#### Adverbials, Constructed Dialogue,

#### and Use of Space, Oh My!:

#### **Nonmanual Elements Used**

### in Signed Language Transliteration

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One widely held view in the profession is that two different disciplines are practiced within the work that signed language interpreters do: "Interpretation refers to the process of changing messages produced in one language immediately into another language" (Frishberg, 1990, p. 18) whereas transliteration refers to occasions when an interpreter translates from a signed message into spoken English and alternately also "gives the viewer English in a visually accessible form" (p. 19). Often, the voice-to-sign component is used to differentiate these two disciplines. By definition, the target language for voice-to-sign interpretation is American Sign Language (ASL). However, no comparable consensus exists with respect to the target for transliteration (Sofinski, Yesbeck, Gerhold, & Bach-Hansen, 2001).

Early descriptions of transliterating unequivocally state that the target is a form of manually coded English (MCE) (compare Frishberg, 1990; Siple, 1997; Solow, 1980). More recent descriptions posit that the product of transliteration incorporates ASL features in English order. The current consensus is that, at the very least, the target for transliterating is certainly not ASL; rather, it is English-based (Defining Interpretation ..., 1996; Frishberg, 1990; Humphrey & Alcorn, 2001; Kelly, 2001; Siple, 1997; Solow, 2001; Stewart, Schein, & Cartwright, 1998).

Stauffer and Viera (2000) sum up the current situation with respect to transliteration this way:

There is no one generally accepted, identifiable definition of translit-

eration in the field of interpretation today. . . . The effect on individuals who prepare to take transliteration credentialing tests is that candidates are left on their own to synthesize the various definitions and descriptions of transliteration with program training and testing expectations. (p. 75)

Although an adequate amount of linguistic research has been conducted to provide a useable description of what ASL (and by extension interpreting) is, the same obviously cannot be said of transliteration. Many questions still linger, including the question pertaining to what language features are contained within an adequate description of transliteration (Sofinski et al., 2001; Stewart, Schein, & Cartwright, 1998).

#### HISTORICAL DESCRIPTION OF TRANSLITERATION

Siple (1997) provides an overview of the definitions, descriptions, and research conducted on transliteration since the mid-1960s. The changes are presented with the background of the various social forces that affected the original description and subsequent modifications of transliteration. By and large, these works are necessarily anecdotal in nature because empirical evidence on signed language and the related field of signed language interpreting was generally nonexistent.

As late as 1990, texts commonly used in interpreter education defined the process of transliteration only in terms of English and MCE (Frishberg, 1990). During the last decade, the work of Winston (1989) has changed the description of transliteration to include the production of "the message in an English-based sign language while maintaining meaning" (Kelly, 2001, p. 18).

The definition of forms of manually coded English (MCE) has remained constant since the early 1970s with one exception—contact signing. Early literature establishes MCEs as a set of invented or contrived manual systems intended to represent English (Bornstein, 1973; Crystal & Craig, 1978), which does not include the naturally occurring phenomenon that Woodward (1973) called Pidgin Sign English (PSE). Lucas and Valli (1992) reanalyzed the phenomenon researched by Woodward and, instead, find a situation of language contact called "contact signing," a nonstandardized mixture of English and ASL features that varies by individual and situation. Some authors categorize contact signing as an MCE (Humphrey &

Alcorn, 2001; Kelly, 2001; Siple, 1997). Others adhere to the original definition of MCE, restricting that definition to contrived manual systems, and they place contact signing into the category of naturally occurring phenomena (Solow, 2001; Stewart, Schein, & Cartwright, 1998).

English word order and English mouth movements are commonly described as English language features that are contained in the products of transliteration (Humphrey & Alcorn, 2001; Kelly, 2001; Solow, 2001; Stewart, Schein, & Cartwright, 1998). English word order occurs in the transliteration product with "minimal changes and English is usually mouthed as spoken in the original English [source] text" (Solow, 2001, p. 14). According to Kelly (2001), "Transliterators also need to be aware of features borrowed from ASL, such as lexical choices, head and body shifting, use of location, verb modulation, and use of facial and non-manual markers" (p. 18).

#### PREVIOUS RESEARCH ON TRANSLITERATION

McIntyre (1986) reported on the analysis of transliteration conducted as part of the 1984 Conference of Interpreter Trainers (CIT). The findings included different strategies that transliterators may use, including (a) omission and (b) addition, the restructuring of information or lexical items, or both.

Siple (1997) provides a historical overview of the development of the definition of transliteration. Within this work, Siple summarizes the findings of previous empirical research done with respect to transliteration. These findings include the following:

- 1. Winston (1989) challenged the notion that transliteration was a simple recoding of spoken English and identified five strategies used by the participant in the study—sign choice, addition, omission, restructuring, and mouthing.
- 2. Siple (1993) identified and described the strategy of midsentence, between-sentence, and between-topic pausing in transliteration.
- 3. Siple (1995) provided greater detail with respect to Winston's identification of additions as a strategy used in transliteration, further describing the strategy as being used to achieve cohesion, emphasis, clarification and modality adaptation.

Sofinski et al. (2001) identified nine core features of voice-to-sign transliteration by educational interpreters. These researchers posited that at least two different groups of transliteration—sign-driven and speech-driven—are based on these core features.

Anecdotal reports suggest that, just as the product of one competent interpreter differs in form from the product of another competent interpreter, consumer preferences also vary. In fact, the task to anticipate the signed language interpreting preferences of one individual according to those expressed by another is very difficult, if not impossible, to achieve.

Viera and Stauffer (2000) conducted a study on the preferences of consumers of signed language transliteration. The responses parallel earlier definitions of *translation* and *transliteration*. One reported preference is representative of the general consensus: "All words that appear on the mouth are exactly as spoken; no transposition of words or terms" (Viera & Stauffer, p. 94). The respondents further explained that they did not want ASL, rather, "someone who moves his/her mouth and is expressive" (p. 94).

Gonzalez (1981) wrote in support of the need for oral transliteration. In her justification, she referenced the training of signed language interpreters and how they are "taught silently to mouth what they sign" (p. 1). Gonzalez describes the problems that are associated with a consumer of oral transliteration attempting to access the English message through the mouth movements of a signed language interpreter as being part of the complex process used by a signed language interpreter:

It is, and naturally so, very difficult to concentrate also and adequately on *saying* each word clearly. As a result, and usually without the signed language interpreter being aware of it, many words are only partially formed on the lips; others are left out altogether (especially when they are not signed). This means the person trying to speechread gets bits and pieces, rather than whole words, connected phrases, and sentences. Further, since speechreading "invisible" words and words that look alike depends heavily on the context, it is extremely important that *all* the words "be there." (Gonzalez, 1981, pp. 1–2, emphasis in the original)

#### **METHODOLOGY**

Part of the initial motivation for conducting this study was to ascertain whether or not sign language transliteration could be effective in the K-12 setting. To this end, a 10-question instrument was designed to assess each student's knowledge of the specific program information contained in the source videotape (e.g., the Technology Assistance Program [TAP] and the Virginia Relay Center [VRC]). The on-site coordinator administered this instrument to each student immediately before and then again immediately after exposure to the sign language transliteration event. The sign language transliterators were informed of this procedure before the interpreting event. However, none of the sign language transliterators were made aware of the specific items included in the pretest-posttest instrument before videotaping.

#### **Participants**

At the time of this study, the participants were either full-time employees of or full-time students enrolled in the same county public school system in Central Virginia. Each individual volunteered his or her time to take part in the study; no participant received renumeration for his or her valuable time and effort.

Signed language transliterators. The selection of the interpreters adhered to criteria determined in conjunction with the administration of the local education agency (LEA). The pool consisted of full-time educational interpreters whom the LEA uses and who satisfy the minimum criteria for signed language interpreters as established in Virginia Department of Education (VDOE) regulations (i.e., possession of a valid Virginia Quality Assurance Screening [VQAS] credential, Level III or higher). Each interpreter in this pool was then asked whether he or she would be willing to be involved in a study on the effectiveness of signed language transliteration in the K–12 setting. From those in the pool who agreed to participate, one transliterator was selected for each of the five groups of students who are deaf or hard of hearing.

At the time of the study (March 2000), four of the five full-time K-12 educational interpreters participating in this study possessed a valid VQAS Level III credential in transliteration. The fifth participant possessed a valid NAD Level IV credential.<sup>1</sup>

On-site coordinator. Integral to the completion of this study was the identification of the on-site coordinator at each of three schools (elementary, middle, and high school). The resource teacher for the hearing impaired students at each school was selected to perform in this capacity because of his or her ability to communicate effectively as signers in addition to being native speakers of English. Each on-site coordinator (a) identified potential participants; (b) obtained permission for the students to be involved in the study; (c) consulted with other teachers with respect to the schedule of each child to ensure participation; and (d) placed participants into groups of 3–6 students, resulting in two elementary-age groups, one middle-school-age group, and two high-school-age groups.

Deaf or hard of hearing students. Twenty-one students representing all K-12 grades except for Grades 1, 6, and 11 participated in the study. Criteria for student selection required that the students be enrolled in the county's hearing impaired program and that they have written permission provided by a parent or legal guardian to allow the student's participation in the study.

#### **Apparatus**

A 7-minute-and-45-second videotaped presentation about technology services of the Virginia Department for the Deaf and Hard of Hearing (VDDHH) was produced specifically for use as the source material for this study. (See Appendix 5.A for a transcript of the segment.) The speaker regularly presents on this topic in various settings, including the K–12 classroom. A television with a screen of at least 21 inches was connected to a regular VHS videocassette recorder in each setting. Both the television and the recorder were situated on a portable audiovisual cart. Two camcorders (one regular VHS camcorder and one Super VHS camcorder) were used to record the product of each signed language transliterator.

<sup>1.</sup> Within six months of the conclusion of the study, two of the participants received the RID Certificate of Transliteration [CT]; the other three study participants did not attempt the RID CT assessment. These attempts were independent of the study.

#### **Transliterator Survey**

At the end of his or her participation, each interpreter completed the survey (see Appendix 5.B), which was designed to collect specific demographic information and other information with respect to each signed language interpreter's participation in the study. This information was used to determine that the goal of the interpreter was transliteration and that the interpreter believed the goal had been achieved.

#### **Procedure**

Approximately one week before the date of exposure to the students, each transliterator was provided a copy of the source videotape in its entirety. At that time, the researcher explained that this tape would be the precise source used in the study. Each transliterator was encouraged to become familiar with the material. If any transliterator posed any questions about how to interpret the material (i.e., "What is the sign for —— -," "How would you do ---- "), the researcher replied "I really don't want to influence your product." However, the researcher did indicate that the product should be transliteration, whatever the transliterator considered that type of product to be.

At the time when each transliterator was to produce his or her product, the transliterator entered the room and chose a location to stand. Before the students entered the classroom, two camcorders were set on tripods to face wherever the transliterator had decided to stand, which in every case was next to the television and facing the chairs that had been set up for the students. The cameras were then manipulated to capture not only the transliterator's signing space but also at least part of the television to capture references made by the transliterator to the image on the screen. The beginning of the source tape was then played to set the appropriate volume for the transliterator.

Immediately after the conclusion of the group's exposure to the videotape, the transliterator completed the transliterator survey. The researcher reminded each interpreter to record the identification number of any student who, in the interpreter's opinion, did not attend to the product.

Three variables were used to ensure that the product was signed language transliteration. First, each transliterator completed a waiver form allowing VDDHH to release to the researcher VQAS scores verifying that each transliterator satisfied the minimum requirement established

TABLE 5.1 Total English Words Mouthed (by Segment of Source)

Product	I	2	3	4	5	6	Total/ Percentage	Range
Spoken Source	100	116	100	107	102	116	641/100.0%	100-116
Interpreter E1	70	54	54	61	63	67	369/57.6%	54-70
Interpreter E2	82	60	81	84	80	90	477/74.4%	60-90
Interpreter M1	80	59	68	67	58	70	402/62.7%	58-80
Interpreter H1	69	64	62	62	63	61	381/59.4%	61-69
Interpreter H2	80	72	75	76	77	73	453/70.7%	72-80

by VDOE. Second, the transliterator survey was used to verify that transliteration was the goal of the interpreter. Finally, the videotaped products were rated in accordance with VQAS procedures to ensure that these specific products would not have disqualified any transliterator from potentially achieving at least a VQAS Level III in transliteration, which would satisfy the minimum requirement for K-12 educational interpreters in the Commonwealth of Virginia.<sup>2</sup>

After successfully completing the control process, the researcher analyzed the first half of each of the five transliteration products for nonmanual features. Those features occurring in the mouth channel were synchronized to coincide with the text of the source. Commonalities in the various products were noted. Then, the researcher analyzed in detail a 41-second, 100-word segment of this 3-minute segment to determine the use of mouth movements.

#### **RESULTS**

The researcher recorded the movements of the mouth channel of all five transliterators for the first 2 minutes and 49 seconds of the source material. During this section of the source, the presenter speaks 641 English words. The total number of English words mouthed by each of the five interpreters (see Table 5.1) during the portion of the work related to this same section of the source ranges from 369 to 477.

2. The actual achievement of a VQAS level depends on demonstrating minimal competency in three segments: voice-to-sign, sign-to-voice, and interactive (one-on-one). However, the current study addresses only the voice-to-sign component.

This nearly 3-minute section of the presentation was then divided into 44 structures of which 40 contained independent clauses (e.g., "These are two programs that we offer.") and 4 were lengthy subordinates (e.g., "and over 250 amplifiers for people all over the state."). The mouth movements of each interpreter were then recorded and compared to the actual spoken English words of the source. Although many of the mouth movements that were recorded represented English words that were the same as those words spoken in the source, on several occasions, the product incorporated English words that were not found in the source. In fact, out of these 44 structures analyzed, only one of the five products contained mouth movements representing English words in the same syntactic order, without interruption, as found in the source, and this product produced only one occurrence during this section ("Here, at VDDHH, we offer two programs.").

The researcher then more closely analyzed the data in a 41-second, 100-word segment of this section to categorize the mouth movements made by each interpreter (see Table 5.2). The findings resulted in a more precise tally of mouth movements in three categories: (a) representations of English words, (b) adverbial usage—mouth movements required in ASL to express adverbial information, and (c) omissions of English words in the source.

#### Representation of English Words

The mouth movements that represented English words were grouped into three categories: (a) the replication of spoken English words present in the source; (b) the substitution, on both the lexical and syntactic levels, of English words present in the source; and (c) the addition of English words not found in the source.

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REPLICATION OF ENGLISH WORDS SPOKEN IN THE SOURCE
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The most frequently occurring phenomenon was the replication of the mouth movements related to English words spoken in the source. The occurrence among participants, as represented by English-like mouth movements in the products, ranged from 38% to 63% of the actual source words. An example of virtually every part of speech (e.g., noun, pronoun, verb, adjective, conjunction, etc.) was replicated in the product of all interpreters.

TABLE 5.2 Analysis of Mouth Movements in Segment 3

	TOTAL (English Word)	(Source Word)	(English Word)	(Source Word)	(Target)	(Product)	TOTAL (Source Word)
Product	Representation	-	Addition	Substi- tution	Adverb- ials	Mouth Move- ments	Omission
Eı	54	38	4	I 2	5	59	50
E2	81	63	4	14	5	86	23
М1	68	51	2	15	7	75	34
Hт	62	47	I	14	I	63	39
H <sub>2</sub>	75	49	2	24	2	77	27

Note. (a) Representation = the total number of English words represented by mouth movements in the product; (b) Replication + Substitution + Omission = product manifestations of the 100 English words spoken in Segment 3; (c) Replication + Addition + Substitution + Adverbials = total number of mouth movement items noted in Product.

## SUBSTITUTION OF ENGLISH WORDS SPOKEN IN THE SOURCE

Literal replacement (i.e., a one-for-one exchange of an English word found in the source with mouth movements representing a different English word form in the product) was the most frequently occurring substitution. For example, one section of the source reads, "This amplifier allows people who are hard of hearing to turn up the volume." One of the participants maintains the original lexical choice made by the speaker (i.e., *allows*) whereas three of the interpreters lexically replace *allows* with *let* or *lets* as evidenced by their mouth movements.<sup>3</sup>

This same example provides insight into the interpreting process on a nonlexical level because the fifth product syntactically restructures this structure as the following shown in Example 5.1.

(See Appendix 5.C for an explanation of all transcription formats used in this chapter.)

Examples of common (i.e., occurring in at least four of the five products) lexical replacement that were found within the 41-second segment

3. Winston (1989) identified this strategy as "conceptual sign choice."

#### EXAMPLE 5.1

**Source:** This amplifier allows people who are hard-of-hearing to turn up on the volume.

#### Interpreter E1:

```
Persons hard of <u>hearing</u> can {MM →}

PERSON HARD-OF-HEARING CAN {sh: CL-1 (moves vertically 1-2 inches)}

{bh: CL-Y (stationary) →}

{increase volume of amplifier}
```

include the following: (a) phone for telephone, which occurred in four of the five products during the phrase "talking on the telephone"; (b) can for could (as in "Anybody in the state could apply"), which occurred in all five products; and (c) several different substitutions for anybody (as in, "Anybody in the state"), which included everyone, any person (by two participants), any people, and anyone.

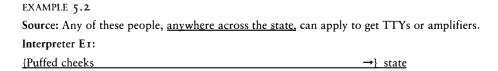
```
ADDITION OF ENGLISH WORDS NOT FOUND IN THE SOURCE
```

Mouth movements found in the product that did not appear in the source were the least frequent category of mouth movements representing English words that were identified in this segment. The most common example co-occurred with a rhetorical question in the product. The source contains the question, "How do you go about getting them?" Three of the products ended with ASL rhetorical questions: (a) "How get that, how?"; (b) "How do you get {an adverbial that is mouthed in conjunction with WHAT-DO}"; and (c) How do you get them, how?"

Another example of an addition occurred in conjunction with a substitution on the syntactic level. When the source used the phrase "people who are hard of hearing" outside of referencing the four categories of individuals eligible for the Technology Assistance Program (TAP), the product of one interpreter rephrased the source as "people can't hear well." This example contains all three types of English word representation that have been identified: (a) replication (e.g., people used in both the source and the product); (b) substitution (i.e., lexical—hear for hearing—or phrasal—can't hear well for hard of hearing); and (c) addition (e.g., can't, well added to the product).

#### **Adverbial Use**

In the source, the following structure was a fertile ground for the addition of adverbials: "Any of these people, anywhere across the state, can apply to get TTYs or amplifiers." During this sentence, four participants incorporated at least one adverbial. One interpreter expressed anywhere across as shown in Example 5.2.



{ALL-AROUND-THERE (sh moves in arc from right to left in front of chest)} STATE

Three other participants, in varied ways, used the same previously established referent (i.e., a list of categories of persons eligible for TAP who are Deaf, hard of hearing, speech disabled, or deaf-blind); they referred to this list and coproduced an adverbial wherein the index finger of the strong hand references "down the list of four categories" (see Example 5.3).

#### EXAMPLE 5.3

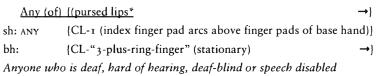
Source: Any of these people, anywhere across the state, can apply to get TTYs or amplifiers.

#### Interpreter M1:

Any people	[Puffed cheeks —————————→]
sh: ANY PEOPLE	{CL-1 (index finger pad arcs above finger pads of base hand)}
bh:	{CL-"3-plus-ring-finger" (stationary) →}

Anyone who is deaf, hard of hearing, deaf-blind or speech disabled

#### Interpreter H1:



#### Interpreter H2:

{(pursed lips*	→) (break	) {(pursed lips—→)
sh: {CL-1 (index finger pad arcs above finger pads of base h	and)}	INCLUDE
bh: {CL-4 (stationary)	→}	

Including people who are deaf, hard of hearing, deaf-blind or speech disabled

\* Interpreters H1 and H2 may have been using "MM," but the data was not definitive.

These three products exemplify another type of syntactic substitution that combines both English mouth movements and adverbial mouth movements. In relation to the phrase "Any of these people," two products incorporated both replication of English words contained in the source and substitution of English form by an adverbial in conjunction with the reference of the established referent (see Example 5.3, products of Interpreters M<sub>I</sub> and H<sub>I</sub>). A third participant substituted the entire English phrase with two adverbials in conjunction with manual features (see Example 5.3, product of Interpreter H<sub>2</sub>).

#### Omission of English Words Spoken in the Source

When the 44 structures were compared with the recorded mouth movements of each of the five products, at least one omission was identified within every structure in each product (with the exception of the one example provided above). For illustration, within the subordinate structure, "so they can hear better when they're talking on the telephone," each interpreter produced between 3 and 7 omissions of English words contained in the source:

```
Interpreter E1—"hear more when talk-talk telephone"
Interpreter E2—"hear better . . . talk on the phone . . . hear better"
```

Interpreter  $M_1$ —"can hear better when you talk . . . on the phone"

Interpreter H1—"can hear better when talking on the phone" Interpreter H2—"They hear more clearly when they use the phone."

On a syntactic level, the above examples show that four of the five products dropped the subject (i.e., *they*) of the clause, which is a pronoun and the antecedent of "people who are hard of hearing."

#### Nonmanual Features Identified Outside the Mouth Channel

Numerous occurrences of nonmanual features occurred outside of the mouth channel. The products of all five participants evidenced the incorporation of three features: (a) direction of eye gaze, (b) constructed dialogue, and (c) a combination of nonmanuals (e.g., eye gaze combined with body shift, etc.) to support the use of space for comparison and contrast.

#### DIRECTION OF EYE GAZE

Common use of eye gaze occurred in many instances across all five products. For example, a shift of eye gaze (i.e., a change in direction of the pupils away from the audience) co-occurred during both betweensentence and between-topic pauses. Eye gaze was also commonly directed toward the location of the hands when establishing or referring to a list of categories (i.e., listing). Eye gaze and head turn directed toward the television screen also served as use of space in referencing the image of the speaker or the type of equipment being discussed.

#### CONSTRUCTED DIALOGUE

Numerous instances of constructed dialogue occurred in all five products. In one instance, all five participants exhibited the various roles expressed in the following passage: "You would type what [sic] is that you have to say. They would read it on their screen, which [sic] you can see the screen on here, and then they would type back to you." One example of constructed action in this passage that related to "and then they would type back to you" uses eye gaze to establish tokens and surrogates as well as body shift and body lean to identify change in speaker role (see Example 5.4).

EXAMPLE 5.4

Source: ... and then they would type back to you.

Interpreter H2:

Then {would type {(pursed lips\*) → } {back}

THEN (point) {CL-4 (keying on TTY)} {TTY-TO (directed to surrogate)} {#BACK (directed to surrogate)}

Then they would type back to you.

\* Interpreter H2 may have been using "MM," but the data was not definitive.

Similar nonmanuals supporting the use of space (i.e., in the establishment and incorporation of token and surrogates) during constructed dialogue occurred in all five products.

Constructed dialogue also occurs in the interpreter products when it is not implied in the source. For example, the source said, "So, when you go home you need to ask Mom and Dad how much they earn." During the interpretation of this passage, three participants assumed the role of the child by means of (a) eye gaze directed at the adult surrogate, (b) head movement directed in conjunction with change in eye gaze, (c) change to first person address of question, and (d) modification in body posture (i.e., like a young child addressing his or her parent). The mouth-channel movements of two of these three products are shown in Example 5.5. The third product involves no adverbial but simply expresses "ASK MOM AND DAD (role shift to child asking parents): HOW MUCH MONEY EARN?"

#### EXAMPLE 5.5

Source: So when you go home you need to ask Mom and Dad how much they earn? Interpreter E1:

 {do-do}
 go
 home
 to- day {you ask} ("mom-dad"

 {WHAT-DO}
 GO-TO
 HOME
 NOW
 DAY
 {ASK-TO}
 {MOTHER^FATHER}
 }(role shift to child asking parents)

{how much } {"mon" } {MM $\longrightarrow$ } {HOW MUCH} {MONEY} {EARN-MONEY}

#### Interpreter M1:

	When	you	go	home	ask	{MM}
#so	HAPPEN		GO-TO	HOME	REQUEST (role shift to ask Mom and Dad)	
						{QUESTION-TO}

COMBINATION OF NONMANUALS FOR COMPARISON AND CONTRAST

The source message "So, the next program that I want to talk about, in addition to the TAP Program, here at the agency we also have the Virginia Relay" indicates a major change in topic in the source. In the corresponding portion of the product, all five products incorporated eye gaze in conjunction with head turn and other nonmanual elements (e.g., pause). Three products emphasized eye gaze in the direction of the audience during a body shift to assume a new role; one contained eye gaze and head turn following the movement of the hands as they "pushed" the TAP Program off to the right-hand side of the signing space; and the fifth product contained eye gaze and head direction after the vertical drop of the hands in producing the sign NEXT-ON-THE-AGENDA.

#### DISCUSSION

After considering the results of this study, one could logically question whether the data examined are examples of what is systemically called signed language transliteration or whether they are signed language interpretation. The transliterator survey (see Appendix 5.B) clearly shows that the interpreters both (a) intended to perform transliteration and (b) in their retrospective determination, reported that these products are representative of their transliteration products. Also, the raters of the VQAS agreed that these products meet the minimum requirement established for K–12 educational interpreters in Virginia for the voice-to-sign transliteration segment (i.e., VQAS Level III). Another important point to note is that, within 6 months of the study, two of the five participants were awarded an RID Certification of Transliteration (CT).4

The mouth movement features identified in the current study reflect the obvious English influence of the spoken English source on all five of the transliterated products. However, descriptions of mouth movements used in transliteration typically identify the goal as being the production of complete English sentences: "In transliteration, cohesive English sentences are visibly presented on the lips, either the exact words from the original text or English paraphrasing of the original text" (Kelly, 2001, p. 16).

The findings of the current study do evidence the production of English-like mouth movements. However, few of these mouth-movement patterns represent complete English sentences. Furthermore, at a point that is less than a minute into the source and immediately following the first major topic change, participants begin a marked difference in the mouth-movement patterns, which reflect less of the source's syntactic structure. Even before this change, however, the mouth movements are not complete English sentences.

For example, about 30 seconds into the source comes the sentence, "The first program, Technology Assistance Program or TAP, is a [sic] equipment program." Four of the five products express the following through mouth movements (an ellipsis represents a physical pause in the mouth channel of the product):

**Interpreter E1:** "First program called TAP or Technology Assistance Program. That equipment program."

**Interpreter E2:** "The first one . . . Technology Assistance . . . we call TAP for equipment program."

**Interpreter M1:** "First program, Technology Assistance Program . . . equipment program . . ."

**Interpreter H1:** "The first, Technology Assistance Program . . . equipment program . . ."

The fifth product expresses the mouth movements shown in Example 5.6.

<sup>4.</sup> The other three participants did not attempt the RID performance test during this time frame.

#### EXAMPLE 5.6

Source: The first program, Technology Assistance Program or TAP, is an equipment program. Interpreter H2:

#### equipment program.

E-QUIPMENT PROGRAM

The first of these two programs is called "TAP," which is an equipment program.

\* Interpreter H2 may have been using "MM," but the data was not definitive.

The influence of the spoken English source is evident in the English mouth movements on both lexical and syntactic levels. However, none of these products express a complete English sentence.

Another example occurs after the first major topic change, which happens about 2 minutes into the source. The speaker says, "Well, through TAP, it may not cost you anything; it may be free." In conjunction with this structure, the mouth movements three of the participants are as follows:

Interpreter E1: "With that program, call TAP, maybe free . . . maybe free."

Interpreter M1: "When use TAP cost nothing . . . maybe free . . . none."

Interpreter H2: "With TAP, maybe not cost anything . . . maybe free."

The mouth movements of the remaining two participants are shown in Example 5.7.

EXAMPLE 5.7

Source: Well, through TAP, it may not cost you anything; it may be free.

Interpreter E2:

through TAP maybe not cost you {any-thing }... maybe free ... free TELL-YOU THROUGH #TAP MAYBE NOT COST {ANY THINGS}... MAYBE FREE ... F-R-E-E

(mouth open) {(pursed lips\*)] COST NONE

There may be no cost through TAP, it may be free ... free! No cost at all!

#### Interpreter H1:

There may be no cost through TAP. It may be free.

The products shown in Example 5.7 are typical of some of the mouth movement patterns closest to complete English sentences. One can see from this example that, although the spoken English source undeniably influences the product, the mouth movements in the product do not represent cohesive English sentences. Instead, these mouth-channel features appear to represent some type of literal, simultaneous interpretation of the material contained in the source, material that is often represented in the same syntactic order but with substantial omission and frequent restructuring. This pattern is similar to a recent description of mouth movements and other nonmanual elements in the contact signing discourse of a female deaf adult who attended 12 years of education at a residential school for the deaf before the advent of MCEs (Sofinski, 2002).

The analysis also considered a phenomenon that Winston (1989) called "conceptual sign choice" and that Kelly (2001) calls "ASL lexical choices." In the analysis discussed in this chapter, the process controlling this phenomenon appears to be a form-for-form, literal replacement of lexical items (i.e., an ASL lexical item in the target was substituted for a spoken

<sup>\*</sup> Interpreter E2 may have been using "MM," but the data was not definitive.

English word in the source). However, on several occasions, the ASL lexical item used in the target did not contain English mouth movements; in fact, some were classifier predicates or verb constructions that were co-produced with an adverbial in the mouth channel. In these cases, no English feature was identified.

There are other ASL features identified by Kelly (2001) to be included in a transliterated product. Head nod, head turn, body shift, and body lean were repeatedly noted in each product. Although these nonmanual elements occur throughout each product, they occur most consistently across products during the act of constructed dialogue. As part of this feature, the head and body shifts that are made in conjunction with eye gaze, facial expression, and body language all contributed toward the assumption of a character role. These elements were also noted during the use of space for comparison and contrast.

## Evidence to Support Previous Findings of Transliteration Research

Similar to the findings reported by McIntyre (1986), the findings of this study identified occurrences involving replication of the English words of the source, omissions, additions, and restructuring. In addition, the current study identifies another type of English representation—substitution—and the use of an ASL mouth movement feature—adverbial usage.

Siple (1997) provides a detailed summary of transliteration research through the mid-1990s (Siple, 1993, 1995; Winston, 1989). The results of the present study generally support these previous findings. In particular, Winston's (1989) assertion that transliteration is not a "simple recoding" is clearly supported.

All five of the participants in the current study used pausing frequently throughout their transliterating products, and the analysis supports the findings of Siple (1993) with respect to within-sentence, between-sentence, and between-topic occurrences. Within-sentence pausing occurred frequently in all five products near dependent structures such as "These two pieces of equipment, or telephones, that are offered" Between-sentence pausing repeatedly co-occurred with eye gaze and head turn directed to the television image of the speaker. The most noticeable pause in all five products occurred during the transition between the two main topics of the speaker (i.e., the Technology Assistance Program and the

Virginia Relay Service). During this time, the speaker also takes a relatively long pause as follows: "So, you could use the telephone, all by yourself, and not have to depend on anyone else. (pause) So, the next program that I want to talk about, in addition to the TAP Program here at the agency, we also have the Virginia Relay."

The findings of Siple (1995) are also supported in the results of the current study. She detailed Winston's (1989) identified strategy of addition, identifying four categories: cohesion, emphasis, clarification, and modality adaptation. The products analyzed in this study include examples of these categories:

Cohesion: Product of Interpreter H<sub>I</sub> in Example 5.3 for "Any of these people, anywhere across the state."

Emphasis: "How get that, how?"

Clarification: Product of Interpreter E2 in Example 5.7 for "Well, through TAP, it may not cost you anything; it may be free."

Modality adaptation: As in the interpreter points to TV screen of speaker holding up TTY.

The findings of the current study support six of the nine common features of voice-to-sign transliteration posited in Sofinski et al. (2001):

Shadow (English mouth movements) accompanies fingerspelling. Nonmanual signals (NMS) include instances of topicalization.

Lexical meaning base includes instances of prepositions.

Space includes instances of listing.

Lexical meaning base is ASL-semantic.

Syntax follows form of source (with possible deletions).

However, the findings were unable to support a primarily textual or sentential mouth-movement pattern, which Sofinski et al. (2001) had identified. The final two of the common features identified by Sofinski et al. (syntax of frozen text follows form of source and lexical form includes selective initialization) were not part of the analysis of this study.

One major difference between the current study and Sofinski et al. (2001) is that the current study involved the presence of a live audience whereas the Sofinski et al. study did not. The Sofinski et al. study was conducted under the conditions of a signed language interpreter testing environment (i.e., the interpreter alone in a room with a TV-VCR and a camcorder-tripod with no live audience to provide feedback). Additional investigation is needed to determine whether and how the presence of a

live audience affects the nonmanual aspects of signed language interpreting and transliteration.

A second important difference between these studies is that the participants in the current study had access to the source videotape the week before being recorded. In contrast, although most of the participants in the Sofinski et al. study had not been previously exposed to the source, those that had previous exposure did not know the nature of the source before the recording event.

Stauffer and Viera (2000) compared the needs of consumers with the preparation and practice of transliterators and concluded that "inconsistencies exist between what consumers need and/or prefer from transliterators and what transliterators actually do (the product)" (p. 75). The findings of the current study support this conclusion. The mouthmovement elements of the five products reported in the current study largely parallel the responses reported by these researchers.

The transliterators in the current study produced transliterations that included features similar to those described by Stauffer and Viera (2000). However, these transliterations do not reflect the expressed preferences of consumers. For example, the survey done by Viera and Stauffer (2000) present one consumer's feedback: "I request someone who will lip sync in English and put signs in English word order. What percentage of the time is this responded to appropriately? Never!" (p. 92). At the same time, not all of these respondents necessarily expressed a preference for a verbatim expression of the source through mouth movements; some simply wanted clear English words expressed through the product.

The demographics of the 58 respondents to the Viera and Stauffer (2000) survey are important to note: (a) respondents had an average age of 49 years, 4 months; (b) 74% of the 58 respondents reported holding a graduate degree, and all but one respondent reported having some type of college degree (i.e., associate degree or higher); and (c) a pattern was evident in which respondents self-reported a spouse or partner having normal hearing. In these respects, the respondents to the survey overrepresent one particular segment of the Deaf community.

The results of the current study also concur with the anecdotal reporting of Gonzalez (1981) that the mouth movements of signed language interpreters did not meet the need of (i.e., did not provide complete English words and sentences for) consumers or oral interpreters. Another important consideration is the context of the time during which Gonzalez

used the term *interpreter* in the generic sense and not in comparison to *transliterator*. In fact, in her description, she mentions, "sign language interpreters are now taught silently to mouth what they sign" (p. 1). Clearly, this analysis shows that the earlieranecdotal descriptions of transliteration conflict with the observations of consumers, particularly those who focus primarily on mouth movements.

#### **FURTHER RESEARCH**

Winston was "unable to determine a pattern to the relationship between sign choice and mouthing" (Winston, 1989, as cited in Siple, 1997, p. 92). Although the current study did not focus on this relationship, evidence showed that each participant represented English words through mouth movements without support in the manual channel and vice versa, similar to a recent description of contact signing by a deaf adult (Sofinski, 2002). In Sofinski's (2002) single-subject study, "[s]even instances of full English mouthing without sign support were noted" (p. 39). The mouth movements that were produced without manual support in both the current study and the single-subject study included mouthing of subjects (it, that), verbs (to [in infinitives], was), and conjunctions (or, and).

Two texts (Humphrey & Alcorn, 2001; Solow, 2001) reference the term Conceptually Accurate Signed English (CASE). With the continuing popularity and use of this term in K-12 as well as in freelance-contract situations and training, a detailed observational description of the elements that constitute a "CASE product" is needed. Humphrey and Alcorn (2001) identify CASE as the name for a system of signs, or MCE, "that has evolved primarily among interpreters" (p. 4.17). In contrast, Solow (2001) lists CASE as a subsection of language contact and describes it as a "common communication style characterized by the incorporation of traditional ASL signs, some newer signs, some contrived signs and fingerspelling, along with speech and speechreading, signed generally in English grammatical order in an effort to represent English visually" (p. 14). So, is CASE a naturally occurring phenomenon or is it contrived? If it is contrived, then where is the related literature describing its creation?

The profession of signed language interpreting, supported largely by anecdotal reports, has systemically embraced the use of the term *translit*-

eration. This usage is largely based on the notion that, in the work done by transliterators, processing from the source to the target remains in one language. However, more recent empirical investigation (Lucas & Valli, 1992; Sofinski et al., 2001; Winston, 1989) consistently report the existence of ASL features within the products of transliterators. The work and process of spoken language interpreters (Gile, 1995) is now being applied to the work of signed language interpreters (Patrie, 2001). This examination of a range of translation from "literal" to "free" (Metzger & Fleetwood, 1997) could potentially lead to a reevaluation of the concepts of a "language continuum" (Baker-Schenk & Cokely, 1980; Solow, 2001) and to the systematic separation of the work of signed language interpreters into two disciplines according to the target language.

#### CONCLUSION

This preliminary investigation examines the occurrence of nonmanual elements in what is commonly called signed language transliteration. During the same 3-minute section of source material, the majority of mouth movements recorded in each of five interpreter products represent English words. However, not all of the English words represented appear in the source. The replication of mouth movements representing English words contained in the source account for 38–63% of all English words spoken by the presenter. In fact, less than 1% of the 220 structures analyzed (i.e., 44 source structures compared with the relative segments of five interpreting products) are complete English sentences. These findings directly conflict with the RID definition of mouth movement patterns in transliteration: "Cohesive English sentences are visibly presented on the lips, either as exact words from the original text or as English paraphrasing of the original text" (Defining Interpretation . . ., 1996).

After replication, substitution was the next most common element found in the mouth channel. Literal replacement is the most common type of substitution on the lexical level, although this phenomenon also occurred on the phrasal level. The analysis also identified the presence of additions (i.e., mouth movements representing English words not found in the spoken English source) and adverbials in the products of all five interpreters. These findings support Winston's (1989) claim that transliteration is not just a "simple recoding" of the source.

Finally, outside of the mouth channel, the five products shared other nonmanual elements in common. Eye gaze, body shift, body lean, and head turn were frequently noted. These nonmanual elements supported constructed dialogue and the use of space for comparison and contrast. Both constructed dialogue and the use of space are commonly found in ASL discourse.

The results clearly show, then, that each of these products share phonological, morphological, and syntactic elements more in common with ASL than English. Therefore, the analysis of the products in this study support the findings of previous studies of transliteration. As is the case with previous studies, the transliteration products here are not in keeping with the common definition of transliteration (Frishberg, 1990). This finding has implications that are far reaching. With respect to interpreting practice, the transliterations produced by transliterators are not in keeping with the expressed preferences of consumers.

Further research is needed to see how consumers actually respond to the products that are being produced. Are these products tolerated or preferred? Are these products comprehended or "reinterpreted?" How do these growing findings relate to the use of transliterators in mainstream education programs that purport to expose children who are deaf and hard of hearing to English by visual means? Moreover, how do professional examinations account for the tripartite distinction among the expressed preferences of consumers of transliteration, the anecdotal descriptions by professionals with respect to transliteration, and the empirical findings of researchers of transliteration?

With respect to interpreter practice in the educational setting, how does the role of the interpreter vary at the elementary, middle school, and high school levels? Does a particular role affect the interpreter's delivery style or reinforcement of the message? Does the age of the consumer influence an interpreter's product? Is role or product variation common across competent educational interpreters working at the same educational level but housed in different school districts?

With respect to interpreting theory, to what extent is the process of transliteration similar to that of interpretation? Does the field of signed language interpretation actually comprise separate, distinct, and definable processes and products or is the issue akin to the age-old concern about free as opposed to literal translation (Metzger & Fleetwood, 1997)? With respect to interpreter education, how are students of interpretation

currently being taught to transliterate? Do the skills being taught prepare these students for the professional examinations and the real world of interpreting?

Finally, this study raises questions from a sociolinguistic perspective. Where do the language choices made by interpreters and consumers converge, and how do language policy and language attitudes affect the expressed preferences of consumers and the products of interpreters?

Clearly, this study has raised numerous questions. The findings, however, make one thing extremely clear: More research with respect to the processes and products of interpretation have the potential to positively affect practicing interpreters, deaf and hearing consumers of interpreting services, professional examinations, language policy affecting deaf children, interpreter preparation curricula, our understanding of sociolinguistic issues in deaf communities, and our understanding of interpreting theory and practice.

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# Verbatim Script of "VDDHH Technology Programs: TAP and Virginia Relay" Presentation by Susan Roach

Hi. My name is Susan Roach, and I work with the Virginia Department for the Deaf and Hard of Hearing. I'm here today to tell you about two programs that we offer at the agency.

Here, at VDDHH, we offer two programs. The Technology Assistance Program, known as TAP, and the Virginia Relay Service. These are two programs that we offer.

The first program, Technology Assistance Program, or TAP, is a equipment program, and what we do is provide telephones to people all across the state. There are two types of telephones that I want to talk to you about.

A TTY, which is also known as a TeleTypewriter, is one of the pieces of equipment that we offer. This phone, as you can see, has a keyboard, looks like a typewriter, but it also functions as a phone.

So, if you wanted to call someone else who had a TTY, you could call them directly. You would type what is that you have to say. They would read it on their screen, which you can see the screen on here, and then they would type back to you. So, you would take turns talking just as you do in a regular talk with your friends.

So, the TTY is one way to make telephone calls.

Another way to make telephone calls is by using an amplifier. This amplifier allows people who are hard-of-hearing to turn up the volume so that they can hear better when they're talking on the telephone.

These two pieces of equipment, or telephones, that are offered through TAP. How do you go about getting them?

Well, through the TAP Program you would need to apply. Anybody in the state could apply as long as they are deaf, hard of hearing, speech disabled, or deaf-blind. Any of these people, anywhere across the state, can apply to get TTYs or amplifiers.

So through the Technology Assistance Program, known as TAP, you can apply to get a TTY or an amplifier.

Well, as you know, when you apply or you go to buy things, sometimes it costs. Well, through TAP, it may not cost you anything; it may be free. Depends on two things, whether you can get the equipment free or not. One is how much money your parents earn. The second one is how many people are in your family.

So, when you go home, you need to ask Mom and Dad how much they earn. And then, count up the number of people in your family. There's probably you, Mom and Dad, and maybe some brothers and sisters. So when you figure out

how many people are in the family, and how much money your parents earn, you'll then find out whether you would get your telephone free, or maybe have to pay part.

So, through the TAP Program you could get the TTY or an amplifier if you were deaf, hard of hearing, speech disabled, or deaf-blind.

In the course of one year, the TAP Program sends out over 250 TTYs, and over 250 amplifiers for people all over the state.

So, you can begin making phone calls directly with your TTY by calling another person who has a TTY. So, you could talk to them and talk about school or you could maybe ask them questions about (lips smack) what the homework was that you missed that day. So, you could use the telephone, all by yourself, and not have to depend on anyone else.

So, the next program that I want to talk about, in addition to the TAP Program here at the agency, we also have the Virginia Relay. So if you have a TTY, but your friend doesn't, how were you going to call them? Well that's why the Virginia Relay Service was set up.

In 1991, the Virginia Relay was set up so that people who use TTYs and people who use regular phones could talk to each other. Well how does that happen? What you do when you call on your TTY, you call to the Virginia Relay, and a communication assistant, known as a CA, answers your call. You then tell the communication assistant who it is that you want to call.

They call your friend and whatever that person says to them on the phone, they then type to you on your TTY. Anything that you want to say back, you type on the TTY and the communication assistant will tell your friend. So, it's easy to make a call.

Let's think of different uh ways or different situations that you could call a friend.

If you wanted to talk to them about a snow day and if they were sledding that day. Or, if you wanted to order a pizza and you didn't think the pizza shop had a TTY, the CA, communication assistant, could make that call for you. And hopefully, in just a short time, your pizza would arrive at the house. Or, you could call and ask somebody out on a date.

So, those are just a few examples of how you can use the Relay Service to talk to people who do not have TTYs.

So if you call someone direct or if you need to use the Relay Service, you may want to do that during the day or at night. So, you would need to call the Relay Service on your TTY you would dial 1 800 828 1120. Or if your friend wanted to call you they would call 1 800 828 1140.

And they can make these calls anytime day or night, because the Virginia Relay Service is open 24 hours a day, 7 days a week. So that you can make calls to your friends.

5. What is the highest level of education you have completed? Please circle:

High School	9	10	11	12
College	1	2	3	4
Grad School	5	6	7	
Post-Grad				
Other				

#### **EDUCATIONAL SETTING**

- 6. In what educational setting do you typically interpret (i.e., elem., middle, etc.):
- 7. On a scale of 1–10 (1 being more ASL-like and 10 being more English-like), what number would best indicate the mode of interpreting you provide in the setting in which you typically interpret?

#### **SOURCE**

- 8. Was the knowledge gained by viewing the actual source videotape prior to your work today beneficial in your processing the information?
  - YES or NO
- 9. On a scale of I-IO (I being of particular hindrance, 5 being of no particular consequence, and IO being of particular benefit), how has the experience of seeing the EXACT source material affected your performance?
  [Hindrance] I 2 3 4 5 6 7 8 9 IO [Benefit]
- 10. Please explain WHY you selected this number, including THE MOST RELEVANT REASON.

PERI	FORMANCE (The one you JUST completed)					
II.	When you were asked to Transliterate, what did you use as your guide? In other words, what features did you feel were important to ensure that the product was Transliteration?					
12.	On a scale of I-IO (I being completely unsuccessful and IO being totally successful), where does the product produced TODAY fit? [Unsuccessful] I 2 3 4 5 6 7 8 9 IO [Successful]					
13.	Is the product you provided today (Transliterating) indicative of the mode of interpreting you typically provide (as referenced in question #7)?  YES or NO Please explain WHY or WHY NOT?					
14.	Being specific, how does your product TODAY differ from what you would "normally do" in class?					
15.	Did each participant attend to the product? If no, please get ID number from coordinator.					
16.	Please list the participants for whom you have worked "regularly." (Please use ID number.)					
Your participation in this study is crucial to its success. THANK YOU for the time you have so unselfishly given!  END						

#### Transcription and Glossing Convention Key

1. Terms above the line represent mouth movements noted by the researcher:

MM = lips pressed together; used in conjunction with a verb that happens normally or regularly (Bridges & Metzger, 1996, p. 36). puffed cheeks = lips closed, cheeks puffed with air; used to indicate a large amount or size (Bridges & Metzger, 1996, p. 37). pursed lips = lips pressed together; used to describe the mouth movement incorporated into the product; however, data was inconclusive in determining that it was an example of MM.

(break) = a suspension or demarcation of prosodic features (e.g., pause in manual production, change in eye gaze, head tilt) in the product; generally indicates the end of one linguistic construction and the beginning of another.

Brackets { } indicate the length of the "non-manual modifier" (Bridges & Metzger, 1996).

·--- indicates continuation or perseveration

#### 2. Terms below the line represent the following:

GLOSSES of ASL lexical items are shown in small caps.

E-QUIPMENT = initialization; in the example E-QUIPMENT, the handshape of the ASL base sign things is modified to incorporate the hand configuration E, representing the first letter of the gloss commonly used to label the initialized sign E-QUIPMENT.

#so = lexicalized fingerspelling.

MOTHER \* FATHER = compound.

{Information in brackets} represents the manual portion of the classifier predicate (CL-PRED).

bh = base hand

sh = strong hand

CL = handshape description

(Terms included in parentheses) provide information about movement and location.