

Code Choices and Consequences: Implications for Educational Interpreting

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Language interpretation is a multifaceted endeavor involving many factors and numerous demands. This chapter examines the variety of linguistic choices encountered during interpreting work, especially in educational contexts. Interpreting work occurs in a context that is best characterized as an intensive language-contact situation and involves numerous linguistic consequences. It reviews numerous research studies that describe the wide range of linguistic variation encountered and various language and communication strategies available to interpreters.

In most bilingual or multilingual communities around the world, there has been prolonged contact between two or more languages. These language-contact situations result in a specific set of sociolinguistic outcomes. The most salient linguistic features of language contact are code-switching and lexical borrowing. Other sociolinguistic pressures, such as language dominance or cultural hegemony, may lead to an “intensive” language-contact situation. These sociolinguistic pressures represent a special set of challenges for interpreters who work in these language-contact communities. The outcomes are shaped by the diversity of participant characteristics and the varieties of language available (or not available) to these participants. Not only is there linguistic transference (rule-governed bilingual behavior); there may also be language interference (the results of inadequate first- and/or second-language acquisition and difficulty keeping the contact languages separate). How interpreters deal with these linguistic challenges has major implications for interpreter education, evaluation, practice, and research.

The consequences of language contact between signed and spoken languages, and understanding that these are universal occurrences, have significance for deaf people, educators, and interpreters worldwide. The focus here is interpreting in K–12 educational contexts (for post-secondary issues, see Napier, this volume). The linguistic demands and strategies described are applicable across a wide range of interpreting settings and are relevant to both signed and spoken language interpreters. Given the variety of signed and spoken language-contact situations around the world, American Sign Language (ASL) and English are used in this chapter as generic cover terms to illuminate some of the universal linguistic outcomes.

ISSUES OF DEFINITION

Various approaches may be followed in the study of language interpretation, and the present discussion concentrates on language-contact studies—a branch of sociolinguistics. Depending on the discipline, there are different meanings assigned to the term “code.” In sign language studies, the term is typically used to refer to any number of invented manual codes representing spoken language and which linguists distinguish from naturally evolved and acquired signed language. In the field of sociolinguistics, however, “code” is used as a generic cover term “to refer not only to different languages, but also to varieties of the same language as well as styles within a language” (Romaine 1995, p. 121). *Code-switching*, for example, refers to the *alternate* use of two languages within a communicative event.

The term “consequences” refers to the results or outcomes of language contact and the choices between language codes and varieties (e.g., code-switching, mixing, lexical borrowing, etc.). Myers-Scotten (1998, p. 3) defines *code* and *variety* as “cover terms for linguistic systems at any level, from separate languages to dialects of a single language to styles or substyles within a single dialect.” Such labels, while sometimes problematic, are necessary to distinguish linguistic characteristics within the multilayered and multidimensional complex of language and communication. These distinctions appear to be even more complex in cross-modality and cross-cultural sociolinguistic contexts (e.g., spoken-signed language contact). Signers have both manual and oral channels available for the coding of linguistic information.

Spoken-signed language contact studies suggest that “true” code-switching means a *complete switch from one language to another*—that is, a switch in linguistic modality (e.g., Davis 1989, 1990a; Lucas & Valli, 1992). In other words, someone stops signing and starts speaking, or vice versa. However, the definitions offered by Romaine and Myers-Scotten suggest a broader view. A broader interpretation is necessary to account for one of the unique outcomes of spoken-signed language

contact. Signers sometimes *simultaneously* represent spoken language words or phrases with mouth movement or fingerspelling during signed language production (i.e., code-mixing).

In terms of the oral channel, signers appear to *alternate sequentially* between using mouth configurations specific to the signed language and those representative of the spoken language. At another level, the alternation between sign-driven and speech-driven linguistic output can be seen as a type of code-switching (e.g., when one alternates between signing more like ASL and signing more like English). These forms of cross-linguistic transference have been reported for dozens of signed languages (e.g., Ann, 2001; Bergman & Wallin, 2001; Boyes-Braem & Sutton-Spence, 2001; Lucas & Valli, 1992; Woll, 2001) and are reflected during interpreting work (e.g., Davis, 2003; Napier & Adam, 2002). This research indicates that these bilingual behaviors are highly patterned, cross-linguistic strategies differing from linguistic interference—a result of inadequate second-language acquisition (see Napier, this volume, for further discussion of the strategic use of these linguistic behaviors among interpreters).

The prolonged contact between spoken and signed languages, along with pressures for deaf people to acquire spoken language, leads to an “intensive” language-contact situation. Such intensive contact may lead to extraordinary efforts (e.g., language policy and planning) to keep the languages separate and to keep the dominant language from exerting pressure on the minority language. There are numerous consequences (or outcomes) of prolonged and intensive language contact. These may be as dramatic as language shift, language death, and the emergence of pidgins and Creoles—or as commonplace and predictable as code-switching and mixing, foreigner talk, and lexical borrowing. Language contact studies offer a useful theoretical and analytic framework to explore the numerous linguistic outcomes, demands, and choices encountered by interpreters—particularly in educational contexts.

LANGUAGE CONTACT STUDIES

The study of language-contact outcomes is one of the most complex areas of linguistic inquiry. Numerous approaches may be taken in the study of language contact (e.g., second-language acquisition, bilingualism, and sociolinguistics).¹ Regardless of theoretical approach, language, or modality, a substantial body of research reveals that the most common consequences of language contact involve code-switching, mixing, and lexical borrowing, and that these are bilingual rule-governed behaviors (e.g., Auer, 1995; Gumperz, 1982; Kachru 1992; Muysken, 2000; Myers-Scotten, 1992, 1993 a & b, 1997; Myers-Scotten & Jake, 1995, 2000; Poplack 1980; Poplack, Sankoff & Miller, 1988; Poplack & Sankoff, 1988; Romaine, 1995; Sankoff 1998).

We are still in the early stages of researching linguistic consequences of contact between spoken and signed languages and between signed languages. However, the evidence thus far strongly suggests that in addition to the universal outcomes found between spoken languages (and apparently between signed languages), contact between a signed and spoken language involves unique cross-linguistic and cross-modality phenomena (e.g., lexicalized fingerspelling and mouth configurations) (see Ann, 2001; Battison, 1978/2003; Boyes-Braem & Sutton-Spence, 2001; Bridges & Metzger, 1996; Davis, 1990a; Lucas, 2001; Lucas & Valli, 1989, 1990, 1992; Mulrooney, 2002; Padden, 1991, 1998; Quinto-Pozos, 2002; and Sofinski, 2002 for more discussion).

Additional research shows the language-contact features that are highly characteristic of deaf peoples' sign language are also used by their interpreters. Specifically, interpreters use code-switching and lexical borrowing as linguistic strategies to clarify the message, convey accurate meaning, and accommodate the audience (Davis, 1990a, 2003; Napier, 2002a & b, and this volume; Sofinski, Yesbeck, Gerhold & Bach-Hansen, 2001). The wide array of code choices faced by interpreters, particularly in educational contexts, requires distinguishing code-switching as a linguistic strategy (i.e., *transference*) from other possible outcomes—for example, *interference* from the source language during interpretation.

Notions of Transference and Interference

Code-switching, mixing, and lexical borrowing may be viewed negatively by many, including bilinguals themselves. Some individuals believe it shows a deficit or a lack of linguistic mastery, while others attribute it to laziness or sloppy language. However, few bilinguals keep their languages completely separate, and code-switching is universal, highly patterned, rule-governed, and a valuable linguistic strategy. Thus, bilinguals tend to intermittently mix their languages even in the “monolingual mode.” Scholars suggest that perfectly balanced bilingualism is a rare occurrence and few bilinguals have native competency in both languages (e.g., Grosjean, 1992, 1996; and Romaine, 1995).

Typically, the first or dominant language influences the second language. When such influence appears to be the result of inadequate second-language acquisition and performance, it is considered “interference.” However, linguistic transference (code-switching and lexical borrowing) may be viewed as a bilingual discourse strategy and is distinguishable from linguistic interference (i.e., source language-retained forms that may interfere with the propositional content of the target language message). Linguistic transference means that source-language forms appear to be “consciously” retained to elucidate or

disambiguate the message (Davis 1990a & b, 2003; Napier 2002a & b, and this volume).

Examples of linguistic *transference* are evident when interpreters intentionally represent English words or phrases with fingerspelling, lip movement, or a literal sign for word rendition (e.g., the literal representation of an English idiom). Davis (1990b, 2003) described how ASL interpreters mark the cross-linguistic transfer of material from the source language (in this case, English) in very specific ways (e.g., using quotation markers or by indicating that it is a literal English rendition).² This research shows that transfer between ASL and English can take place without the phonological parameters and linguistic rules of the target language (in this case, ASL) being violated (i.e., the transfer is sign-driven). See Napier (2002a) for details about the use of this strategy in a study of Australian Sign Language, or Auslan, interpreters. Transference or interference may occur at any linguistic level—phonological, morphological, syntactic, or even pragmatic.

Interference implies that a linguistic rule in the target language is violated or that the material being introduced from the source language into the target language is considered intrusive by the intended audience. The following patterns are examples of interference: overuse or overgeneralization of mouthing and/or fingerspelling; using literal vs. semantically correct sign choices,³ and glossing of ASL signs during interpretation.⁴

Language Bases

In code-switching studies, the language used predominantly is called the *primary, base, or matrix* language, while the language from which the linguistic forms originate is the *source, donor, or embedded* language. A major defining characteristic of signed-spoken language contact is that the signed language typically forms the base language (i.e., the spoken language is generally the source of the transfer material). For example, it is much more common to see English-like features in ASL discourse than ASL forms in English. As such, ASL appears to borrow heavily from English, but there is a disproportionate amount of borrowing from ASL into English (cf. Davis, 1990a, 2003; Lucas & Valli, 1992). This type of asymmetry is a common occurrence in minority-majority language-contact situations. Naturally, the transfer of linguistic material does occur in both directions, and there are some cases where the spoken language forms the base, with the source material originating from the signed language. This most commonly occurs among hearing ASL-English bilinguals (e.g., children of deaf adults or interpreters).

Anecdotal evidence suggests that when hearing ASL-English bilinguals interact with each other in English, there are many instances of code-switching and mixing with ASL. However, not much research has

been conducted in this direction. In one such study of this type, Miller (2003) follows Myers-Scotten's (1997, 1998) Matrix Language Framework to analyze the code-switching patterns of hearing ASL-English bilinguals interacting with each other in English. Miller's study describes patterns consistent with other contact situations and patterns unique to this context (e.g., signing and speaking simultaneously). The notion of what constitutes the base (or matrix) language and how this shapes the linguistic outcomes has implications for language-contact studies and for bilingual and interpreter education.

Distinguishing Language-Contact Phenomena

The term "code-mixing" is sometimes used to refer to "pieces" from one language being embedded into the sentences of another language—in contrast to "code-switching" where there is a clearer break between clauses, sentences, or longer stretches of discourse (Kachru, 1978, 1992). When pieces from one language appear within a single clause or sentence in another, various problems of incongruence arise—such as word-order differences, morphological disparities, semantic differences, and literal vs. idiomatic interpretations. In systematic studies of bilingual communities, it has been observed that speakers tend to avoid switches in places that would result in ungrammatical sentences (Poplack, 1980; Poplack, Wheeler, & Westwood, 1989; Sankoff & Poplack, 1981). The challenge is to differentiate linguistic transfer material that appears within sentences (code-mixing) from switches that take place at or between sentence boundaries (code-switching).

Lexical Borrowing

In order to understand the range of lexical and morphological choices available to interpreters it is important to understand the process of lexical borrowing. Researchers have gone to great effort to distinguish the process of lexical borrowing from code-switching. Sankoff, Poplack, and Vanniarajan (1986, p. 3) posit that "it is often impossible, in a given sentence, to tell whether a genuine switch has taken place; if a single word from one language appears in a sentence in the other, this may constitute a switch, but it may also be a loanword." Borrowing and code-switching represent different linguistic processes and involve different constraints and conditions. In the case of lexical borrowing, individual words (or compounds functioning as single words) from the donor language are repeatedly used in the host or recipient language until they become fully assimilated and indistinguishable from the native vocabulary.

In addition to frequency of occurrence, loanwords have generally achieved recognition and acceptance. Loanwords typically indicate some new cultural or technological concept or refer to some established notion in a new way. Preference on the part of speakers for simpler

lexical items to express the same referent and a desire for synonyms to distinguish registers has been proposed as motivation for borrowing. It has also been proposed that bilingual ability and language contact are key predictors of lexical borrowing (Mougeon et al., 1985; Poplack, Sankoff, & Miller, 1988; Sankoff, Poplack, & Vanniarajan, 1986).

Morphemic Mouth Movements

Modality shapes lexical borrowing between a signed and spoken language, leading to unique phenomena—for example, lexicalized mouth configurations. Davis (1990a, b; 2003) described how the mouth is used to convey linguistic meaning during ASL interpretation, whether in the rich articulation of ASL non-manual signals (such as adjectives and adverbs) or in the visual representation of certain English words (primarily nouns). The rich use of morphological mouth configurations appears to be a major defining characteristic of intensive language contact between a signed and spoken language and is an example of simultaneous code-mixing (cf., Davis, 1990a; Lucas, 2001; Lucas & Valli, 1992). Rather than sequentially switching from one language to the other, certain features of both languages are produced simultaneously. For example, the lexicalized English mouth movements that accompany some ASL signs (e.g., LATE, HAVE, WANT, LIKE, FINISH, WHO, etc.). In contrast, ASL mouthing bears no apparent relationship to English (e.g., the adverbial modifiers MM, TH, PAH, CHA, etc.). For linguistic descriptions, see Bridges and Metzger (1996), Davis (1990, 2003), and Marshcark, LePoutre, and Bement (1998).

Mouth patterns similar to those found in ASL appear to be evident in other signed languages. Boyes-Braem and Sutton-Spence (2001) have edited a book on the use of the mouth in European sign languages and report broad consensus among the contributors that there are at least *two* clearly identifiable types of mouth patterns in sign languages. As these researchers put it: “Mouth patterns used in a sign language may be derived from a spoken language or they may have formed from within the sign languages and bear no relation at all to the mouth movement of a spoken language” (p. 1). European researchers refer to the patterns related to spoken languages as “mouthings” and patterns from within signed languages as “mouth gestures.” Preliminary research suggests that the movements of the hand and body drive (and are synchronized with) the movements of the mouth—that is, mouthings borrowed from the spoken language are restructured to fit the patterns and constraints of the signed language (cf. Bergman & Wallin, 2001) and “mouth gestures derive from the actions of the hands” (Woll, 2001, p. 87).

Lexicalized Fingerspelling

Scholars have argued that fingerspelling, by its very nature, is a signed language phonological event (e.g., Davis, 1989, 1990a & b; Lucas & Valli,

1992; Mulrooney, 2002; Padden, 1991; Padden & Gunsauls, 2003). Battison (1978/2003) first described and analyzed the process of English words becoming “fingerspelled loan signs” and hypothesized that a “borrowing” occurred when fingerspelled English words were made into ASL signs. He analyzed the lexical restructuring of 93 “fingerspelled loan signs” such as #YES, #JOB, #BACK, #WHAT, #EARLY, #DOG, #RARE, etc.⁵

Davis (1989) and Lucas and Valli (1992), following an idea originally made by S. Liddell (personal communication, 1989) argued that fingerspelling is essentially an ASL phonological event (prior to this, the assumption was that fingerspelling was English). Therefore, the representation of English with fingerspelling entails lexical restructuring and is a productive lexicalization process in ASL. In a pattern parallel to lexical borrowing, an English word can be fingerspelled repeatedly until it becomes an ASL sign. In other words, a fingerspelled word can undergo systematic phonological, morphological, and semantic changes—that is, the word eventually becomes an integral part of the ASL lexicon. This suggests that ASL fingerspelling is a rich and productive way to represent English literacy events and to derive new ASL lexicon.

Initialized Signs

ASL fingerspelling is used to represent abbreviations and acronyms commonly used in professional, technical, and educational contexts. In addition, fingerspelled letters may be used to “initialize” the citation form of a sign to correspond to the first letter of an English word that has the same or similar connotation. According to Padden (1998, p. 41) “initialization is one of the most productive word-building processes in ASL, used widely for technical or professional purposes.” The linguistic process of sign initialization appears to be highly patterned and widely used in the adult Deaf Community. Some initialized signs are used primarily by individual consumers in a specific setting (e.g., occupation or profession related).

Initialized signs are also ubiquitous in educational contexts. English-based signing and transliteration rely heavily on sign initialization. However, overgeneralization of this linguistic feature and violation of morpheme structure constraints are a concern and can lead to misunderstandings (which are an example of interference). This happens when other consumers and interpreters are expected to know the initialized signs that were created for a specific context without the benefit of preconferecing. Educational interpreters need to be aware of the linguistic and sociolinguistic processes that govern sign initialization and how this feature is generally used by members of the ASL signing community. For example, Kelly (2001, p. 48) cautions transliterators to follow the initialized signs already established by deaf adults and that “if an initialized sign is created, then that sign should remain in that

specific context and not be used in another setting without being properly established.”

CODE CHOICES AND CONSEQUENCES IN THE EDUCATIONAL CONTEXT

The types of code-switching and lexical borrowing characteristics of bilingual discourse are also available to interpreters as a linguistic strategy (see Davis, 1990a, 2003; Napier 2002a & b, and this volume). More research is needed to account for the range of coding systems intended to represent English that are commonly used in educational contexts. In addition to conventional orthographic means, finger-spelling, cued speech, initialized signs, and English-based signing may be used. There may also be times when the interpreter is required to transliterate or sign and speak simultaneously. These coding mechanisms for English comprise the general linguistic repertoire of educational interpreters who may be expected to apply them to varying degrees depending on numerous educational and sociolinguistic factors. During a typical day, interpreters are faced with making frequent linguistic choices and decisions about the approach they take to interpreting work. Freelance interpreters enter a wide range of settings and encounter a variety of topics and participants from diverse backgrounds (social, economic, educational, cultural, and sociolinguistic). For many interpreters, such variety may have been one of the things they found most appealing about the interpreting profession.

Interpreters working in specialized settings (e.g., educational, legal, or medical) are faced with making critical decisions about language choice and interpreting approaches on a continual basis. The nature of interpreting work involves multiple contexts and a variety of participants, with demands arising from several sources. Some demands stem from the languages or communication modes being used, and others from non-linguistic factors, such as environmental, interpersonal, and intrapersonal demands. Dean and Pollard (2001, and this volume) offer a cogent way to sort through these demands. This approach helps interpreter practitioners and educators describe the source of these demands and encourages effective decision-making.

During a single day, interpreters may be called upon to translate, interpret, transliterate, or “code” English in various visual-manual forms (i.e., transcodification). The pressures in the educational domain for the development and maintenance of English literacy lead to demands for literal English coding and transliteration. This raises issues concerning language policy and planning, language dominance and cultural oppression, and how much consumers understand the translation/interpretation/transliteration process. This also raises such

questions as “At what age are deaf children best served by educational interpreters?” “How are deaf children taught to work with an interpreter?” (for further discussion of issues in educational interpreting, see Fleetwood, 2000).

The Question of Best Practice

Challenges have emerged from recent legislation in several countries, the educational inclusion reform movement, and the ever-increasing consumer demands for qualified interpreters. Before delving into the wide array of code choices that are evident in educational contexts, it is informative to see what researchers have said about the sociolinguistic nature of interpreting work, particularly in educational contexts (Cokely, 1992, and this volume; Foster, 1989; Harrington, 2000; Johnson, 1991; La Bue, 1995, 1998; Ramsey, 1997, 2000; Winston, 1990, 1994, 2004). This research suggests that deaf students, even with support from interpreters, may become unintentionally marginalized participants in the educational mainstreamed context. Notwithstanding this issue, Seal provides the following overview:

The scope of practice for educational interpreting is both broad and deep. Any teaching-learning situation can be an educational interpreting situation. Consider a 40-year-old taking scuba diving lessons, a 25-year-old in a Lamaze class, a 62-year-old taking “Alternatives to Smoking” classes, or an 8-year-old in a summer soccer camp. Educational interpreting can and does occur in each of these settings; but only one setting, the school setting, provides a scope of practice that can include units on scuba diving, natural childbirth, the dangers of smoking, and the basics of soccer in the same 6-hour day that also includes units in mathematics, reading, writing, and on and on. Educational interpreting itself is *all-inclusive*. (2004, p. 6)

Adding to the complexity of educational contexts is the fact that children who are deaf represent a very heterogeneous sociolinguistic group. Contributing to this linguistic variation are factors relative to hearing loss (e.g., degree and age of onset), family background (signing/non-signing, deaf/hearing parents or siblings), and educational placement (full inclusion, mainstreaming, school for the deaf, etc.). The high degree of language variation found among deaf children is also evident in the general Deaf community. Thus, the microcosm of the classroom is reflected in the larger linguistic community of deaf adults. In other words, many of the consequences that emerge from educational placement and communication practices continue well into adulthood (see Marschark, Sapere, Convertino, & Seewagen, this volume).

The Need for Adequate Preparation

Current trends in educational placement of deaf children necessitate interpretation in multiple languages (e.g., ASL, English, and even Spanish or other languages if necessary) and through multiple communication modes (e.g., manual, oral, written, and electronic media)—thus the need for highly trained and qualified educational interpreters. As the situation dictates, the need may arise for translation, interpretation, transliteration, or transcoding (e.g., cued speech or manually coded English [MCE]). One of the greatest challenges facing Interpreter Preparation Programs (IPPs) in the United States is selecting qualified applicants and preparing interpreting students who are proficient in both ASL and English (and there is also an ever-increasing need for interpreters who are fluent in Spanish). Only a small number of applicants are truly ASL-English bilingual.⁶

Regardless of degree type (Associate or Bachelor), formal interpreting preparation typically takes place in a 2- to 3-year time frame. Given such time constraints, priority is given to language preparation, teaching about the interpreter's role, code of ethics and business practices, interpreting and discourse processes, and interpreting practice. Thus, students are faced with acquiring ASL proficiency, improving English skills, and learning to interpret during a relatively brief degree program. Considering the wide range of sociolinguistic variation in educational settings and within the larger Deaf Community (e.g., gender, age, ethnic, regional, and educational), most IPPs are most concerned with teaching individuals to become skilled interpreters in a wide a range of settings. However, a significant number of graduates find jobs in educational contexts that necessitate the ability to transliterate and to work with English-based sign systems.

Most IPPs do not focus on a particular specialization, nor do they concentrate on teaching transliteration or manually coded English. Interpreters are trained as generalists, which means they face acquiring specialty skills in the field, through continuing education, preparation for certification, or additional degree studies. For example, it is not uncommon for some IPP graduates to also have other degrees (e.g., teaching or law degrees) or for those with Associate degrees in interpreting to subsequently complete a Baccalaureate degree in interpreting. To address the gap between preparation and entry into the field, Dean and Pollard (this volume) offer a problem-based approach to interpreter preparation and new approaches to interpreter training through observation-supervision. Most interpreter educators and practitioners recognize that it is essential that preparation be maintained in the field along with continuing education and mentoring. The need for higher education and more rigorous preparation is reflected in the

degree requirement passed at the 2003 Registry of Interpreters for the Deaf (RID) Conference in Chicago.⁷

What Is Transliteration?

Because transliteration is most commonly found in the educational interpreting arena, it warrants discussion. In the United States, transliteration is the label used to account for the way interpreters attempt to visually represent English words and grammar. The recognition of English-based (i.e., literal) renditions can be traced back to the emergence of the interpreting profession, prior to the understanding of the underlying psycholinguistic processes (that continue to evolve along with the argot). Since the establishment of the RID national evaluation and certification system for sign language interpreters in 1972, candidates have been awarded either interpreting and/or transliterating certification (see Cokely, this volume).

Winston (1989) conducted the first in-depth linguistic analysis of transliteration work. Her research described a complex combination of ASL and English features that appear to be a conscious strategy used by interpreters. Winston proposed that transliteration balances the pragmatic, linguistic, aesthetic-poetic, and ethnographic goals of translation work. This suggests that transliteration is the ability to incorporate ASL features in English word order. More recently, Sofinski, Yesbeck, Gerhold, and Bach-Hansen (2001) conducted an in-depth linguistic analysis of the transliterated output of 15 educational interpreters. For the study, Sofinski and colleagues borrowed the concept of two different types of Simultaneous Communication (SimCom) proposed by Stewart, Akamatsu, and Bonkowski (1988): *speech-driven*, where primary emphasis is given to the spoken English portion of the linguistic output, and *sign-driven*, where primary emphasis is given to the meaning, or semantic base, of the signed portion of the linguistic output.

The results of Sofinski, and colleagues' study (2001) were that interpreters rendering a transliterated product can be divided into at least two groups: sign-driven and speech-driven. A third hybrid group (a mixture of both) also emerged. This suggests that transliteration parallels what other researchers have found in SimCom. Sign-driven transliteration incorporates more ASL features (such as those identified by Winston, 1989),⁸ while speech-driven transliteration uses more English features (e.g., constant English mouthing, manually coded English-bound morphemes, predominant use of initialized signs, and English word order). The third group identified suggests that in some cases transliterators switch between signing that is more ASL or English-like.

Some scholars (e.g., Metzger, 1999; Napier 2002a), recognizing that translation, interpretation, and transliteration share similar underlying

processes, borrow the terms “free” and “literal” from spoken-language interpreting to account for the two main forms of interpreter output. Napier (2002a, p. 28) defines “free interpretation” as “the process by which concepts and meanings are translated from one language into another, by incorporating cultural norms and values; assumed knowledge about these values; and the search for linguistic and cultural equivalents.” In contrast, transliteration is described as “literal interpretation,” which means it closely follows the patterns of the source language in the target output. Research conducted by Napier (2002b) on post-secondary educational interpreting suggests that interpreters tend to be dominant in either free or literal translation style, and that some “code-switched” between styles (see Napier, this volume). More research is needed to describe the nature and structure of alternation between “free” and “literal” interpretation, to compare “sign-based” and “speech-based” transliteration, and to identify parallels with spoken-language interpreters.

Kelly (2001) reported that most IPPs focus on language preparation, translation, and interpretation. This follows the general assumption that translation forms the basis for interpreting and that interpretation and transliteration share similar underlying processes (e.g., Davis, 2000). One example of the importance of translation in practice in the educational domain is that interpreters are frequently called upon to provide sight translation (i.e., rendering written texts into signed language). In contrast to signed-language IPPs, most spoken-language IPPs require bilingual proficiency in the working languages as a condition for admission. Signed-language IPPs focus on language preparation, whereas spoken-language IPPs concentrate on the development of translation skills (see Lee and Quinto-Pozos, this volume, concerning issues of language preparation).

Although there is a larger world market for spoken-language translation services, translation-based approaches recognize the importance of developing translation skills as the basis for doing interpreting work. Given the nature of translation work (typically involving frozen texts rather than interpreting live interactions), one would expect students of translation to develop a clearer structural delineation (grammatical and semantic) between the working languages. Generally, translation provides time to produce accurate target language output with less risk of interference from the source language (an issue for simultaneous interpretation). Arguably, after mastering translation, students would be better prepared to consecutively interpret, and then simultaneously interpret. See Russell (2002) for research concerning different outcomes between simultaneous and consecutive interpreting work.

Kelly (2001, p. 2) described transliteration this way: “The task of transliterating is defined as delivering the signed message based on

English grammatical order; basing sign choices on ASL usage, not English gloss; maintaining the meaning and intent of the original English; and understanding that the meaning of the message is more important than the form." Sofinksi (2002, p. 27) pointed out that while recent definitions of transliterating have been expanded to include elements of both English and ASL, the notion of "word-for-sign representations of English using manual communication in English-order" is still central to these definitions. Livingston, Singer, and Abrahamson, (1994) broadened the definition of transliterating to encompass language contact varieties that include both English and ASL linguistic elements.

The rationale for transliteration is that it meets the preferences of a large number of consumers and that federal legislation grants deaf children and adults the right to choose from an array of services that includes interpreting/transliterating. The need for transliteration has been clearly articulated in the literature (cf. Siple, 1997; Napier, this volume). Deaf consumers frequently request transliterating because they want to "see" the English (Kelly, 2001). The need for transliteration raises numerous questions about the role of the interpreter, the interpreting process, and the preparation of interpreters. When should transliteration skills preparation be introduced to students of interpretation? What are the implications of deaf consumers asking to "see" the English? Viera's (2000) survey, for example, suggested that consumers sometimes request transliteration because they want to "learn" English like their hearing peers. How plausible is it that English can be learned through transliteration? How is the interpreter's role to be delineated in educational contexts? Do interpreters serve as linguistic change agents? To what degree is transliterating the product of the requirement to render the message "simultaneously" to an audience who has some degree of English proficiency (or who may be striving for that goal)?

These questions are not raised to minimize or dismiss a deaf person's right to request transliteration. Rather, it becomes a question of how to prepare students of interpretation to accommodate these differences. If the goal is to "see" and "learn" English, when might one consider the use of real-time captioning services rather than transliterating? The expressed desire of deaf consumers to "see" English is consistent with the increase in requests for real-time captioning, although that increase may be the result of the lower cost of text-based services than interpreting. Consumers would benefit from in-service workshops that explain interpretation and transliteration processes, demonstrate the differences between interpreting and transliterating, and discuss the role of the interpreter/transliterator. How often do deaf children or even adults using interpreters have access to this type of information? Can the need for interpreters be replaced by electronic

means of communication? What are the nature, structure, and motivation for switching between sign-based and speech-based forms?

English-Based Signing

In addition to transliteration, it is also highly probable that interpreters in educational settings will encounter a variety of English-based signing—collectively referred to as manually coded English—a product of total communication philosophy. Garretson (1976, p. 300) defined total communication as a “philosophy incorporating the appropriate aural, manual, and oral modes of communication in order to ensure effective communication with and among hearing impaired persons.” The assumption is that deaf children will acquire English by “seeing” it on the hands, and thus make acquisition of reading and writing English accessible. In practice, the total communication philosophy typically is interpreted to mean that spoken English is represented by a manual code, with each sign intended to correspond to each spoken word. English-based systems borrow heavily from the ASL lexicon, but grammatical structure and sign meanings follow English. ASL signs are altered and new signs are sometimes invented to represent English morphology (oftentimes at the expense of ASL morphology and semantic accuracy). In sum, MCEs are a mixture of signs borrowed from ASL and signs invented to represent English words and morphemes. Again, the signing products of the educational arena have implications for interpreting preparation and practice. The effectiveness and “naturalness” of these English-based sign systems in the education of children who are deaf have been approached from different research perspectives and continues to be a source of ongoing debate (cf., Ramsey, 1989; Schick, 2003; Schick & Moeller, 1992; Supalla, 1991; Wilbur, 2000, 2003).

Though a generation of deaf learners has been taught using artificial sign systems, there has not been a significant increase in literacy scores since the inception of these systems more than three decades ago (see Marschark & Spencer, 2003, for an extensive compilation on the subjects of language, culture, literacy, and other educational issues). On this subject, Akamatsu, Stewart, and Mayer (2002, p. 230) write: “It is arguable as to whether English in a manual form is an apt, or indeed accurate, descriptor of the forms of communication that occur in classrooms because there is considerable variation in how much of the English language is actually represented on the hands.” Simply put: What does it mean to “see” English? How does one acquire a spoken language without having ever heard that language?

In reviewing the research on bilingualism and literacy, Mayer and Akamatsu (2003, p. 144), along with other researchers, posit that other “compensatory strategies” can potentially be used to facilitate deaf

learners' access to spoken-language literacy. They propose two types of compensatory strategies: those that are speech-based, such as "contact sign, mouthing, or mouthing in conjunction with speech, fingerspelling, or sign"; and those that are sign-based, such as "glossing and fingerspelling." According to Mayer and Akamatsu (2003, p. 144), "This potential needs to be investigated with respect to how, and how well, these strategies mediate the literacy learning process, particularly with respect to how they might operate in concert to support the process of learning to read and write." See Supalla, Wix, and McKee (2001) for a discussion of print as the primary source of English for deaf learners.

Sign-Supported Speech

Signed language linguists have long considered "artificially" invented manual codes for English problematic. Signed and spoken languages are considered "natural" if they (1) develop naturally over time, (2) are acquired through an ordinary course of language acquisition, and (3) are organized according to universal and independent patterns of organization (Stokoe, 1960 cited in La Bue, 1998). Natural language development and acquisition patterns are not evident with sign systems developed by committee and enforced by educational policy. Johnson, Liddell, and Erting (1989) use the term "Sign Supported Speech (SSS)" to encompass MCE and the practice of speaking English while simultaneously signing (i.e., SimCom). In one of the first studies on this subject, Marmor and Petitto (1979) found that SimCom made it extremely difficult for a group of teachers to produce accurate signs and speech. Their research showed that the signed message suffered the most, with the omission, misrepresentation, or misuse of signs that were critical to the meaning of the message. SSS (in the form of MCE or SimCom) appears to "bypass the linguistic, syntactic and semantic patterns associated with signed languages" (La Bue, 1998, p. 9). What language do deaf children perceive and acquire by attempts at representing English through SSS? More research is needed to determine how accurately SSS can represent English in the hands of a highly skilled signer. See Cokely (1990) for further discussion of communication modes—especially a comparison of SimCom and interpreting.

Arguably, the lack of a strong ASL linguistic foundation shapes these outcomes. Based on extensive observational and evaluation data, Schick (2003, p. 219) points out that "teachers and programs differ in how faithfully they represent English via a sign system because of philosophical reasons and less than fluent signing skills." Schick also pointed out another major issue is that children typically learn MCE from hearing educators. This begs the question: Who are the primary linguistic models for children who are deaf—the deaf child's caregivers, members of the educational support team including interpreters, and/or the

children's peers? The fact that MCE is a product of "language by committee" and school environments (in contrast to the home and community) diverges from the linguistic principles and acquisition patterns evident in natural languages of the world, thereby raising questions and concerns about its efficacy. This also raises sociolinguistic questions concerning linguistic identity and socialization. For a full account of MCEs, see Bornstien (1990), Schick (2003), and Wilbur (2003).

Approaching the MCE question in terms of the grammatical elements that work well within the visual system and from what deaf children find learnable, Schick concluded:

When English grammatical structures are converted to a visual form, as with MCE, children appear to have a great deal of difficulty acquiring certain aspects of it, despite special teaching and support. Specifically, they have difficulty acquiring the functional categories and relatively simple morphology of English and produce it in a limited, fragmented manner. This may be due to the restricted input they receive, and the issue of variations in input makes interpretation difficult. (2003, p. 228)

Like researchers who approached this question before her (cf. Gee & Goodhart, 1985; Gee & Mounty, 1991; Singleton, Supalla, Litchfield, & Schley, 1998; Supalla, 1991), Schick concurred that "there may be something about making a spoken language into a visual one that is inconsistent with how visual languages work."

To date, Wilbur (2003) has provided the most extensive linguistic description of what distinguishes naturally evolved signed languages from artificially created signing systems and an overview of the research. She described how natural signed languages are multilayered and make use of multiple manual and non-manual articulation channels (another way of saying that ASL is morphologically complex in ways significantly different than English). Research conducted by Wilbur and Peterson (1998) suggested that signed English lacks the linguistic depth evident in natural sign language and does not have linguistically specified non-manuals of its own. Remarkably, researchers (most notably, Supalla, 1991) have found that deaf children being taught MCE with little or no exposure to ASL frequently enrich their own signing with ASL-like features (classifiers, verb agreement, and spatial mapping). Schick (2003, p. 228), among others, suggests that "this may indicate a core property of visual languages, in that some elements may be able to emerge via gesture, albeit in a rudimentary manner that is not equivalent to the rich, structured morphology of mature ASL." According to the principles that linguists call Universal Grammar, the human brain is suited to the acquisition and use of any language to which a child is exposed regardless of modality, as long as the linguistic form is compatible with certain perceptual and

production constraints—that is, it is easy to use and learn (see Fischer, 1998; Lillo-Martin, 1997; Singleton, et al., 1998). Artificially developed signing systems appear to violate these linguistic constraints. According to Wilbur (2003, p. 343), “It is Signed English that demonstrates the importance of the linguistic evolution process because it lacks what natural languages have: efficiency in the modality.”

Given the variety of invented codes (including cued speech) involved in interpreting, it would be difficult to prepare students of interpretation for a particular context or to teach any one system that may be encountered at the entry level of the profession. It does seem essential that students of interpreting understand the linguistic underpinnings of “natural” language acquisition and the educational objectives that these contrived systems attempt to achieve. During interpreter preparation, students should be introduced to signed English approaches, review the research on the subject, and evaluate these approaches objectively, following principles of linguistics and language acquisition (specifically, psycholinguistics). If a child or school requires the use of a specific sign system, it is often left up to the individual interpreter to decide if they are qualified for such an undertaking—thus, the need for more meaningful evaluation and field supervision.

REDEFINING THE ASL-ENGLISH CONTINUUM

Given the wide range of code choices encountered during interpreting work, it is useful to reanalyze the traditional continuum used to describe signed-spoken language contact. Woodward (1973) first coined Pidgin Signed English (PSE) to account for sign language variation along the ASL-English bilingual-diglossic continuum. Thirty years later, the term is still in widespread use. However, the emergence of a pidgin is a rarified linguistic situation typically lasting for only one generation before becoming a Creole.⁹

Valli and Lucas have explained why the PSE label is inaccurate and describe the special conditions from which a pidgin arises:

Usually a pidgin is the result of language contact between the adult users of mutually unintelligible languages. The language contact occurs for very specific purposes, like trade. These adult users are usually not trying to learn each other’s language, but rather a third language that will help them improve their social and economic status. Often, they are removed from the situation in which they can continue to be exposed to their first language. They also may have restricted access to the language they are trying to learn and may end up learning it from each other. This was the sociolinguistic situation during the slave trade in West Africa and the West Indies, when many pidgins emerged. (2000, p. 186)

Another characteristic of pidgins is a greatly reduced morphology and syntax. A Creole emerges when the children born into these situations acquire it and make it linguistically more complex. Thus, the pidgin notion does not accurately portray the language-contact situation in the Deaf Community. A pidgin is the result of a unique and unstable linguistic situation that represents only one of the numerous possible outcomes of language contact (e.g., bilingualism, lexical borrowing, code-switching, cod-mixing, interference, foreigner talk, convergence, mixed systems, and Creoles).

Lucas and Valli (1992) did extensive research of ASL-English contact and found evidence of code-switching and lexical borrowing. They also found linguistic phenomena unique to sign- and spoken-language contact, such as fingerspelling, fingerspelling/sign combination, mouthing, CODA (children of deaf adults)-speak, and contact signing (code-mixing). They describe a "third system" called "contact signing," which is distinguished by *code-mixing* (see Lucas & Valli, 1992, p. 26). Contact signing is the consequence of intensive contact between English and ASL and has features of both languages. The contact variety (contact signing) gets used by deaf people with hearing people, and by deaf people with each other. Contact signing is described as follows by Valli and Lucas (2000, p. 188): "Its linguistic features include English word order, the use of prepositions, constructions with *that*, English expressions, and mouthing of English words, as well as ASL non-manual signals, body and gaze shifting, and ASL use of space."

Lucas and Valli's use of the "third system" label to describe this phenomenon is similar to Selinker's (1992) notion of "interlanguage." Finegan provided the following account of interlanguage:

Some researchers view second-language learners as developing a series of interlanguages in their progression towards mastery of the target language. An interlanguage is that form of the target language that a learner has internalized, and the interlanguage grammar underlies the spontaneous utterances of a learner in the target language. The grammar of an interlanguage can differ from the grammar of the target language in various ways: by containing rules borrowed from the native language, by containing overgeneralizations, by lacking certain sounds of the target language, by inappropriately marking certain verbs in the lexicon as requiring (or not requiring) a preposition, by lacking certain rules altogether, and so on. A language learner can be viewed as progressing from one interlanguage to another, each one approximating more closely the target language. (2004, p. 561)

As with all languages, a great deal of variation exists in ASL. Intensive and prolonged contact between English and ASL has resulted in a signed variety used among adults that is best called "contact signing"

(see Lucas & Valli, 1992, p. 100). Most significant is that individuals who use the contact variety appear to be ASL-English bilinguals. Though inaccurate, the PSE label has become commonplace in the field and still appears in much of the professional literature.

Erroneously, many interpreters, teachers, and parents tend to use the PSE term as a “default category” for students who do not sign ASL and do not exhibit complete grasp of one of the manual codes for English (Ramsey, 2000). The “contact sign variety” is not a pidgin or English, and the PSE label is not helpful since it implies the absence, rather than the presence, of language. Central to this debate is language-acquisition base—that is, most children who are deaf do not have English or ASL proficiency. Most caregivers, interpreters, and teachers are not proficient in ASL. Interpreters tend to be the more fluent signers because they are required to complete more sign language preparation and interpreter certification is predicated on language proficiency. Considering these language development circumstances, Ramsey (2000) suggested three probable outcomes for the variety of signing that typically gets assigned the generic “PSE” label: first, the learner signing with ASL as the target; second, the learner signing with MCE as the target; and third, a highly idiosyncratic variety, such as the signing of a late learner who has received delayed or degraded signed input. All this needs to get sorted out from Selinker’s (1992) notions of interlanguage (sometimes called learner’s grammar).

THE CONTRIBUTION OF EDUCATIONAL SOCIOLINGUISTICS

Educational interpreters encounter a wide variety of sociolinguistic challenges (e.g., language variation, pressures to sign English, linguistic interference, lack of language proficiency among participants, the issue of interpreting into the second language, etc.). The research suggests that interpreting is not equivalent to, nor should it be expected to replace, direct discourse or instruction (e.g., La Bue, 1995, 1998; Ramsey, 1997, 2000, 2004; Winston, 1990, 1994, 2004, this volume). There is a need for more ethnographic-based research grounded in educational sociolinguistic theory. For additional perspectives, see Marschark and colleagues in this volume.

To understand the relationship of communication modes and coding strategies to English literacy development, La Bue (1998) studied the interpreting work of educational interpreters in a large, public, middle through high school program (54 deaf and hard of hearing students, 25 instructional staff). Her research focused on the interpreted discourse in a ninth-grade English class, the relationship between literacy learning and classroom discourse, and the educational interpreters’ ability to convey this relationship. La Bue found that instructional

discourse features used by the teacher to prompt student participation critical to development of advanced literacy skills were often lost in interpretation.

Stinson and Lang (1994) also suggested the possibility that direct instruction would be better than mediated instruction through an interpreter. It has been discussed that even college-level students who are deaf and rely on the presentation of lecture material through an interpreter are unable to understand and remember as much information as their hearing classmates who receive the information directly from the instructor (see Marschark et al., this volume). La Bue (1998, p. 11) lists three major reasons explaining why deaf students do not comprehend as much using an interpreter: first, the demands of simultaneous interpretation (i.e., processing time); second, deaf students vary in their English and ASL competencies (i.e., language contact variety); and third, "the nature of the signed medium is visual and cannot represent many sound-related literacy-learning practices, such as letter/sound associations or practicing discourse styles that correlate to written composition" (i.e., transliteration). La Bue (1998) suggests that deaf students who succeed academically are fluent in both English and ASL. There is a need for additional research to identify the relationship of sign-based coding strategies (e.g., mouth-ing, glossing, and fingerspelling) to the development of English literacy skills (see Mayer & Akamatsu, 2003; Singleton et al., 1998; Supalla et al., 2001).

SUMMARY AND CONCLUSIONS

Sorting out language-contact phenomena is a notoriously difficult endeavor. Cross-linguistic and cross-modality differences between signed and spoken language and the coding approaches used in educational contexts make this an even more challenging endeavor. For example, the assumption behind signed English is that deaf children will be able to acquire English by "seeing" it on the hands, making acquisition of reading and writing accessible. However, the research does not support this assumption. The linguistic outcome of manually coded English is a mixture of signs borrowed from the lexicon of ASL and signs invented to represent English words and morphemes. Signed-language linguists have long considered manual codes for English developed by educational committee and enforced by policy problematic because they deviate from universal language-acquisition patterns found in natural language.

A concern in language contact research, and one that has particular relevance to the interpreting field, is to distinguish transference (i.e., rule-governed linguistic behaviors such as code-switching and lexical borrowing) from interference (the deviation from the rules or norms of

either contact language due to inadequate language acquisition). Interpreters may use code-switching or mixing as an interpretation strategy (transference), but this may also be an outcome of interpreting into one's second language (i.e., ASL is the second language for most interpreters and for most consumers of interpreting). Moreover, the constraints imposed by simultaneous interpretation (the *modus operandi* for signed-language interpreters) contribute to interference between the contact languages.

Just as translation forms the basis for interpreting work, the same basic underlying processes are shared by interpretation and transliteration. Depending on various factors, interpreters may provide a freer and more idiomatic equivalency, or one that is more literal (i.e., following the source language forms very closely). Similarly, interpreters tend to alternate between sign-driven and speech-driven renditions. For speech-driven renditions (literal/transliterated), the sign language provides the visual medium for coding the spoken language. For example, ASL fingerspelling encodes English words; handshapes are used to cue speech; signs are initialized for English synonyms; and the ASL lexicon is juxtaposed onto the English morpho-syntactic system. Consequently, there is a range of coding choices used to represent English visually—for example, lip movements, orthographic means, and the aforementioned manual coding devices.

The research presented thus far strongly suggests that fluent bilingual signers (including many deaf people, CODAs, interpreters, etc.) alternate between sign-based and speech-based signing. One of the major outcomes of signed-spoken language contact is lexical derivation in the form of fingerspelling and mouth configurations. Both appear to provide an excellent means of representing spoken-language literacy events and are a productive means for lexicalization. Further research is needed, but at least in American, Australian, and European sign languages, the mouth is used in similar ways. There appear to be three main types of mouth movement that accompany sign language: first, there are mouth movements that bear no obvious relation to spoken language (called "mouth gestures" by some European sign language researchers and "non-manual markers" by some ASL researchers); second, there are lexicalized mouth movements derived from spoken language that always accompany a particular sign; third, there is an alternation of the first two types of mouth movement, with the simultaneous mouthing of spoken language words (i.e., glossing or shadowing) within lexical, phrasal, and discourse boundaries.

Finally, while sign language interpreters may demonstrate these varieties of fingerspelling and mouthing, they are also bound by somewhat different conditions. First, the spoken language is generally their native or primary language; second, when they are listening to the spoken language, they are attempting to simultaneously interpret into

the signed language, which is typically their second language. We know from second-language acquisition research that learners are continually striving for more successful approximations of the target language (cf. Campbell, 1998; and Selinker, 1992). The role of immersion, metalinguistic awareness, and feedback that is both supportive and analytical constitutes some of the major ways to achieve the goal of second-language proficiency.

It is problematic to simply divide linguistic coding according to categories of "natural" and "artificial." Like most linguistic phenomena, things are not that cut and dried. Natural and artificial are relative terms, and there exists a range of code choices across linguistic mediums and communication modes. Generally, there are two main types: The first set of choices is cross-linguistic and results from the intensive language-contact situation (e.g., code-switching, mixing, borrowing), and the second set is the cross-modality nature of signed and spoken language communication (e.g., transliteration and transcodification). These two categories are interrelated and seem more productive and descriptive than simply labeling linguistic choices as being natural or artificial. More research is needed to understand these coding compromises and the linguistic and psycholinguistic constraints of the visual signed-based medium to represent speech-based literacy learning.

There are no simple or obvious answers to questions concerning educational interpreters, and there is a need for more educational sociolinguistic, psycholinguistic, experimental, and ethnographic approaches to the study of interpreting work in these contexts. There may be much we still do not know, but at the same time there are many patterns we can observe and describe. We must recognize the ways that interpreting may or may not enhance learning and provide educational access. In the well-intended campaign for inclusion, deaf students, even with support from interpreters, may become unintentionally marginalized participants in the educational mainstreamed context. Due to factors relative to hearing loss (e.g., degree and age of onset) and family background (signing/non-signing, deaf/hearing parents or siblings), there is a great deal of linguistic variation among children who are deaf. These factors lead to sociolinguistic outcomes that pose a challenge for interpreters and interpreter education. Not only is there potential for the successful transference of meaning between languages, there also may be language "interference" (again, issues of first- and second-language acquisition and difficulties keeping the contact languages separate). Interpreters, like the other bilinguals in an intensive language-contact situation, are faced with the challenge of keeping the contact languages separate (i.e., minimizing interference and maximizing transference).

The main shortcomings for educational interpreting have to do with the time and processing constraints imposed by simultaneous interpreting, inadequate first-language base among the participants due to

language delay and education policy, and differences between signed- and spoken-language modalities (i.e., the signed medium is visual and cannot represent many sound-related literacy-learning practices). We as interpreter educators, researchers, and practitioners must be aware of these shortcomings, recognize their effects on the participants, and strive for the highest level of language access and equivalency. A strong language base in the contact languages, an awareness of contact signing, and the skill to assess and address the interpersonal communication needs of the participants are tantamount to successful interpretation.

NOTES

1. Clyne (2003, p. 3) reports that the field of language contact studies has evolved into four major areas of research: (1) grammatical aspects of code-switching (Jacobson, 1998, 2001); (2) processing models of bilinguals (De Groot & Kroll, 1997; Nicol, 2001); (3) code-switching in conversations (Auer, 1998); and (4) reversing language shift (Fishman, 2001).

2. Davis (1990b, p. 312) analyzed and described three strategic ways that interpreters represent English words or phrases in the visual modality during ASL interpreting: (1) pronounced mouthing of English words (without voicing) while simultaneously signing ASL; (2) prefacing or following an ASL sign with a fingerspelled word; and (3) marking or flagging a fingerspelled word or the signed representation of an English word or phrase with certain ASL lexical items—for example, the index marker, the demonstrative, quotation markers, etc.

3. A single term in English may convey multiple meanings, whereas ASL may require different signs for the different meanings, or vice versa. For the English word “call,” for example, ASL requires different signs to convey different meanings (e.g., NAME, CALL-BY-PHONE, CALL-BY-TTY, TO SHOUT OUT, TO SUMMON, etc.) *Signing the term literally, instead of idiomatically, would be a form of interference.*

4. Here is another example of interference: The ASL verb GO-TO is reduplicated, and the interpreter voices “go, go, go,” rather than the appropriate English translation—“to frequent.”

5. The convention followed here is that “fingerspelled loan signs” are written in upper-case letters preceded by #.

6. These observations are based on this author’s 25 years of faculty service in IPPs at various colleges and universities in the United States. Furthermore, the issue of bilingual proficiency is frequently discussed by interpreter educators in forums such as the Conference of Interpreter Trainers.

7. For more details, see degree requirements at the Registry of Interpreters for the Deaf, Inc.’s website (<http://www.rid.org>).

8. Sofinski and colleagues (2001) analyzed ten features of *sign-driven* transliteration (adapted from Winston, 1989): sentential rather than textual shadowing; the use of non-manual signals in lieu of consistent English mouthing (i.e., adverbials); listing techniques; use of token and surrogates;

classifier predicates; inflected verbs; ASL semantic-based signs; base/root lexical form; rhetorical questions; and phrasal restructuring.

9. See Fischer (1978) for discussion of sign language and Creolization.

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