact between ASL and English by addressing the way in which the sign production of interpreters contains features of both languages when they are transliterating. He suggests that signers do not actually shift between languages but rather that mouth and manual-channel articulations guide the user's perception of the production.

3. Cued Speech is a way to make spoken language visible through the use of manual cues articulated by the cue-er's hands.

4. Even a "nonagreement analysis" of verbs in sign languages might suggest that sign language verbs reliably point to their objects more often than to their subjects.

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