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Event Packaging in British Sign Language Discourse

Gary Morgan

Sign languages are articulated in the space on and around the bodies of signers. The construction of extended discourse by native British Sign Language (BSL) signers calls on a rich reference system that exploits linguistic, as well as topographic, representational spaces. Describing ongoing scenes where two or more events are co-occurring requires sophisticated control of the laying out of events in sign space. Native signers exploit the various options available to them from within the BSL system to distinguish between referents and action. Focusing on event packaging, signers set up events in representational frameworks or use clear narrator information—articulated in narrator space—to guide the addressee through discourse by moving the narrative through a series of representational spaces. Packaging involves the activating of a series of spaces and the cohesive movement through these spaces.

Once speakers move on from the sentence and begin to construct extended monologue we can say that they are in the realm of discourse. Discourse in this sense is language beyond the sentence. Although discourse is a term used for many uses of language here it refers to "a large span of related spoken [*or signed*] utterances by one speaker" (Karmiloff-Smith 1985). In discourse, sentences need to be linked to other sentences in order to carry an idea or plot through a series of changes in events and temporal contexts. Constructing discourse is therefore about getting events and relations correct at the sentential level, as well as allowing relations to be encoded across the sentential boundary. One term used to express

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discourse constraints is *cohesion*. Cohesion refers to relations of meaning that exist between sentences when the interpretation of some element in discourse is dependent on that of another (Halliday and Hasan 1976). Cohesion normally accompanies *coherence*, which refers to the overall intelligibility of the discourse or text. Users of language are constantly working within the requirements of making discourse cohesive and coherent. The linguistic labels chosen by speakers to mark cohesion reflects their attempt to manage information flow for themselves, as well as their addressees (Chafe 1987).

SIGN DISCOURSE

Sign languages can be described as *discourse-sensitive* languages, that is, the face-to-face nature of interaction is coupled with nonliterate traditions of reporting events.[1] It is therefore valuable to describe the nature of discourse in this modality and how it differs from spoken language. This description focuses on three aspects of discourse in sign language: (1) the use of sign space for reference, (2) the representation of discourse in sign space, and (3) the nature of face-to-face communication. These aspects of sign language were first formalized in Friedman (1975) and have been explored since in several areas, for example, Ahlgren and Bergman (1992), Bahan and Petitto (1982), Gee and Kegl (1983), Poulin and Miller (1995), Roy (1989), and Winston (1995).

The Use of Sign Space for Reference

Sign discourse exploits sign space for referring to protagonists in narrative.[2] Signers may use arbitrary locations assigned to areas of sign space to represent referents (e.g., Neidle, MacLaughlin, and Lee 1997). Another option is to represent the interaction of referents, as well as dialogue and action, through a shifting of reference from the narrator to another first person (e.g., Metzger 1994). This strategy is most akin to reported speech in spoken language discourse (e.g., Clark and Gerrig 1990). Signers construct discourse through the systematic use of reference to areas of sign space and through shifted reference.

The Importance of the Shifted Referential Framework

The use of the shifted referential framework underlies the successful transition of reference through discourse and has not been the focus of the majority of comparative work in spoken language. Sign discourse has three overlapping referential frameworks. The specific markers of simultaneity are embedded into this three-tier framework. This relationship is schematized in figure 1.

These three schematized frameworks are used to carry information through narrative. Each space is devoted to different kinds of information marking, although there is interaction between the three (indicated by

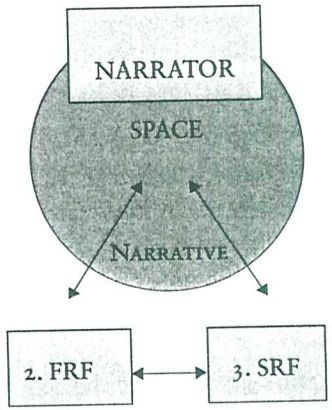


FIGURE 1. *Interaction and Use of Representational Spaces in Narrative.*

1. Sign languages are no longer non-writable. Several sign languages have been recorded in the Sutton Sign-Writing system (e.g., Gangel-Vasquez 1997). The impact on BSL and the BSL-using community of recording experiences and history in a written form is an interesting sociological issue.

2. The sign space is a hemispheric zone extending from the signer's body in all possible directions of an arm's stretch. It is observed that reference will exploit space within a zone occupying a horizontal band between the waist and chest height as well as space on the signer's own body.

arrows from within the main area marked NARRATIVE). Each of the three representational spaces are described here in turn:

1. Using narrator space, the narrator describes information with a clear use of eye gaze toward the addressee, especially for scene setting, the first mentions of protagonists, plot motivations, and genre appropriate introductions. This space is used throughout the narrative for comprehension checks and narrative filling information. It may interact with both the fixed and shifted referential frameworks.
2. The fixed referential framework is used for scene setting involving topographic space, the movement of referents through proforms, and pronominal points toward spatial loci. Eye gaze toward hands marks the use of proforms. This space interacts with the shifted referential framework in discourse.
3. The shifted referential framework is mainly used to describe dialogue, actions, and thoughts of protagonists. Movement to the shifted referential framework is normally marked by eye-closes or nonmanual markers, which follow locations set up in topographic space set up in the fixed referential framework. There is often rapid interaction with the fixed referential framework.

The Representation of Discourse

Sign language also exploits sign space to represent not only syntactic arguments but also topographic information. Spoken language makes large recourse to spatial language through arbitrary symbols. In English, spatial terms such as "back of, head of, mouth of, foot of," make reference to body coordinates while "under, over, in, next to," and so on are less iconic. There is a radical difference in sign language: signers may position units of language such as nouns and verbs in sign space in accordance with real-world spatial arrays. The interaction between syntactic and topographic space has been the subject of intensive sign language research in several different signing populations (see Emmorey, Corina, and Bellugi 1995).

The Nature of Face-to-Face Communication

Sign languages are constrained in that the addressee must look at the person signing during interaction. Sign narrators use sign space on and around their own bodies to construct and represent discourse. Signers take into consideration their conversation partners' need to understand reference and uses of sign space. The patterns of sign discourse reflect this consideration. Signers monitor and adapt their discourse for conversation partners, normally representing discourse from their own perspective but marking the passage of events through discourse in various ways so as to allow full interpretation (Emmorey 1994; Morgan 1997). The discussion now turns to the use of reference forms in discourse.

REFERENCE IN SIGN LANGUAGE

Previous work on reference in sign language has predominantly concentrated on an analysis of American Sign Language (ASL). Initial work focused on the sentential level of sign language and up until recently has even avoided tackling descriptions of longer stretches of sign language such as those observed in conversation or narrative (for a discussion of this see Neidle, McLaughlin, and Lee 1997). Work on BSL (Brennan 1986), as well as other European sign languages (e.g., Bos 1996; Engberg-Pedersen 1995; Pizzuto 1990) has made the general finding that morphosyntactic mechanisms are used within the space surrounding, as well as on, the signer's body.

The Organization of Reference in BSL

Based on the previously cited early work, a preliminary investigation of discourse construction in British Sign Language (Morgan 1998) has described a system of reference forms that are employed by signers in several referential frameworks. The reference forms described here are noun phrase, pronominal points, proforms, verb agreement, verb agreement in the fixed referential framework, and verb agreement in the shifted referential framework.

NOUN PHRASE

In BSL, noun phrases have a similar referential function as in spoken language. They may constitute the name of a referent spelled out in the manual alphabet (for example, T-O-M, or a name sign for one of the characters (for example, FLAT-NOSE).[3] Indefinite and definite noun phrases are

3. For the use of conventional notation devices to record sign language, see appendix A.

distinguished by signers through nonmanual features (in particular a head nod or eye-gaze marker) or by using a strategy of ONE BOY to indicate an indefinite referent and BOY for a definite referent. Nominal reference in BSL is often, but not necessarily, accompanied by a point into signing space. Pronominal points (PRO) or nonmanual mechanisms directed at or from these areas maintain a referent in discourse focus:

EXAMPLE 1

>< <<
LITTLE-GIRL$_a$ PRO$_a$(index finger point right)

the little girl

The preceding overt reference followed by an index finger point (PRO) to the right functions to establish the referent "little girl" in this area of sign space for subsequent discourse functions.[4]

PRONOMINAL POINTS

The referential partitioning of sign space through the use of pronominal points was described in ASL by Friedman (1975); it involves the grammatical use of points in sign space on and off the body to indicate locations for referent identities. It is argued that these referential locations are used as person or object referents; that they represent landmarks for the use of various morphosyntactic and discourse mechanisms; and that it is their successful control and manipulation which underlies one aspect of discourse. An index point for reference functions like a pronoun. When used, it simultaneously gives referent identity, as well as topographic information (if this is important in the discourse context).[5]

4. The use of semicircles to represent sign-space and arrows to represent the movement of signs toward specific locations, stems from a notation convention in van Hoek, Norman, and O'Grady-Batch (1987). Above the gloss, the vertical line indicates the extent of eye-gaze scope. In the example presented, the signer is looking at the addressee (><) up to the point of the pronominal point to the right, when eye gaze shifts to the right (<<). All eye-gaze notation is made from the signer's perspective. Accompanying the gloss are subscripted syntactic roles and an English translation (a full description of notation devices appears in appendix A).

EXAMPLE 2

>< >>
THEN PRO$_a$

then she

The pronominal point in example 2 co-refers to the antecedent noun phrase. Points may indicate reference to objects, locations, or concepts, as well as people. Anaphora requires that the signer point, gaze, or face toward the previously established spatial locus. Subsequent discourse uses this referent establishment as a locus for future comment. What has been established is a fixed referential framework (van Hoek, Norman, and O'Grady-Batch 1987). The narrator needs to be consistent in the use of this framework for the narrative to be coherent. Any future additions to the spatial array—along with shifts in the narrative framework—need to be assimilated. In signed discourse, as in spoken language, the interpretation of these pointing forms depends upon the relational meanings that are understood by the addressee.

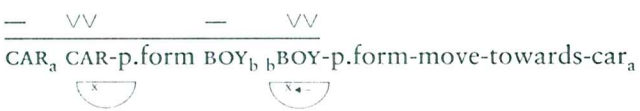
PROFORMS

Proforms (p.form) mark the semantic category or the size and shape of the referent noun. They are used for establishing referent identity as well as topographic information (if important in the current discourse context). A canonical person proform is articulated in BSL with a G handshape, alternatively the proform can be represented by an inverted V handshape denoting legs (handshape notation device from Stokoe 1960). Proforms may be moved around the signing space or may be manipulated into various positions such as SITTING, JUMPING, KNEELING. Pronominal points and directional verbs can also exploit proforms to convey complex morphosyntactic information. In example 3, a signer, after an overt

5. Traditionally, sign language description refers to these points as "index-finger points" because the signer uses the index finger. Subsequently signers are referred to as having "indexed" a referent. This is inherently confusing, as linguistic theory uses the term "index" to refer to a syntactic role in, for example, a verb agreement frame. Syntactic index and an index-finger point are not the same thing. Here an index-finger point functions as a pronoun form.

reference to a car, places a vehicle proform (flat B-hand) in the right side of the signing space and then signs BOY followed by a person proform (G-hand) that moves toward the stationary passive hand maintaining the car. These uses of referential spaces are used by adult signers to build cohesive discourse.

EXAMPLE 3



the boy approached the car from the left

These pronominal forms are referred to as *manual* as they are articulated largely on the hands, although for their success as referential expressions they need to be produced at the same time as nonmanual information. For example, the use of a proform for PERSON-WALK would need accompanying nonmanual information (facial expression, body orientation, manner of movement) for its successful identification as an old man walking or as the boy in the story walking. Pronominal points often are accompanied by nonmanual information.

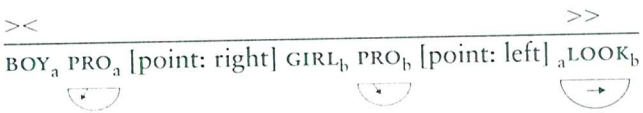
VERB AGREEMENT

In this description, verb agreement morphology is divided between two referential systems: the fixed and shifted referential frameworks.

Verb Agreement in the Fixed Referential Framework

Once signers have established referents through nominal reference, a range of linguistic devices exploits these areas of the sign space for building discourse. One of the more complex morphological devices used with these spatially arranged referent loci is verb agreement. The inflection of a verb across sign space between two already established referent locations is argued (e.g., in Janis 1995) to function in the same manner as in a pro-drop language such as Italian. In pro-drop languages the subject clause can be omitted and both subject and object can be incorporated into the verb stem (e.g., *voy* [I go] in Spanish, where *yo* [I] does not need to be expressed). A verb such as GIVE in BSL can move between two locations, representing referential antecedents, in order to convey the meaning, "John gave the book to Mary." Another directional verb in BSL LOOK, may remain static as the orientation of the handshape gives referent information. The location of the sign in sign space encodes the subject of the utterance; the orientation of the sign (which location the fingers are pointing toward) indicates the object of the verb (see example 4). The verb LOOK would be produced with alternate hands when reversing direction due to the phonological constraints of hand orientations (it is difficult to position the right hand with the fingers pointing towards the area close to the right elbow). The following utterances illustrate the use of verb agreement. The second sentence reverses the direction of the verb inflection, thus indicating a change in meaning.

EXAMPLE 4



the boy looks at the girl,

she looks back at him

The use of directional verbs in the fixed referential framework may not be the most common reference strategy used in discourse. As described in the introduction, there is another discourse possibility that verb agreement can tie into, which is related to the change of perspective from speaker to shifted first person.

Verb Agreement in the Shifted Referential Framework.

In BSL, directional verbs inflect between referents that are present in the same way as they inflect between referential loci (representing nonpresent referents) in sign space.

In examples such as YOU-TELEPHONE-ME, YOU-GIVE-TO-HER, I-STAY-AT-YOUR-HOUSE, signers use similar verb-frame constructions between referents that are present, as in example 5 between the signer and a present second-person referent, and referents who are not present, as in example 6, between the signer and a nonpresent third-person referent.

EXAMPLE 5

I am asking you

EXAMPLE 6

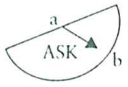
I asked him

The last two contexts refer to the fixed referential framework (FRF) in example 7 and the shifted referential framework (SRF) in example 8.[6]

EXAMPLE 7 (FRF)

(John) asked (Mary)

EXAMPLE 8 (SRF)



(John was like) # asking (Mary, like this)

Once signers mark a movement from speaker to shifted first person, they report events from what has been referred to in the literature by terms such as *role shift* (Loew 1983), *referential shift* (Emmorey 1994), and *constructed action* (Metzger 1994), among others. This discourse option is equivalent in several ways to direct discourse or reported speech shifts in spoken language, but in sign language signers exploit this shift to report actions as well as words from another person's perspective. Examples 9, 10, and 11 illustrate the difference between the use of a fixed referential framework and a shifted referential framework in the utterance "the boy looks at the girl."

6. The notation # indicates the example is from within the shifted referential framework. This is characterized by accompanying nonmanual markers, such as an off-center orientation of the shoulders. An approximate translation attempts to capture this shifted diagram.

EXAMPLE 9 (FRF)

(he) looked at (her)

EXAMPLE 10 (SRF)

(he like) # looks at (her, like this)

The signer in example 10 reports the action of "looking" from the shifted perspective of another first person. The body shifts toward the location of this referent; the eye gaze is directed at the second referent. The option of shifted perspective can also be taken while still in a marked narrator space, termed *mixed perspective* here, but possibly *role prominence* in other descriptions (e.g., Bahan 1996).

EXAMPLE 11 (mixed perspective)

(he went like) looking at (her)

The salient aspects of these three distinctions are the different use of eye gaze between examples 10 and 11. Moving the body, as well as eye gaze, toward a referent's location is characteristic of a full shifted first-person device (coded as #). Hence signers not only make choices in the type of referential forms they use for person reference (pronoun, noun phrase, proform, verb agreement), they also make a discourse selection of perspective. The BSL reference system is exploited in a complex integration of the fixed referential framework and shifted referential framework in several discourse contexts. One of these contexts is now discussed.

Event Packaging

One aspect of discourse that has received interest in the literature is the notion of simultaneity (e.g., Slobin 1996). In describing the encoding of simultaneity in discourse, terms such as *foregrounding* and *backgrounding of events* are used (e.g., Bamberg 1987; Hickmann 1994; Jisa and Kern 1997). Normally backgrounding is a continuing event against which a foreground event occurs. The use of temporal markings to distinguish

background and foreground (ground) events in discourse is argued to guide attention flow for both speaker and addressee (Tomlin 1987). The use of markers to encode simultaneity relates to the speaker's intention to describe several different ongoing events as occurring within the same temporal boundary. In the semantics of English, these descriptions rely on the notion of main and subordinate events encoded as two clauses. These events describe moments of time and encode referent states, activities, or accomplishments. Moreover, the intervals defined in the two clauses may overlap or occur in succession (Slobin 1996). Thus speakers set up events along different "grounds," choosing to focus on one or the other.

In English it is common to use aspectual and temporal markings on verb morphology to mark background and foreground information, for example, "While he was sleeping the frog climbed out of the jar" (Berman and Slobin, chapter 1a).

The use of the aspectual marker "ing" marks the boy in background while the simple past "ed" marks the frog in foreground. The use of perspective marking is particularly salient in situations where two or more events happen at the same time, for example, "An owl came out and bammed him on the ground while the dog was running away from the bees" (Berman and Slobin 1994, chapter 1a).

Cross-linguistic work demonstrates that different languages have different options for encoding simultaneity. In Turkish, simultaneity may be encoded using case marking for causation on the verb for one referent and a topic particle "*de*" for the second (Slobin 1996, 74).

EXAMPLE 12

Baykus	dusuruyor	onu kopek	de	kaciyor
owl	fall**causative**	him dog	**topic**	run away

the owl knocks him down and as for the dog he runs away

Returning to English speakers, example 13 highlights the use of temporal connectives such as *while*. English speakers use connectives to join two or more events in discourse. Speakers also use these markers to overlap events along the temporal frame. But there are constraints on the extent to which different connective markers may encode overlap of events, illustrating their different semantic features. Comparing the temporal connectives *while* and *when* illustrates this point. "I am doing laundry while George is washing dishes," as opposed to "I am doing laundry when George is washing dishes!" which sounds strange (Silva 1991).

The use of connectives is related to the semantics of the event being described. In a comparison of the use of *while* and *as*, Silva (1991) found that the degree of interchangeability between the connectives depended on the event being described. Silva elicited sentences of a scene where a woman is using a vacuum cleaner inside a house and two children are watching her through a window from outside. Study participants used the connectives *while* and *as* equally as often to connect these two events:

> She ends up cleaning up the living room as the kids watch through the window outside.
>
> She's got a vacuum cleaner and is just tidying up very quickly while the little boy and girl are sort of watching her through the window.

Other scenes uniformly elicited only the temporal connective *as* from subjects. When two events are embedded in each other (e.g., walking and thinking) and have the same subject, the marker *as* carries more appropriate semantic information than other connectives. In English, Silva proposes the conjunction markers *when*, *while*, and *as* make up a continuum of simultaneity. *When* is the least specific as to the exact temporal relationship it encodes between events and at the same time the least constrained as to what predicates it can connect. *As* is the most specific and the most constrained and *while* is in the middle of the continuum. In terms of the role, temporal connectives perform in the construction of discourse. Silva cites Chafe's (1984, 445–50) statement that these markers "serve as guideposts to information flow, signaling a path or orientation in terms of which the following information is to be understood."

Encoding Simultaneous Events in Sign Language Discourse

Although discourse has been explored in analysis of several sign languages, the strategies for encoding simultaneous events has received less attention. The analysis of simultaneity in terms of event packaging in extended discourse differs from the analysis of simultaneously articulated signs (e.g., Miller 1994), in that whole events involving several referents are happening simultaneously rather than description of signs involving two hands.

Previous descriptions of sign language discourse have described the use of representational spaces that appear to function as spatiotemporal connectives in spoken language, such as, *when*, *while*, and *as* in English. The nature of these uses of representational space needs to be explored further

to understand how simultaneity is described in connected extended discourses. Looking at recent analysis of sign discourse, Winston (1995) describes ASL signers' use of what she terms "comparative frames" for establishing nominal reference in space. At the discourse level, spatial reference is an integral feature of at least three types of discourse frame: comparisons, performatives, and time mapping. Winston describes the use of the third type of discourse frame, time mapping spatial devices, as a discourse strategy whereby spatial comparisons are used to establish and maintain the major theme of the signer throughout the text. The device is also used to juxtapose current and past events, that is, a cohesion device for allowing simultaneous events to be packaged.

Within these discourse frames, time references are traced through a specific section of text by the initial establishment of a referent at a location in space and by subsequent co-references to that entity at that location. Abstract concepts, such as temporal frames, may be assigned locations in the spatial array and subsequent reference to these "reactivates" that temporal frame. These ideas can be traced at least as far back as Friedman (1975) and Padden (1983). Signers use temporal referencing in several ways:

1. the signer directs eye gaze toward the marked space as referring to the marked temporal frame;
2. the signer points to the space;
3. the articulation of a sign for a referent is moved from neutral to marked space indicating another temporal frame;
4. the signer rotates the torso/head towards the space;
5. the signer indicates a shift in time by physically stepping into the space and producing the signs; and
6. the signer switches hands (from dominant to nondominant) in order to articulate the signs with the hand on the side nearest the established temporal frame in space.

Mechanisms 1 through 3 can be seen in the previous description of pronominalization. Mechanisms 4 and 5 can be seen in the description of the shifted referential framework provided earlier. Mechanisms 1 through 5 may be ordered along a hierarchy of explicitness, from the most reduced (1), to the most overt (5). Signers make pragmatic judgments as to the extent of explicitness required in order to shift reference (Morgan 1997).

In an echo of Chafe and the "guideposts" notion just presented, Winston (1995) argues that these repeated references to temporal frames in space provide the watcher with cues for interpreting the signer's intended meaning; this analysis is extended in Mather and Winston (1996). Different spatial scenes and markers of movement evoke conceptual referents in the mind of the audience. The use of space in sign language thus extends to the marking and distinguishing of temporal events, as well as referential functions. Signers, in attempting to describe different events, may devote locations or areas of representational space to refer to events and move back and forward from these locations to package events.

Emmorey (1992) has related this use of space to encode surface relations in sign languages to the elaboration of cognitive models of language such as those in Fauconnier (1985). Fauconnier writes that communication through language works to the extent that communication partners "build up similar space configurations" from the linguistic and pragmatic data. Building a scene in sign space, which perhaps reflects an internal "mental discourse map" (Tyler 1983), is one of the most exciting aspects of sign language analysis at the discourse level. Understanding the mechanisms of sign space and referential frameworks that signers work with, in their construction of online complex discourse, is an important area to be described and assimilated into the field of general discourse analysis. The preceding description of a rich referential system in BSL suggests signers are disposed to report events in a dramatically different surface form to speakers of spoken languages. The present study reports on the use of sign space for the reporting of simultaneously occurring events in free-standing monologue narratives.

DESCRIPTION OF THE PRESENT STUDY

The data presented here come from a larger study, which describes discourse cohesion and its development in young deaf children (Morgan 1998). The data centering on the packaging of events formed one part of this investigation.

Method

PROCEDURE

Signers familiarized themselves with stimulus material. They then retold the story to the author, who is a fluent BSL signer, after being

requested to "tell the whole story in as much detail as possible to me." The picture book was not present as the participants retold the story. The narrative was recorded on a video camera positioned next to the addressee. The study participants were two deaf native BSL signers, one male and one female, both in their early forties.

MATERIAL

The data discussed here forms part of a picture book narrative, *Frog Where Are You?* (Mayer 1969), henceforth referred to as FS (for Frog Story). This material was first used in descriptions of narrative production in Bamberg (1986); it is rich in opportunities for the encoding of temporal distinctions, sequencing, simultaneity, prospection, and retrospection. Recently a major cross-linguistic comparison of narrative production using FS has been reported (Berman and Slobin 1994). This analysis included ASL data (Galvan 1988). The story is depicted by nontext pictures showing the adventures of a young boy, his dog, and a lost frog. The boy and dog characters appear in twenty-three of the twenty-four pictures. The data described here are taken from the middle section of the narrative, where a complex scene depicts the simultaneous actions of the boy and the dog searching for the frog. The stimulus material used to elicit this part of the narratives are reproduced in figures 2 and 3 on p. 43.

MEASURING THE EXTENT OF EVENT PACKAGING

The analysis involves a qualitative description of three aspects of discourse in sign space:

1. Scene setting. This aspect refers to the use of the surface of sign space for the division of background and foreground events, i.e., the actions of the dog and the actions of the boy, as well as the placement of "narrative props" such as trees, holes, beehives, and so on.
2. Movement between representational spaces. This aspect describes the switching between events through the use of spatial means. These means focus on the use of the BSL reference system (described previously), and the signaling of these shifts through narrator information to the addressee.
3. Temporal devices. This category focuses on the use of temporal strategies for the combination of events, the switching between events, and the tying of events together across discourse.

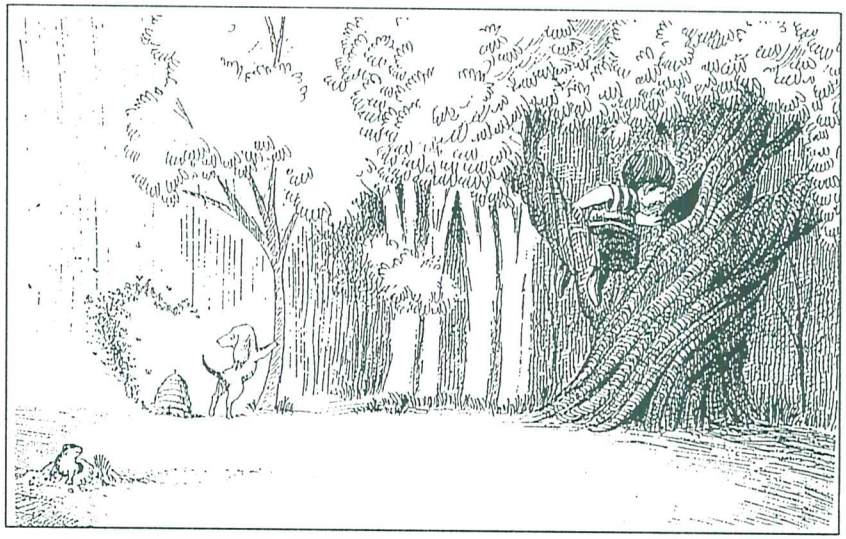


FIGURE 2. *The First Picture from* Frog, Where Are You?

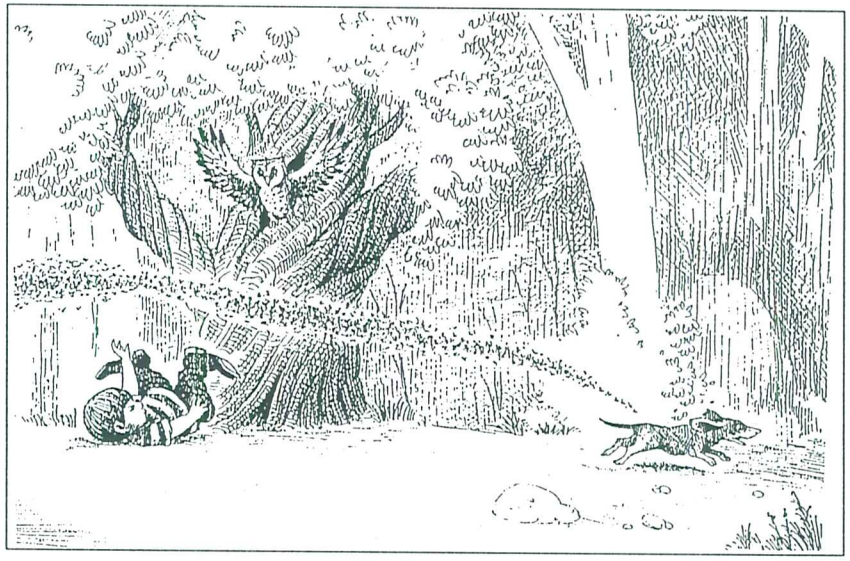


FIGURE 3. *The Second Picture from* Frog, Where Are You?

Results

The following data are taken from the overall FS narratives of two deaf native BSL signers. The analysis focuses on one section of these elicited narratives. This part of the narrative involves the encoding of two

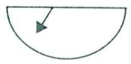
simultaneous events. In figure 2 (on the left side of the scene), the dog who has been pushing at a tree, where a beehive is hanging, stands looking at the beehive, which has fallen to the ground with the first bees beginning to come out of the hive. On the right side of the scene, the boy has found a large tree with a hole in the trunk and is investigating inside. In the next picture (figure 3) we see the dog running across the foreground, pursued by a long swarm of bees. The boy in the meantime has discovered that the hole is the nest for a large owl, which is seen angrily emerging from the hole, while the boy falls from the tree in shock. In relation to the discussion of the grounding of discourse, it is important to mention that in the type of discourse elicited in this study, the inherent foreground and background of events are not given by the pictures themselves but are constructed by the narrator (Slobin 1996). The action of the dog pushing at the beehive could be foregrounded in the main clause with an active verb and the actions of the bees backgrounded in a subordinate clause: for example, "the dog runs away as the bees follow him." The available options to encode events are diverse. The speaker can choose between marking the dog as focus and the bees by a passive tense, for example, "the dog is being chased by the bees;" or encode the action of the dog in a subordinate clause that represents the next plotline in the scene, for example, "all the bees start chasing the dog, who runs away." The organization of experience in narrative, as following the available options in a given language has been labeled "thinking for speaking" by Slobin (1996). First the glossed version of these events is first presented for Signer 1. The second signer's narrative will then be described before attempting to draw commonalities between the two pieces of signed discourse.

EXAMPLE 13

Signer 1: Frog Story

```
     —    ^^          ><
// # DOG JUMP-UP++ TRY CATCH-HIVE FALL

><          <<
BOY NO-SEE # LOOK-RIGHT-SHOCKED
```



```
><  -                                  (squint--------
TREE WIDE TRUNK HAVE HOLE # BOY THINK

----------) <<                    00
PRO-THERE MAYBE LOOK-IN-HOLE ++ SHOCK
```

```
><  .      ^^
WHAT OWL # FLAP-WINGS PECK-ANGRILY

00                    ><                  -
BOY FALL-DOWN   // SAME-TIME PRO-THERE BEE
```

```
                                      <<
HIVE-FALL PRO-THERE BEE-pl ANGRY LEAVE
```

```
><
SWARM-FLY FLY LONG-THIN-TRAIL p.form-SWARM //
```

The dog is like jumping up and down again and again, trying to get the hive hanging from the tree when it falls onto the ground, the boy as he didn't see what happened like turns around and is like shocked. There is this big wide tree with a hole in the side of the trunk. The boy thinks to himself 'in there maybe.' He like looks into the hole, really looking around inside and gets a real shock as there is this big nasty owl like flapping away and pecking angrily, the boy falls from the tree, just as the beehive falls over to the left, the bees come flying past from the hive, the whole swarm of bees comes flying and buzzing away out of the hive and in a huge cloud they come flying toward the boy.

The preceding excerpt is an extremely rich piece of signed discourse. The complexity is only hinted at by the selective glosses of signs, movements, and eye-gaze behavior. The following section discusses the presence of the three aspects crucial for packaging events across discourse in this narrative excerpt.

Scene Setting

The signer begins with a description of events coming directly from the dog's perspective. She marks the shift of perspective through a break from mutual eye gaze with the addressee and a series of nonmanual characterizations of the dog, including eye gaze directed toward a representation of the tree and beehive. The information of why the dog is jumping up, TRY CATCH-HIVE FALL, is accompanied by eye gaze at the addressee (><).

The signer using the shifted referential framework constructs a direct report of actions, rather than using pronominal and agreement forms between spatial locations on the surface of sign space within the fixed referential framework (see previous discussion of pronominal points, proforms, and verb agreement in shifted referential framework). Next, the signer reintroduces the boy through an overt noun phrase: BOY NO-SEE. This is the same type of narrator "aside" to the addressee, as the TRY CATCH-HIVE FALL comment in the previous utterance. An aside to the addressee is characterized by mutual eye gaze (><) and is used for clarification, filling information, and marking the subsequent information as important—something like "now pay attention to the next bit, as it's important to the story."

A shift to a different referent is marked through the break in eye gaze, which is interpreted as the subject of the previous utterance: the boy. This perspective shift sets up the first division of signing space between the boy and the dog. The boy looks to his right to see the dog's actions, and is shocked to see what is happening. This brief mention of orientation creates a scene where the boy is to the left of the dog. The signer chooses to mark this orientation from the point of view as mirroring the left/right distinction in the stimulus material. This scene is still reported as a shifted representation of events at this point. The signer continues from the boy's perspective as he faces a large tree, while switching to narrator information marked by >< to describe the scene. The signer sets up a representation of a hole in front of her at face level: TREE WIDE TRUNK HAVE HOLE. The owl emerges from the hole and has a marked upward eye gaze contrasting with the boy's level eye gaze. The use of different eye-gaze levels creates the impression of a height difference, thus allowing shifts in perspective between the boy and the owl to be accomplished in the same representational space. These shifts involve a 180-degree rotation of perspective.

There is a change in the use of sign space, as the signer describes the boy falling from the tree with a V proform moving away from her own body, accompanied by nonmanual characterizations of the boy falling through space using facial expression and body orientation appropriate to the boy's experience. A new scene is set up through a marked look to the addressee and the transition: SAME-TIME PRO-THERE BEEHIVE-FALL PRO-THERE. The location of the fallen hive is articulated twice with a point to her left and with the finishing point of the falling hive also on the left side. The signer takes the boy's new perspective on events as the scene rotates 180 degrees, with the boy now lying on the floor. The dog had previously been located by LOOK-RIGHT-SHOCKED in the right side of signing space from the signer's point of view, but the dog's actions are now located toward the signer's left sign space. This rotation of both the fixed referential framework and shifted referential framework is a complex construction both in terms of the spatial locations of referents and objects that need to be integrated with linguistic devices, as well as in terms of the representation of this new scene at the cognitive level.

Movement Between Representational Spaces

The signer shifts between representing action on her own body through the shifted referential framework to representing events in the signing space through the fixed referential framework. There is also a frequent movement to a narrator perspective to give "filling" information, to mark changes in referent perspective, to mark structural units of the discourse, and to monitor addressee comprehension. Movement between these three representational spaces (fixed referential framework, shifted referential framework, and narrator) involves setting up locations in sign space as well as signaling movement through these spaces. The signer "moves" between a series of spaces. The sequence begins with space devoted to the actions of the dog, which moves cohesively into a space occupied by the boy. The two spaces replace each other in terms of where they articulated. The signer does not physically move from one area to another, but in terms of representation she is in one space when she represents the dog and another space when she represents the boy.

The movement between these two representational spaces is signaled first through a break in shifted reference and a comment on the dog's actions (TRY CATCH-HIVE FALL) to a narrator comment on the boy's actions (BOY NO-SEE). Once focus has moved from the dog to the boy, the signer signals another shift in reference, this time to the boy's perspective on events. Thus the movement between these spaces appears entirely cohesive. The signer goes further than this and marks an intermediate

movement between the two spaces, signing LOOK-RIGHT-SHOCKED. This implies that the dog has now moved from the signing space to somewhere to the right of the boy. Following this shift is information from narrator perspective and then a shift back to the boy. Rather than solely action, this shift reports the boy's internal thoughts: # BOY THINK PRO-THERE MAYBE. The space set up by the tree and the hole in the tree are extensions of the space representing the boy. When the boy looks in the hole, the signer moves her hands to depict the hole moving toward her own face rather than moving her face toward the hole, emphasizing the representational nature of these descriptions. Pointing toward the hole is consistent with the boy's new point of view, facing the tree rather than looking down onto the ground.

The next movement in space is between the owl and the boy. As in the exchange in the use of the same signing space between the boy and the dog in the earlier part of the narrative, the signer now represents the owl's actions in the same space the boy had occupied, marking the shift in reference with an intermediate narrator comment (WHAT OWL) and mutual eye gaze. The new referent to be represented in this space uses eye gaze up to the boy as a signal of the new perspective. Again, rather than a full jump to another perspective, this allows only a shift from boy as primary focus to boy as secondary focus, or from agent to patient.

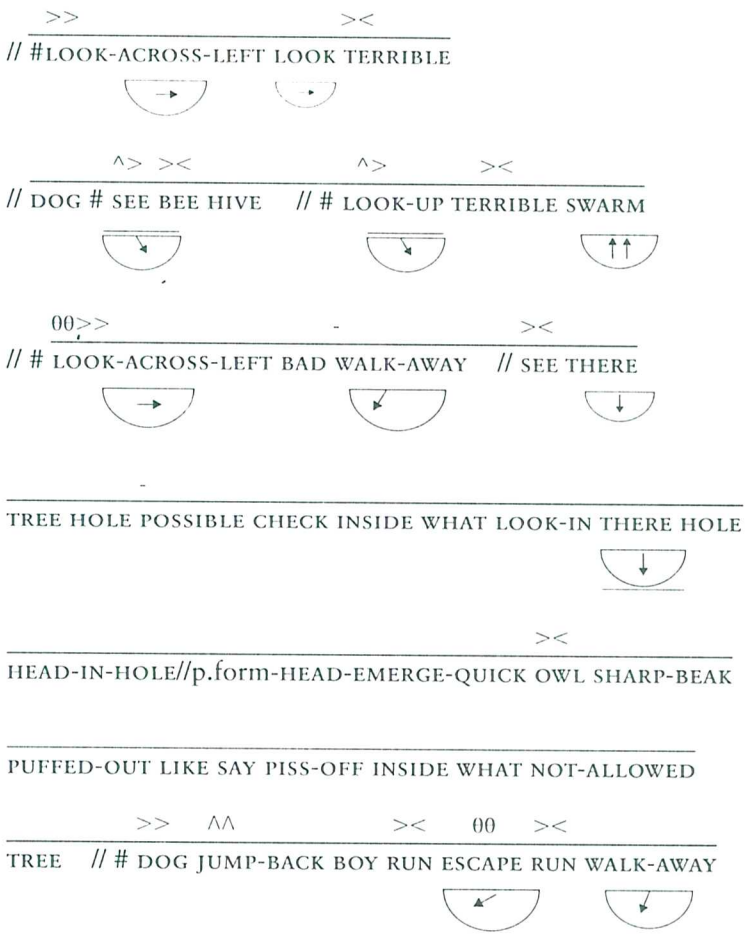
Temporal Devices

In this part of the narrative there is a complex problem to solve concerning the laying out in discourse of the two events, which are occurring simultaneously. The signer uses a sequence of event descriptions to describe both the dog's and boy's actions, ordering events as first the dog then the boy. The dog's actions terminate at the moment the beehive falls. The middle part of the description focuses on the boy's actions and the dog's are assumed to be occurring off the main focus. When the boy falls from the tree the signer uses the temporal marker SAME-TIME and reintroduces the dog into the discourse. The reintroduction begins with the beehive falling, although the last mention of the beehive had suggested it had already fallen. The signer uses a "flashback" and depicts the fall once more.

The analysis now moves onto the same event described by the second signer. The description follows the same organization, revolving around the three aspects of event packaging.

EXAMPLE 14

Signer 2: Frog Story



He looks over at the dog who is looking up at the beehive. That is terrible! The bees are all swarming out. He like looks over, that is bad, then walks away from there. He sees a hole in a tree in front of him, 'Maybe I should check and see what's in there.' He like looks into right into the hole, like puts his head right into the hole looking around like that. With that an owl comes shooting out of the hole, all puffed up feathers a big sharp beak like to say, 'piss-off out of here, this is my house in here, you're not allowed in this tree.' The dog suddenly jumps back frightened and runs off with the boy escaping away from the scene. . . .

Scene Setting

As in the first signer's story, the second signer begins with a dominant perspective on the scene, the relative positions of the referents are indicated from the boy's perspective. The signer marks a shift to the boy and indicates that the dog is some way off to his left: # LOOK-ACROSS-LEFT LOOK TERRIBLE. Very quickly the signer moves across to the location previously designated as the area to the left of the boy. This shift of reference to the dog is very rapid. The position of the beehive, as well as activity of the bees, are described from the dog's perspective: DOG # SEE BEEHIVE // # LOOK-UP TERRIBLE SWARM. The narrator comment that breaks this description includes the use of two proforms representing the swarm of bees that move toward the narrator's body. Abruptly, the signer signals a change in perspective and moves the description back to the boy positioned to the right of the dog. There is a lexical repetition that increases the predictability of this reduced shift through: LOOK-ACROSS-LEFT.

Now that the relative locations are set up, the signer moves the boy through the signing space with a person proform. The next part of the description involves a narrator point, a description of the tree and the tree hole: SEE THERE TREE HOLE POSSIBLE CHECK INSIDE WHAT LOOK-IN THERE HOLE HEAD-IN-HOLE. This description uses mixed shifted-narrator perspective. The two referents are brought together abruptly for the escape.

Comparing the Two Signers

MOVEMENT BETWEEN REPRESENTATIONAL SPACES

Both signers adopt a similar strategy in setting out a clear perspective on events at the beginning of this complex scene. In the second signer's story, the boy's actions are represented in a shifted referential framework in the first utterance. The movement to the dog is marked by a look to the left side of sign space, indicating that some distance off there is something terrible happening. A noun phrase reintroduces the representational space of the dog. This example illustrates that representational space is "cleared" and "reused" through the signaling of a new perspective by an overt reference form: DOG # SEE BEEHIVE. The signer blends representational spaces at points, allowing the dog's actions to move into narrator comments: # LOOK-UP TERRIBLE SWARM.

In contrast with the intermediate "stepping-stone" narrator comments of the first signer, which seemed to facilitate transition between representational spaces, the second signer chooses to move back to the boy solely through lexical repetitions involving perceptual verbs to locations: LOOK-LEFT, LOOK-UP. There is movement between different levels of referential space by the proform BOY-WALK-AWAY, followed by the narrator comment SEE THERE. The narrator comment serves to switch attention from the movement of the boy to the description of a new scene. The description of the tree and tree hole are thus linked to the previous scene through the perceptual verb SEE, as was the previous transition between the dog and the boy actions through LOOK.

Signers exploit these perceptual verbs (e.g., LOOK, SEE, GLANCE) to move discourse between areas of representational space in similar ways to temporal links such as "earlier, next, and later," and metaphorical spatiotemporal terms such as "after, back, behind, and before." For the owl's entrance into the scene the signer uses an A handshape as a head proform, thus describing both the action of the owl leaving the hole as well as the reaction of the boy looking at this event. This is an example of a simultaneous event being encoded by the signer using different parts of his own body to represent different referents. The subsequent narrator marked comments are from a mixed perspective, contrasting the indignant owl and the narrator reporting what happened: p.form-HEAD-EMERGE-QUICK OWL SHARP-BEAK PUFFED-OUT LIKE SAY PISS-OFF INSIDE WHAT NOT-ALLOWED TREE. The final part of this excerpt involves the bringing together of both referents.

The first signer used a complex construction that involved setting up a new "thematic perspective" through the boy's new position on the ground as well as a "flashback" construction of the beehive falling. The second signer manages this through moving from the narrator-owl comments to a representation of the shocked dog. The addressee perhaps has to make more of an intuitive leap here, as there is no description of the falling hive. As the boy is the dominant perspective, the signer concentrates on describing the boy's actions, leaving the dog as a secondary character that follows the boy out of the scene.

TEMPORAL DEVICES

The second signer marks the two events in a similar right/left representation. Although there is less emphasis on the dog's actions, the signer concentrates on the description of the boy's movements as well as the dialogue with the owl. This emphasizes the point that signers and speakers are selective in which events are described and which take precedence over others in encoding complex scenes in discourse. The first signer

concentrates on the two characters' actions while the second signer focuses more on the boy. The jumps between two simultaneous events are made by the second signer through rapid shifts in reference signaled through noun phrases for the dog and lexical or semantic repetitions for the boy.

Discussion

Both adults construct a series of events that are cohesively linked through a reference system that exploits different levels of representational spaces. The preceding description has highlighted several salient aspects of these spaces and how they are used in discourse. The creation of cohesive discourse through the use of the mechanisms discussed above is complex. In the comparison of the two narratives, it is clear that although the constraint of being cohesive in the use of spatial devices to mark and shift between perspectives on events is being adhered to, individuals vary in how these perspective shifts are marked. Pragmatic judgments are made by signers as to how explicit or reduced reference forms are to be used in specific discourse contexts. In the description of the packaging of events through simultaneity and perspective, an observation was made concerning the signer's use of a *thematic perspective*. A thematic perspective on an event refers to the signers' use of a main or dominant perspective to report events, as contrasted with a secondary perspective. Signers set up a thematic perspective when narrating, thus allowing reduced reference to be used in keeping this perspective in discourse focus. The *secondary perspective* is activated through overt reference forms. Thus, in the context of event packaging, two perspectives can be used on events without having to label both overtly.

The use of spatial devices in BSL narrative is constrained in terms of the number of active referents a signer can report on at any one time. The use of multiple perspectives on events seems to be constrained by factors dealing with processing rapidly changing spatial information. Signers focus early on in their discourses on scene setting. Much time is spent setting up scenes and spatial relations between protagonists. These foundations are used for subsequent rapid transitions between events and referents. Signers divide sign space up at several levels, both by assigning different areas of sign space to different events and by overlaying different events in the same sign space. The divisions of space refer to the use of the fixed referential framework and the shifted referential framework respectively. Sign space can be cleared for new events, if marked by appropriate eye gaze. Signers switch between different sign spaces through marked eye-closes, as well as looks to the addressee to signal shifts, as well as to check for comprehension. Often these changes in sign space are rapid.

The movement between simultaneous events is complex. There are many examples of narrator asides, which surround shifts and frequent checks for comprehension. Thus narrators often use mutual eye gaze or a comment directly to the addressee before and after a shift. There is a system of three steps to shift between two events. There is an intermediate stepping-stone that retains partial semantics of the first events while signaling the new event as primary. There is also a high proportion of perceptual verbs especially involving vision, which are used to link different representational spaces cohesively. Signers also use temporal devices such as flashbacks to link two events separated by a third. The overlaying of temporal frameworks is at the core of achieving cohesion in these constructions. In describing these shifts signers combine different representational spaces. The shifted referential framework and the fixed referential framework are linked through simultaneous perspectives such as proform and referential shift. Often signers mix their report of events by remaining narrators while also representing thoughts, emotional states and physical actions of narrative protagonists.

CONCLUSIONS

Referential forms in BSL are multifunctional. Signers use reference to track protagonists through discourse as well as to organize discourse into episodes, themes, and hierarchies. For example, the use of eye gaze can be seen as syntactic and discourse relevant. Adult signers thus make choices based on both local and global discourse constraints. The use of sign space is pervasive at all levels of sign discourse. Sign space is made up of several subsystems. To set up referents and maintain them through transitions in representation space, signers use the shifted and fixed referential frameworks. The creation of overlaid representational spaces is used to encode simultaneously occurring events. Adult signers effortlessly rotate sign space for discourse purposes, in particular, to switch perspectives on events. Adult signers choose to construct discourse from a shifted perspective, setting up referential loci on their own bodies rather than in the spatial array in front of them. A series of shifted verbs are used to mark

perspective as well as maintain reference. The complexity of this framework is only hinted at in the preceding analysis of simultaneity and serial verb usage. This motivation has consequences for discourse strategies adopted by adult signers in narrative. Signers combine overt reference forms with shifted reference to report language, action, and thought. (This may be a motivation stemming from the nature of face-to-face communication rather than discourse based on a literate tradition.) This has been a preliminary attempt to capture the richness and complexity of this use of sign language. Further work should elaborate the use of representational spaces for describing other discourse contexts, as well suggesting possible existing underlying constraints.

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APPENDIX A

Transcription Conventions

Example	Explanation
Gloss	
LITTLE-GIRL	Approximate English gloss of signs. Where more than one English word is required this is indicated through a hyphenated gloss.
T-O-M	Fingerspelling indicated through small caps separated by hyphens.
Location/ pronominalization	
PRO	
	Point or localization in front of signer at x
Verb Morphology	
	Left
	From right
	Across body
	Towards body
	Right + up
	Left + down
Eye Gaze	
SEARCH	Scope of eye gaze marked by line across top of gloss
><	Mutual
—	Neutral
<<	Right
>>	Left
vv	Down
^^	Up
00	Closed
—	Squint

<v	Right + down
^>	Up + left

Discourse Markers

//	Pause
#	Shifted first person
++	Repeated sign for grammatical purposes
p.form-	Proform sign
pl-	Pluralization marker
abc	Syntactic indices

Storytelling in the Visual Mode:

A Comparison of ASL and English

Jennifer Rayman

This paper is an investigation into the tools of language and how these tools influence the structure of the symbol system. Past studies of American Sign Language (ASL) storytelling have focused on how features of storytelling—such as pauses, eye gaze, and other nonmanual behaviors—create patterns of poetic organization (Gee and Kegl 1983; Bahan and Supalla 1995; Wilson 1996). In addition, Wilson (1996), using Labov's (1972) theory of story structure, has analyzed how evaluative content in ASL is portrayed through nonlexical features such as pantomime, facial expression, and role-shifting. But none of these studies has ventured into the realm of how linguistic tools themselves shape the stories that ASL signers tell.

Discussions of ASL have often remarked on its unique ability to depict spatial and visual elements (Liddell 1996; Emmorey and Casey 1995; Taub 1997). If in fact the resources that allow ASL to represent spatial and visual events are unique to the language, then this should be evident in how ASL users depict events in the stories that they tell, compared to similar stories that speakers of English tell.

In his work on comparative storytelling structure, Slobin (1996a) avoids an exaggerated version of Whorf's (1956) hypothesis that language form governs the representation of the world. Instead, he argues that language provides its users with a range of resources that entails a

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