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# Writing the smile: Language ideologies in, and through, sign language scripts

# Erika Hoffmann-Dilloway\*

Oberlin College, Department of Anthropology, 305 King, 10 North Professor Street, Oberlin, OH 44074, United States

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# ABSTRACT

This article explores the relationship between language ideology and script by detailing an emerging set of practices for writing sign languages. Though sign languages have often been considered un-writable, signers worldwide are increasingly producing written sign language texts using Sutton SignWriting (SW), a writing system originally developed for dance notation. After comparing SW to Stokoe Notation, a sign language script developed by a prominent sign language linguist, this article draws on texts produced by SW users, and the metalinguistic discussion of these texts on an email listserve, to demonstrate that use of SW allows its users to articulate and challenge dominant, and often tacit, ideologies about the nature of language and writing.

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# 1. Introduction

"If you're reading a book on history, do you really need to see the smile when the author mentions America?"

The above question may seem confusing, as readers might wonder how a smile, a visual phenomenon not usually treated as a part of language, can be "seen" in writing. While this question may seem to be precluded by the nature of writing systems designed to represent sound, this is a relevant concern for those writing sign languages using Sutton SignWriting (SW), a visually iconic writing system that represents movements of the body and face. Small but growing networks of signers in over thirty countries use SW for a range of purposes, including writing notes, pedagogical materials, poems, novels, newspapers, and blogs in their respective sign languages, while some scholars have adapted the system for notation purposes in sign language research. The opening quote, which will be explored further below, is drawn from an email listserve on which many members of this multilingual and multinational group of SW users post and discuss such texts.

This article explores the relationship between language ideology and writing system by detailing these emerging sign language literacies. Sign languages have traditionally been unwritten (and even considered un-writable), a fact that has contributed to the relatively low-status of sign languages in many sociolinguistic contexts. Most people assume that Deaf<sup>1</sup> signers are well enough served by achieving literacy in the written version of the dominant spoken languages surrounding them, but low literacy rates among Deaf adults show that this is not a wholly satisfactory situation for a variety of reasons (Maxwell, 1985;

<sup>\*</sup> Tel.: +1 440 775 5014; fax: +1 440 775 8644.

E-mail address: erhoffma@oberlin.edu

<sup>&</sup>lt;sup>1</sup> In this article I follow the widespread convention of writing the word deaf (lowercase) to indicate the inability to hear and Deaf (with a capital D) to indicate identification as a member of a signing community. In cases in which I refer to a group or situation in which both models of d/Deafness are prominent, I use mixed case (d/Deaf). My use of this convention should not be taken to imply that I view this binary as universally relevant, or relevant in the same ways across social contexts.

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Erting, 1992; Holt et al., 1997; Padden and Ramsey, 2000).<sup>2</sup> Linguists' attempts to develop sign language notation systems for research have been largely unsuccessful; much work on sign languages relies on spoken language glosses, a fact that has hindered the analysis and comparison of languages in this modality (see Pizzuto and Pietrandrea, 2001; Pizzuto et al., 2001, 2006 for excellent discussions of this issue).

While this state of affairs is often attributed some inherent quality of the formal properties of sign languages, I suggest that difficulties in writing sign languages are instead due to ideologies about the nature of both language and writing that have informed many attempts to develop writing systems for sign languages. These beliefs include an emphasis on idealized, abstract language that stresses structure over communicative practice and the attendant notion that the arbitrariness of signs is incompatible with other semiotic processes tied to embodied contexts.

The impact of such language ideologies on efforts to develop writing systems for sign languages is well illustrated by the differences between Sutton SignWriting and Stokoe Notation. Stokoe Notation, developed under a structural linguistic rubric, is limited in its ability to write the spatial relationships, bodily movements, and facial expressions that characterize the grammar of many signed languages. Indeed, its creator William Stokoe eventually concluded that, "theory suggests that sign languages cannot be written" (Stokoe, 1978, p. 118). In this regard, Stokoe Notation both reflects and reinforces dominant ideologies about the nature of language and writing. On the other hand, Sutton SignWriting, originally developed for dance notation, draws on a different set of assumptions about human expression. As a result, when applied to sign languages it circumvented the aforementioned ideologies in ways that have led to its increasing use across a range of contexts.

I first encountered SW in 2003, when searching for an effective way to create transcripts of natural signed communication for my research on Nepali Sign Language. Unwilling to rely on English glosses, which obscure the formal properties of signing, I found SW the only system that could encode the details of signed performance in context. Like many who use this writing system, I frequently wanted to discuss, with others familiar with SW, the choices I was making in creating transcripts. As a result, I joined the SW discussion listserve, and soon realized that this social network was a rich context for research in its own right.

This article draws on 5 years of participant observation on the email listserve to argue that use of SW allows sign writers to explicitly articulate and challenge dominant, and often tacit, ideologies about the nature of language and writing. In particular, by creating a context in which questions may be posed which might not otherwise have arisen, such as "do you need to see the smile?", these texts and the discourses surrounding them mount a critique of common conceptions of the boundary between the linguistic and paralinguistic in ways that are fruitful for public and scholarly understandings of spoken, as well as signed, languages. While this is a unique ethnographic context, this article details broader processes by which writing can reinforce implicit ideologies about the nature of language or, in the case of emerging writing systems like SW, help make implicit language ideologies more subject to metalinguistic awareness, discussion, and debate. In so doing, this work highlights the ways in which sign language studies can challenge rather than simply validate (and receive validation from) linguistic theory.

Below, after a discussion of the relationship between ideologies of writing and language ideologies more broadly, I briefly describe and compare Sutton SignWriting and Stokoe Notation, to highlight the linguistic (and ideological) issues entailed in the creation of writing systems for signed languages. Then I analyze two SW texts in which writers chose to encode details of performance not usually considered linguistic, and which are usually referred to through, rather than encoded in, written form. Finally, I examine the listserve discussions about the nature of both writing and language to which such texts give rise.

# 2. Mutually reinforcing ideologies of language and writing

As Antonio Perri has noted, from a current anthropological perspective, "writing includes all social practices that use systems of graphic (and sometimes also material) signs which are recurrent, combinable and conventionally linked to a linguistic context" (Perri, 2001, p. 272).<sup>3</sup> In all cases, the creation of a writing system is an inherently analytical process, by which some aspects of a communicative ecology are enshrined as vital for representation and some are not (Goodwin, 1994; Irvine and Gal, 2000). Thus, as many scholars have noted, language ideologies affect the development and use of writing systems (e.g., Schieffelin and Doucet, 1998; Collins and Blot, 2003). In turn, the ideological perspectives that affect the creation of a writing system often become embedded in and perpetuated by its use (Duranti, 1997). For example, scripts can reinforce

<sup>&</sup>lt;sup>2</sup> Studies suggest that US d/Deaf high school graduates read at a median of the 4th grade level (Holt et al., 1997; Maxwell, 1985). This may, in part, be attributed to d/Deaf students' lack of exposure to the sounds of spoken language, which makes difficult or impossible pedagogical approaches to literacy instruction that rely on sound-letter correspondences. In addition, the syntactic structures of ASL and English are very different. However, Padden and Ramsey have found that Deaf students who have acquired ASL from birth achieve higher literacy rates than students whose education and upbringing have focused on helping them acquire spoken language. Students raised in oral programs frequently have impaired competency in spoken and signed languages; consequently, they face difficulties in relating writing to linguistic content (Paul et al. 1992; Padden and Ramsey, 2000). In addition, Maxwell finds that Deaf adults use written language in ways that differ from common hearing uses. These literacy practices are not taught in classrooms but are acquired through participation in Deaf social life (Maxwell, 1985). The pragmatic, as well as linguistic, disconnect between educational and personal practices may affect the d/Deaf educational experience, and consequentially, acquisition of institutionally preferred kinds of literacies. Finally, due the past suppression of ASL and Deaf cultural practices in associated.

<sup>&</sup>lt;sup>3</sup> Not all scholars agree that writing must inherently be linked to linguistic content, citing musical notation, maps, and other representative systems as nonlinguistic writing (e.g., Boone, 1994).

metalinguistic awareness of some aspects of language and, particularly when a writing system is ideologized as the best representation of a language, further obscure other aspects (Silverstein, 1981).

Writing systems have frequently been divided into typologies based on what aspects of linguistic form they primarily, though not exclusively, represent (i.e., logographic, syllabic, alphabetic). Of course, such typologies are themselves based on the language ideologies of the scholars creating them. Given that language ideologies are multiple and conflicting within and across social contexts, such typologies may not attend to the properties considered relevant by the users of the writing system. Use of these typologies may consequently lead to "bias and distortion" in the scholarly representation of a script (Basso and Anderson, 1973, p. 1014).

Language ideologies are never just about language but mediate between linguistic and social structures (Woolard, 1998, p. 3). It is therefore unsurprising that many scholars have argued that different types of scripts within these typologies represent a social evolution from more primitive and "partial" forms of writing, to the more "developed" and "complete" writing and literacy represented by the alphabetic systems used by the scholars making these arguments (Goody and Watt, 1963). Different forms of literacy are in turn believed to have a range of effects on the cognitive processes and social organizations of the groups that use them (Goody and Watt, 1963; Ong, 1982). As Collins and Blot note, this logocentrism, "the disposition to rank people by presence, absence, or kind of writing" (Collins and Blot, 2003, p. 167), can be seen as a reformulation of older ideas about racial hierarchies. While these arguments have been countered by anthropologists who take a situated approach to the study of literacies (e.g., Heath, 1983; Street, 1984, 1993), they have influenced in a "durable way how we think about our own and others' societies and epochs" (Collins and Blot, 2003, p. 166).

These beliefs have also durably affected scholarly conceptions of the nature of language more generally. Modern linguistics emerged from the ability to objectify language through writing, in a context in which alphabetic writing was seen as the fullest realization of the "modernist desire to make writing closer to speech" (Cody, 2009, p. 289; Bauman and Briggs, 2003). Consequently, aspects of human communicative ecologies not represented in alphabetic scripts – such as stress, intonation, pitch, volume, gesture, eye gaze, or facial expressions – are often ideologically erased, relegated to paralinguistic status (Tedlock, 1983; Farnell, 1995; Kendon, 2008). These erasures reflect and produce a Cartesian influenced conception of language that privileges immaterial mental contrasts over the physical quality of sounds (or signs) (Farnell, 1995).<sup>4</sup> The attendant focus on abstract formal structure rather then the character and functions of language in performance (e.g., Saussure [1906–1911] 1986; Chomsky, 1965), leads structural and formal linguists to define language as a system of reference, and ignore its other functions and meanings. Indeed, the very distinction between phonetic sounds and phonemes hinges on whether a given sound distinction creates or does not create a shift in referential meaning.

Linguistic anthropology and other post-structural approaches to language, on the other hand, are concerned with the pragmatics by which language is deployed, and takes on meaning (more broadly defined), in context (e.g., Malinowski, 1935; Jakobson, 1960; Austin, 1962; Hymes, 1974). This inquiry, which requires particular attention to the role of semiotic processes such as indexicality in creating non-referential meaning (e.g., Silverstein, 1976), entails a shift from conceiving of language as abstract langue, to material and embodied parole (e.g., Farnell, 1995; Keane, 1997; Hull, 2003; Philips, 2009). However, scholars taking this approach have had to contend with the ideological weight carried by the writing systems that remain fundamental to their analyses, attending to the ways writing "constrains the range of phenomena we are likely to study and taints them with particular ideological implications" (Duranti, 1997, p. 125).

Thus, while scholars of sign languages have struggled to represent the communicative practices they study in print,<sup>5</sup> those working on spoken languages must likewise find means of using writing that align with their theoretical perspectives.<sup>6</sup> However, whether such scholars employ widely used written traditions (for example, using standard spellings in transcripts, though these do not represent the pronunciations in context) or refuse them (for example, using IPA or a range of unconventional transcription notations), the dominant norms and ideologies associated with writing influence the creation and reception of these texts and analyses (Preston, 1985; Bucholtz, 2000).

# 3. Writing sign languages: a comparison between writing systems

Ideological perspectives valorizing disembodied, abstract notions of language have also influenced scholarly and popular beliefs about sign languages (and those who use them). Signed communication used to be, and sometimes still is, understood through a language ideology that explicitly linked sign with a basic "pre-cultural" human nature (Baynton, 1996, p. 109). In part this perspective was grounded in attitudes toward the visual iconicity found in sign languages, which was assumed to be natural, universal, and incompatible with the arbitrariness taken to define the linguistic (e.g. Saussure, 1906–1911).

At the same time, more obviously bodily aspects of communication were posited to be more primitive than speech, a Cartesian perspective that informed early anthropologists' suggestion that the more gestures used in a society, the lower that group's position on an social evolutionary ladder (e.g. Tylor, 1865). As a result, sign languages were seen as simple gestures, outside the provenance of human language (Baynton, 1996). Deaf signers, in turn, were often seen as less than fully human,

<sup>&</sup>lt;sup>4</sup> For example, Saussure's signified is a mental concept rather than a thing in the world, while "the sound pattern, or signifier, is not actually a sound. A sound pattern is the hearer's psychological impression of a sound, as given to him by the evidence of his senses" (Saussure (1906–1911) 1983, p. 66).

<sup>&</sup>lt;sup>5</sup> Brenda Farnell, for example, chose Labanotation as a supplement to English glosses in representing Plains Indian Sign Talk (Farnell, 1995).

<sup>&</sup>lt;sup>6</sup> This requires attention to not only the formal properties of language encoded in the choice of script, but also to the semiotics of the layout of text on a page (Ochs, 1979; Blommaert, 2004).

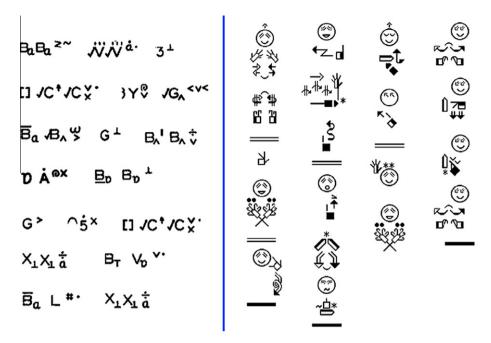


Fig. 1. The opening lines of ASL Goldilocks. Stokoe Notation (written by Joe Martin) appears on the left, while Sutton SignWriting (written by Valerie Sutton) appears on the right (mmc1.mpg).

and many believed that this condition could only be eased by the difficult and incomplete method of teaching d/Deaf children to speak and read lips. This perspective contributed to the highly damaging suppression of sign language in d/Deaf education worldwide (Monaghan, 2003). The fact that sign languages did not have a widely used written form lent logocentric reinforcement to the notion that sign languages were primitive.

Below I briefly describe the relationship between these ideological contexts and two distinct approaches to writing sign languages: Stokoe Notation, which reflects and produces a structural linguistic perspective on language, and Sutton Sign-Writing, which reflects and produces an understanding of human expression that aligns with post-structuralist theory. To illustrate this discussion I have reproduced examples of each system's rendering the same ASL sentences, drawn from Darline Clark Gunsauls's ASL performance of Goldilocks and the Three Bears. Joe Martin (a scholar of sign language scripts) and Valerie Sutton produced the texts for comparative purposes (Fig. 1). I have also included the videotaped performance on which these textual renderings were based. An English translation of the sentences reads, "Goldilocks and The Three Bears. Somewhere, deep in the forest, there is a house sitting on a hill. If you quietly enter the house, there you will see, Papa Bear is reading the newspaper."

### 3.1. Stokoe Notation

In the 1960s, William Stokoe drew on structural linguistic theory to demonstrate that, as signed languages could be described according to the same criteria linguists used for spoken language analysis, they were in fact fully linguistic systems (Stokoe, 1960). Of particular importance to his case was the fact that sign languages, despite being visual, had phonological structure. That is to say, though sign languages do not use sound, they feature duality of patterning, drawing on visual contrasts.<sup>7</sup> These contrasts occur across a range of often simultaneously occurring parameters, including handshape, location, movement, orientation, and non-manual grammatical markers (NMGs). d/Deaf signers throughout the world cite Stokoe's research as a major factor in the social validation of their languages.

Just as the emergence of linguistics as a discipline hinged on the ability to objectify spoken language in writing, Stokoe's analysis of American Sign Language was grounded in the creation and use of a sign language transcription system known as Stokoe Notation (SN). As Joe Martin notes, this system "was crucial to proving Stokoe's premise that the signs of American Sign Language (ASL) were not unanalyzable wholes, but combinations of a ... number of smaller units" (Martin, 2007, p. 2). SN has been used for scholarly research on American Sign Language (Stokoe, 1960) and has been adapted to notate British Sign Language (Kyle and Woll, 1988) and Australian Aboriginal sign languages (Kendon, 1988). It has not been used for purposes beyond academic research.

<sup>&</sup>lt;sup>7</sup> While Stokoe proposed the term chereme to reflect the different modality of visual phonemes, current practice extends the term phonology to apply to sign languages as well. This is because the modality difference is seen as secondary to the shared structural property of phonology in spoken and signed languages.

SN limits its symbol inventory for describing ASL to only those parameters, or aspects, Stokoe deemed necessary to describe its phonemic system, and can therefore be described as a phonemic or alphabetic system. The first category of symbols, called tab, indicate a sign's location in space. These symbols were chosen to be potentially iconic of the body parts to which they indicate proximity. The second, dez, category of symbols indicates the handshape of a sign. These symbols are derived from the ASL fingerspelled version of the English alphabet and Roman number system, a choice that iconically links SN to an established writing system but restricts the number of handshapes that can be represented in the script. When two hands appear in the construction of a given sign, two dez symbols appear in the written version. Finally, the sig category, written as a superscript after the dez, represents the movement of the sign (and was later adapted by Kyle and Woll to additionally indicate orientation).

Symbols from these categories are then arranged linearly, left-to-right, in the written representation of a sign (groups of signs are also written from left to right). For example, the sign (PAPA BEAR)-OPENS-THE-NEWSPAPER from the Goldilocks excerpt is written as follows:  $\kappa_{x}x_{x}$ . The symbols are read from left to right. The "X" symbols represent hooked handshapes, the subscript "1" symbols indicate that the hands are held away from the signer, the superscript " $\div$ " symbol encodes the movement of the hands separating, and the subscript "a" indicates that the palms face up.

Stokoe stated that, "this order corresponds to no sequence in sign phenomena; it is arbitrary" (Stokoe, 1960, p. 40). However, following Martin (2000) I suggest that this choice creates a parallel between SN and the English language script in ways useful to Stokoe. For example, one of his important projects was the creation of an ASL dictionary, in an era in which printing involved reliance on typewriters. This reliance may have influenced both the choice to use elements of the Roman script and to arrange the internal elements of each sign in a linear fashion. Further, a linear script leads to a clear "first" element in the spelling of a particular sign, which allowed the dictionary to be arranged in an alphabetic order.

Even if Stokoe's choice to write signs linearly was solely motivated by the structural issues related to the dictionary he was producing, this choice nevertheless reinforces the common notion that writing systems should be arbitrary and linear and has consequences for the utility of SN; reading in linear sequence linguistic elements that appear simultaneously in actual signing practice is highly challenging. As a result, SN has remained primarily a tool for expert research and has not been used as a daily writing system by d/Deaf signers.<sup>8</sup>

The script represents only manual gestures. This is not because Stokoe was unaware of the potential grammatical importance of Non-Manual Grammatical markers (NMGs); his earliest work on ASL led the way for subsequent studies demonstrating the role of NMGs, such as facial expression and postural shift, in creating minimal pairs between signs and in marking grammatical constructions (e.g., Baker and Cokely, 1980; Neidle et al., 2000; Valli et al., 2005). However, when developing SN, Stokoe felt that the linguistic analysis of sign languages had not progressed sufficiently to allow for informed decisions about what aspects of signed communication consists of linguistic NMGs and which elements should be treated as paralinguistic. Accordingly, these markers are not represented in SN (Stokoe, 1960, p. 38).

Stokoe was cautious about this matter for a reason: because sign languages occupy the same modality as gesture and many other communicative features frequently deemed paralinguistic, Stokoe needed to be very clear in separating these phenomena to make the case that ASL could be characterized as linguistic. While SN is able to describe static signs through this method, this limited inventory prevents the script from representing the complex spatial relationships involved in signed grammatical systems.

The grammar of American Sign Language depends on assigning points in signing space for both physical and non-physical referents, and signers meaningfully exploit potentially infinite gradations between points in signing space. For example, agent–patient relations are expressed by directing the movement of a verb sign from the spatial reference point of the subject to that of the object. This can be illustrated by the way (PAPA BEAR)-OPENS-THE-NEWSPAPER appears in the video recording of Darline Clark Gunsauls's original performance. By directing her eyegaze toward the sign performed to the lower left of signing space she spatially marks the grammatical relationship between the agent, Papa Bear, and the patient, the newspaper. Stokoe Notation, however, does not represent this eyegaze or Gunsauls's use of space in ways more subtle than "away from signer". In large part because of the difficulty in representing signed grammar in SN, Stokoe, as mentioned above, ultimately concluded that sign languages are un-writable (Stokoe, 1978, p. 118).

#### 3.2. Sutton SignWriting

Valerie Sutton, a ballet dancer, began to develop what would become Sutton SignWriting in 1974. When health problems led her to step back from dancing, she focused on creating a means of transcribing movement, in order to preserve existing, or choreograph new, dances. In so doing, she sought to make the system as accessible as possible to dancers themselves, drawing inspiration from the highly iconic "stick figure" approaches to writing dance, such as that of Friedrich Albert Zorn, and eschewing highly abstract systems such as Labanotation. While working in Demark, using her DanceWriting system to

<sup>&</sup>lt;sup>8</sup> Furthermore, as Pizzuto et al. argue, the subsequent use of SN in sign language research may relate to the fact that much work on sign languages focuses on listing "units which can be easily translated via single words of the contact/dominant language", while neglecting "complex units that are commonly characterized as part of the 'productive lexicon' and encode equally complex meanings for which it is often difficult to find single-word translations" (Pizzuto et al., 2006, p. 3). That is, the fact that the script is tightly tied to the production of dictionaries may reflect and produce what Silverstein has suggested is a common metalinguistic focus on segmentable features such as words (Silverstein, 1981).

record the dances of the Royal Danish Ballet, Sutton was approached by scholars interested in notating gesture and signs. With no background in linguistics, Sutton adapted her dance notation to record the movements of signed languages.

This system, which became SW, emerged over many years, through close collaboration with Deaf signers who used it outside the confines of academic research. Important early contexts of use included literacy instruction in schools for the d/Deaf in Denmark during the 1980s, and the creation of a newspaper with original articles written in ASL (and eventually Danish Sign Language) by the Deaf Action Committee in the US. The latter group, made up of Deaf native signers, had a particularly significant effect on the development of SW; as will be discussed below, many changes to the system arose from emerging writing practices of these users.

SW is a featural writing system, which is to say that it represents the distinctive features from which phonological elements are composed. Handshapes in SW are constructed by combining symbols that iconically represent the different features through which given signs are constructed. This includes a number of core symbols for basic handshapes that can be modified in essentially limitless ways. This flexibility has led to the systems's having been adopted to create scripts for writing a wide range of different sign languages, across 38 countries, as well as having been adapted for notation purposes in sign language research. Orientation is encoded through the shading of the hand shapes; white indicating the palm of the hand, black indicating the back of the hand.<sup>9</sup>

Orientation is further expressed by the use of a broken line through the handshape to indicate that the sign should be read as oriented to a horizontal plane, while lack of this line indicates that the hand should be read as occupying a vertical plane. If greater detail is called for, gradations between these planes can be marked by higher or lower placement of the break. SW also includes a range of symbols to represent detailed movement, different kinds of contact between hands and other body parts (for example, striking, holding, brushing, and rubbing), facial expressions, postural shifts, timing, emphasis, and other aspects of a bodily communicative ecology.

While signs were originally written horizontally, from left to right, members of the Deaf Action Committee noted that vertical placement of the signs made more readable the ways in which signers mark grammatical relationships by shifting their bodies from left to right. Valerie Sutton adapted the system accordingly; currently SW is almost always written in vertical columns. Likewise, signs were originally written from the receptive viewpoint. That is to say, SW was written from the perspective of someone facing a signer, and notating the signs they viewed. However, members of the Deaf Action Committee, several of whom had served as research subjects in linguistic labs in the past, found this objectionable. If SW was to be for everyday use by Deaf signers and not simply a tool through which linguists could study the Deaf and their language, they argued, SW should be written from the expressive viewpoint. In other words, in order to encode the fact that SW is a means by which Deaf signers can inscribe their own voices, signs are now written from the perspective of the person producing them.<sup>10</sup>

There are no separate symbols for location. Rather, in map-like fashion, the system reproduces on small scale the physical relationships that inhere in the actual performance of the sign.<sup>11</sup> For example, the Sutton SignWriting representation of (PAPA BEAR)-OPENS-THE-NEWSPAPER (Fig. 2) from ASL Goldilocks is as follows:

Elements of the sign appear as a diagrammic icon of the spatial distribution of body parts in the actual performance of the sign. The handshapes are iconic, with the orientation indicated by the shading of the palms. The arrows indicate curving movement slightly toward and then away from the body, in concert. The iconic representation of the head indicates both facial expression and direction of eye gaze.

As the above description makes clear, SW highlights the simultaneity of the performance of different aspects of signing over linearity and draws on, rather than avoids, both iconic images of the body and diagrammic iconicity of the relationships between body parts. Consequently, SW has been described as pictographic as well as phonetic, though what is pictured is the sign itself, not its referent (Martin, 2000, p. 6). The iconic aspect of this representation runs counter to many dominant ideologies concerning writing. For example, Coulmas insists that the "decisive step in the development of writing is phonetization; that is, the transition from pictorial icon to phonetic symbol" (Coulmas, 1989, p. 33). Yet, in writing signed languages, it becomes possible for a writing system to be both iconic and phonetic at the same time, thus highlighting the non-exclusive nature of these semiotic properties.

In addition, the symbol inventory of SW did not arise from a phonemic analysis of a given sign language. Rather, Sutton strove to create a flexible system that could encode as wide a range of movements as possible. This quality allows SW to write the details of visual grammar that posed challenges for SN, including the eye gaze and use of signing space in the performance of (PAPA BEAR)-OPENS-THE-NEWSPAPER, but means that the system does not formally distinguish between phonetic and phonemic or linguistic and paralinguistic phenomena. Valerie Sutton reports that, as a result, linguists have critiqued SW as un-analytical.

<sup>&</sup>lt;sup>9</sup> This shading is iconically motivated by the fact that most people's palms are to some degree lighter in color than the back of their hands.

<sup>&</sup>lt;sup>10</sup> In this respect, the development of SW met Pizzuto et al.'s (2006) important charge that Deaf researchers and writers should be given precedence in articulating the issues significant in creating written forms for sign languages.

<sup>&</sup>lt;sup>11</sup> Dictionaries using SW cannot determine an alphabetic order based on which symbol within the representation of a sign appears first in a linear left-to-right fashion. Rather such dictionaries are organized by what is called "Sign-Symbol-Sequence". That is, dictionary-makers categorize the internal elements of a written sign and then order the signs in the dictionary according to the presence of each element within the sign. For example, signs might appear in the dictionary in groups ordered according to handshape. Signs within that group might be internally ordered according to movement (for example, signs involving a brush might appear before those involving a rub) and so on.



Fig. 2. (PAPA BEAR)-OPENS-THE-NEWSPAPER.

However, the fact that SW does not presuppose which elements of signed performance should be encoded in writing creates space for individual writers to make their own analyses of the sign languages they write. Valerie Sutton has encouraged those using SW to "write what they see" and signers sometimes see things differently than linguists might. In particular, as we will see below, many SW writers do in fact choose to encode not only widely accepted non-manual grammatical markers, but also aspects of signing practice that most linguists would deem paralinguistic.

In addition, Sutton notes that, "writers do not always see the same things". The level and type of detail in SignWritten documents varies.<sup>12</sup> While some SignWriters produce texts that draw on the same ideologies about language and writing that informed SN, the fact that such a diverse social network uses SignWriting means that writers are influenced by a wide range of ideological perspectives. When writers circulate their texts on the email listserv, participants have the chance to compare and discuss these different analyses of sign languages, a practice that brings metalinguistic and meta-pragmatic awareness into sharper relief. Awareness of and reactions to different writing styles may be further heightened by the fact that SW is usually read from the expressive rather than receptive viewpoint, causing readers to embody the choices made by others, rather than simply viewing them.

# 4. The circulation and discussion of Sutton SignWriting texts

d/Deaf and hearing signers in over 30 countries use SW for scholarly and everyday pursuits. Groups of users in each locale are relatively small and often tied to institutions such as schools (for example, in Germany, France, Nicaragua, Norway, and the US), churches (Malta, the US), or research institutions (Malta, Norway, and Saudi Arabia), though individuals from many countries use SW outside such institutions to write blogs, poems, or stories. Many members of these local groups participate in a multi-national SignWriting social network by circulating and discussing SW texts through a SignWriting email listserve.

Not all people using SW participate on these boards. Contributors to the listserve tend to be persons who wish to engage in discussion of the details of writing SW and the larger issues with which this writing practice articulates, while many others prefer to keep their writing practices out of this fray. Valerie Sutton herself is an important daily contributor to these discussions. In addition to helping participants understand the technical details of the SignWriting system, Sutton mediates the broader analyses and debates about the nature of writing and language that these texts engender. In so doing she has remained committed to allowing insights about SW and sign language to emerge from the practice of producing and discussing written texts, rather than imposing a strict set of rules concerning how participants should transform signing into written form. Below I provide two examples of SignWritten texts that encode details of signing performance that most scholars would consider paralinguistic and then explore some of the discussions such texts engender.

# 4.1. Goldilocks and the Three Bears

My first example returns to the SW rendering of Goldilocks and the Three Bears that appeared in the previous section. In creating a SW document from Darline Clark Gunsauls's signed performance of the story, Valerie Sutton wrote facial expressions that serve as well recognized Non-Manual Grammatical Markers, such as raised eyebrows that function as topic markers (Baker and Cokely, 1980) (Fig. 3). For example, in the first line of the story Gunsauls follows the common topic-comment structure of ASL, signing, "WHAT-(with raised brows) GOLDILOCKS THREE BEARS".

Sutton also included in the written text elements most linguists would describe as prosodic. For example, Sutton has encoded what she calls "Dreamy Eyebrows". She explained to the listserve members that "Dreamy Eyebrows" often appear in storytelling: "When we say 'Once Upon A Time' (or something equivalent to that)...or 'Wandering through the forest...' in Goldilocks. It is a matter of 'feeling' ... the eyebrows are a little different than the normal up and down...there is more of a forehead wrinkle involved." In addition, because children were the intended audience of both the original telling and the written version (this story appears in a SW school reader for Deaf children), Sutton wrote Darline Clark Gunsauls's smile

 $<sup>^{12}\,</sup>$  In Hoffmann (2008) I discuss the relationship between SW and standard language ideologies.

Topic marker eyebrow Dreamy storytelling eyebrows (smile) (smile)



Fig. 3. Non-manual grammatical marker and prosodic facial expression.

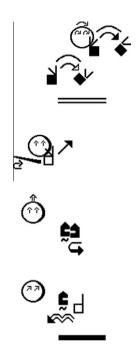


Fig. 4. The SW rendering of "We looked! Then we saw him step in on the mat!" from Cherie Wren's ASL translation of The Cat in the Hat.

as she performed the story.<sup>13</sup> In choosing to write these details, Sutton privileges the character of ASL in performance over its abstract structure.<sup>14</sup>

#### 4.2. The Cat in the Hat

When creating a written version of her videotaped performance of an ASL translation of The Cat in the Hat (Fig. 4), signwriter Cherie Wren wrote to the SW listserve to discuss her struggle to decide how to represent in writing her use of eye gaze. She circulated a video clip of a segment of the story on which she was working. The Cat in the Hat tells the story of two children, the narrator and his sister Sally, and an exciting but reckless cat that visits their home. The sentence Cherie Wren circulated online describes the moment when the children first see the cat enter the house. In English the line reads, "We looked! Then we saw him step in on the mat! (mmc2.mpg)"

When Cherie Wren performed this sentence in ASL the fact that the "we" in the sentence refers to Sally and her brother is marked clearly when she performs the first sign, "LOOK", from the signing location allocated to those characters toward the signing space assigned to the door from which the Cat in the Hat would soon emanate. The signer's slight body shift and eyegaze from the children's signing space toward the signing space of the door marks the fact that the teller has taken on the role of one of the children who narrates the experience.<sup>15</sup> In the next sign, however, though the sign "WE-SAW" moves

<sup>&</sup>lt;sup>13</sup> In making this choice, Sutton was following Gunsauls's example, as the latter commonly wrote smiles into SW texts intended for children.

<sup>&</sup>lt;sup>14</sup> The kind of details that SignWriters encode, of course, vary according to genre. For example, Valerie Sutton notes that the Deaf signers she worked with during the early years of developing SignWriting told her "not to put facial expressions in dictionary entries if it is possible that the facial expression could change using that sign, depending on the sentence grammar structure" and other details of performance in context.

<sup>&</sup>lt;sup>15</sup> Note that Cherie Wren has not written the storyteller as smiling in this story. This is because the Cat in the Hat is told in the first person perspective of a character who may not be smiling, while the smiling narrator of Goldilocks is not a character involved in the action.

353

from the children's signing space toward the signing space of the door, Cherie Wren's eyegaze is focused on the audience who was present when she performed the story. Her eyes remain focused on the audience during the third sign, "DOOR-OPENS", but returns to mark the perspective of the characters in the fourth sign, in which they see the cat step onto the mat.

Regarding the shifts in eyegaze, Wren wrote to the list: "How much of it needs to be written?... I am looking at the door, and the cat coming in, and back to the audience several times in that very short sequence. This is something I struggle with on a regular basis. How much detail is too much, how much is necessary? I am trying to tease out the required grammatical bits..." The eyegaze used to reinforce spatial grammatical relations between characters and places or figures in the story is widely accepted as a required non-manual grammatical marker (Lucas, 1998; Liddell, 2003). But, Wren's question poses, can the eyegaze toward the story's audience also be treated as "required" and "grammatical" and therefore written? Ultimately, as seen below, she decided to include in the written text the eyegaze toward those viewing the story (Fig. 4). What informed that choice?

This decision was likely influenced by the genre of the text: ASL story telling. While for most of its history ASL has not had a widely used written form, it has a rich corpus of face-to-face signed literature, including poetry, drama, and a range of storytelling genres. This tradition involves a great deal of awareness of the ways in which audience, as part of the performance context, affects the telling of a story. Ben Bahan argues, for example, that "the teller, the tale, and the audience" are inseparable in the ASL performance tradition. Further, status as a good storyteller, or "smooth signer", hinges an ability to attend and respond to the mutually constitutive nature of these three elements (Bahan, 2006, p. 28). This concern is not unique to Deaf storytelling contexts; the form and meaning of language use is dialogically emergent among participants across social contexts (Tedlock and Mannheim, 1995). However, this process is not always as subject to explicit metapragmatic discussion.

Attempts to record and circulate this body of literature, whether in print or via video-recording, have therefore been controversial, as performers and critics have noted that removing the story from the face-to-face moment of telling destroys the author's ability to respond to the projected future audiences who read or watch the performance (Bahan, 2006). Those attempting to preserve ASL literature are consequently not as inclined to idealize the purported (if debatable) "context independence" of writing and other detachable forms. This concern may have influenced Cherie Wren's decision to retain eye gaze between storyteller and audience in the written version of the story, despite the fact that this eyegaze would not be treated by most linguists as an obligatory NMG, but more closely parallels the ways in which eyegaze is deployed to manage joint attention in spoken language contexts (Goodwin, 1981).

Because SW is written and read from an expressive viewpoint, marking the relation between the teller and audience in this way helps those reading the text to simultaneously occupy the role of teller and addressee, allowing the three roles identified by Ben Bahan to co-exist even in a private reading. In addition, because the intended audience of the SW written version of the Cat in the Hat is made up of Deaf children, encoding the pragmatic uses of eyegaze creates a text that can socialize young readers into the formal practices involved in being a good ASL storyteller while drawing their attention the tradition's focus on audience. Within this ideological focus then, the eye gaze between teller and audience is "necessary", not for ASL grammar as structured system of reference, but for ASL as performed in this context.

#### 4.3. Listserve discussions

Not all participants on the listserve think it is necessary or valuable to write this sort of detail. Some agree with the perspective that such texts offer, "too much noise for too little signal." This view, usually offered by those list members who have had linguistic training, treats as "signal" communicative elements that contribute to reference, and frames as "noise" those elements that create non-referential meaning reflecting the contingencies of performance in context. These differences of opinion often lead to discussions and, sometimes, debates.

For example, the following exchange occurred when a member defended the choice to write those details often deemed paralinguistic by appealing to the importance of genre. The participant stated that when reading or writing a SW text, answering Cherie Wren's question, "how much detail is too much? How much is necessary?" requires one to ask, "Is (the genre) practical or imaginative? Is it history, science, mathematics, philosophy, or social science?" Another participant challenged this perspective, asking the hypothetical question with which this article opened: "If you're reading a book on history, do you really need to see the smile when the author mentions America?" This question critiques the notion that writing a smile might be appropriate not only on strictly linguistic terms, but also questions whether a writer's positionality (for example, someone who responds with positive emotion to America) should be encoded in, rather than referred to through, written form. Indeed, doing so runs counter to another widespread language ideology, which suggests that unlike "inherently perspectival" oral language, writing can and should create objective and dispassionate truth telling (Goody and Watt, 1963).

Of course, genre can have more influence than modality on the formal properties of written versions of spoken languages as well (Chafe and Tannen, 1987). And written English and other writing systems can index social information about writers and contexts of writing, though in some contexts this semiotic quality is ideologically (or formally) erased. Likewise, many of the paralinguistic features encoded by SW writers can appear in scripts like English. Consider, for example, the prosodic features encoded by, "I reeeeeeealllly want to... GO!" However, attempts to incorporate such forms into written English typically imbue the text with a distinctly non-standard feel, and are generally treated as aberrant or "bad" writing. As this

suggests, the differences between what SW and more widely accepted scripts encode has to do with ideology as well as with the formal differences between the scripts and languages involved.

Though some list participants share an ideological orientation downplaying the significance of the social indexicality of language, a body of SW literature is nevertheless emerging in which "paralinguistic" features encoding such information are written in the same terms as elements more widely recognized as linguistic. As communicative properties represented in script are often privileged in metalinguistic understandings of the nature of a given language, these texts (and the discussions they elicit) create space for sign writers to debate, rather than take for granted, dominant perspectives on the nature of writing and language. Indeed, the SW texts I've discussed support (and are supported by) an emerging alternative ideological perspective that defines language as performance in context; in reply to the question, "do you really need to see the smile?" another listserve participant wrote, "If it is part of the nuance of the sign, yes... one of the very valuable things (about) SignWriting (is that) it captures our language the way we use it".

# 5. Conclusion

No writing system is capable of representing every aspect of the formal properties of a spoken or signed language, nor are scripts that more closely encode linguistic features inherently better than scripts that relate to linguistic content in other ways. However, different kinds of "fit" between a script and a language are ideologically consequential. The choices Stokoe made, while necessary for his theoretical goals, meant that SN represents sign languages in ways reinforce dominant ideas about the nature of language and writing. In noting this, I do not mean to denigrate Stokoe's incredibly important work for, as mentioned above, his efforts to demonstrate that sign languages can be described according to formal linguistic criteria were deeply significant for Deaf social validation.

Indeed, as many scholars have shown, developing a script has as much to do with symbolically representing the social group associated with the language as representing the linguistic properties of the language itself (e.g., Schieffelin and Doucet, 1998; Ahmad, 2008). SN, though not as effective in capturing the formal properties of sign languages, can imply a close relationship between sign and spoken language through its resemblance to alphabetic scripts for spoken languages. In so doing however, it ultimately portrays sign languages as unwritable and therefore fundamentally different.

SW, on the other hand, may seem to stress differences between spoken and signed languages by highlighting aspects of communicative ecologies, such as iconic and indexical processes, non-linearity, and the contingencies of performance, often erased by dominant ideologies of language and writing. For that reason, some signers are threatened by SW, arguing that it will appear strange and primitive to the broader public and will ultimately reinforce stereotypes about the d/Deaf while threatening the validation sign languages have attained through work like Stokoe's. However, in this article I have suggested that, though the ideological orientation reflected and produced by SW contrasts with formal linguistic theory, it aligns with a post-structuralist characterization of spoken, as well as signed, language. SW may derive institutional support from this growing body of literature. At the same time, exploring this alternative writing system may contribute to post-structuralist scholars' attempts to utilize writing as an analytical tool without undermining their theoretical goals.

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# Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.langcom.2011.05.008.

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Erika Hoffmann-Dilloway, a linguistic anthropologist, earned her Ph.D. from the University of Michigan in 2008. She is currently an Assistant Professor of Anthropology at Oberlin College and Book Review Editor for the Journal of Linguistic Anthropology. Her research focuses on semiotics, language ideologies, and language socialization. The two primary ethnographic sites in which she locates her research include d/Deaf social networks in Nepal and online social networks that anchor emerging transnational sign language literacy practices.