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Locative Functions of Simultaneous Perspective Constructions in German Sign Language Narratives

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1 Introduction

Signed and spoken languages differ most obviously in the modalities in which they are produced and perceived. Spoken languages rely on the oral production and aural perception of sequentially ordered elements. Though there are exceptions, e.g. tone, the sequentialization of phonemes determines a primarily linear organization of morphosyntactic structure. Signed languages, on the other hand, are produced and perceived in the visual-spatial modality, and rely on the manipulation of articulators within three dimensional space. The use of space for linguistic expression affords the notion of simultaneity a special status in signed language, and indeed simultaneous patterning and marking characterizes sign languages at all levels of linguistic analysis, including phonology, morphology, and syntax. Moreover, the availability of multiple independent articulators makes possible the simultaneous representation of independent meaningful elements. These *simultaneous constructions* are defined as representations that are produced in more than one articulatory channel, whereby each channel bears distinct and independent meaning units, which stand in some relationship to each other (Miller 1994, Engberg-Pedersen 1994, Leeson and Saeed 2002, Vermeerbergen 2001).

Although this general definition of simultaneous constructions makes no commitment to the involvement of specific articulators, examples of simultaneous constructions within existing typologies in the literature typically involve the two manual articulators. Researchers of different sign languages have identified numerous types of bimanual simultaneous constructions based on formal and functional properties (Miller, 1994 for Quebec Sign Language; Engberg-Pedersen, 1993, 1994 for Danish Sign Language; Leeson and Saeed, 2002 for Irish Sign Language; Vermeerbergen, 2001 for Flemish Sign Language; Liddell, 2003 for American Sign Language; cf. also the review of literature on American Sign

Language presented in Miller, 1994, including Friedman, 1975; Klima and Bellugi, 1979; and Gee and Kegl, 1983). Formally, two independent signs can be produced simultaneously (two one-handed signs produced at the same time) or sequentially (one sign is produced first and holds during the production of one or more other signs). The functions that have been described for simultaneous constructions are primarily locative or discursive in nature, and include:

(1) referent representation on both hands to express locative information (in the depiction of the spatial relationship between two referents)
(2) referent representation on both hands to express the temporal and locative simultaneity of events (in the depiction of action or interaction between referents)
(3) the expression of temporal simultaneity of events or states (aspectual information)
(4) the hold of a topic on one hand while the other hand signs related information (topic – comment structure)
(5) the hold of an enumeration morpheme on one hand while the other hand signs one or more related signs
(6) the hold of an index sign on one hand while the other hand signs one or more related signs

In this paper, I expand the existing typologies of simultaneous constructions in two interrelated ways. Firstly, I include the simultaneous use of articulators other than the hands. In addition to the hands, the body, face, eyes, and mouth are taken to function as independent articulators. Secondly, I include the simultaneous use of different perspectives. The representation of event space in sign space determines the two signing perspectives that are relevant in this paper. In one case, signers are external to the event and represent event space onto the area of space in front of the body from an *observer perpsective*. In the other case, signers become part of the event by assuming the role of an animate referent and event space is represented as life-sized from a *character perspective*. The use of character perspective entails the use of articultators other than the hands, since assuming the role of an animate referent entails mapping the referent onto the body.

This paper presents a discourse-based analysis of the use of simultaneous constructions that involve the production of meaningful elements associated with both character and observer perspectives on both manual and non-manual articulators in German Sign Language (Deutsche Gebärdensprache, DGS) event narratives. Specifically, I focus on how signers use simultaneity to encode locative information in discourse, and present two different main functions of the use of simultaneous constructions of this type. In the first

function, a simultaneously articulated observer perspective form serves to fully semantically specify a character perspective form by disambiguating it or by supplementing additional spatial information. In the second function, simultaneously articulated observer and character perspective forms create a mapping between meaningful locations in the event spaces of both perspectives. Moreover, these constructions are characterized by expressing the *same* event in different ways, i.e. with elements associated with observer and character perspective.

The analysis of the special confluence of form and function in the German Sign Language examples presented here is novel compared to previous analyses in the literature. With respect to function, previous analyses describe the use of simultaneous constructions to express locative information as involving the representation of two referents on the two hands in an observer perspective event space projection. In addition, in representations that include a temporal component, it is typically not the same event that is simultaneously depicted in different ways, but rather the simultaneity of two different events or elements of an event that is represented. With respect to form, the simultaneous use of different perspectives has been described by a handful of researchers (Liddell, 1998, 2000; Dudis, 2004; Engberg-Pedersen, 1993; Aarons and Morgan, 2003; Morgan 2002). These analyses focus on the development of conceptual frameworks to explain what elements of an event can get expressed simultaneously and what properties of the modality make this possible.

The simultaneous constructions presented in this paper are analyzed as a strategy for encoding locative information under the pressures of discourse constraints of clarity, efficiency, and informativeness of expression. I argue that the motivation for encoding the same event in different ways has to do with the interplay of, on the one hand, articulatory constraints on the type of information that can be represented through certain forms, and, on the other hand, discourse-structure constraints on the way that space is structured for representation. On the one hand, articulatory constraints affect the type of information that can get represented in a particular perspective. On the other hand, discourse constraints affect signers' readiness to switch between signing perspectives in the course of a narrative. To ensure the explicit encoding of relevant locative information under these constraints, signers rely on constructions in which an event or components of an event are simultaneously represented on independent articulators in different perspectives.

2 Previous research on simultaneous constructions

Previous research on simultaneous constructions has focussed on the use of the two manual articulators to express locative information or to contribute to discourse structure.

Though it is possible for both hands to appear in sign space simultaneously, in most cases the hands appear sequentially, such that a one-handed sign or one hand of a two-handed sign holds or perseveres during the production of one or more other signs. Sequentially produced simultaneous constructions contain what Engberg-Pedersen (1993, 1994) analyzes as a *hold*-morpheme. The *hold*-morpheme typically appears on the non-dominant hand, and remains in place while something is predicated of it or brought into a certain relationship with it by signs on the dominant hand. It functions to keep a discourse referent visually accessible, e.g. as backgrounded information, while the dominant hand signs related information that is foregrounded or focussed. Moreover, the *hold*-morpheme is analyzed as neutral with respect to the semantic distinction between location and motion. This means that when the locative and temporal interaction between two moving referents is depicted in sign space, only the foregrounded referent is associated with a movement morpheme.

For example, to depict the interaction of two basketball players, where both players are running and one is overtaken by the other, the hand depicting the overtaken player remains stationary, while the hand depicting the player doing the overtaking moves in space (Engberg-Pedersen 1993). The action of overtaking is foregrounded, and thus the movement of the player doing the overtaking is represented by the movement of the hand in space. The player being overtaken is represented as a backgrounded predicate with a *hold*-morpheme on the non-dominant hand. The backgrounded player's motion is not actually represented by movement of the hand in space, but rather must be inferred from the context.

In simultaneous constructions that express only locative information, i.e. that encode the spatial relationship between two stationary referent objects, the *hold*-morpheme typically represents the ground referent. The ground object is identified and located in space and then held in place until the figure object is located appropriately in relation to it. In expressing the temporal simultaneity or temporal overlap of two non-locative events, the *hold*-morpheme backgrounds one event while the co-occurring event is depicted on the other hand. For example, to express drinking coffee while reading a newspaper, a signer can sign a sequence in which she first depicts reading the newspaper (i.e. holding a newspaper open in front of her with both hands), and then maintains the newspaper on her non-dominant hand with a *hold*-morpheme while depicting drinking coffee with the dominant hand (Mathur, 2002, who refers not to the use of a *hold*-morpheme, however, but rather to a HOLD).

Similarly, in simultaneous constructions that express topic-comment structures, information about a discourse referent is provided on one hand, while it is held in place as a topic on the other hand. For example, Miller (1994) gives an example in which the one hand

signs SUN while the other hand signs a sentential clause consisting of four signs that predicates something about the held discourse topic. Engberg-Pedersen (1993) describes a narrative about two ferries colliding, where the signer holds the sign representing one of the ferries in place while signing attributive information about the ferry with the other hand, e.g. the name of the ferry. In this type of construction, the depiction of an entity on one hand typically perserveres while the other hand describes a property of that entity.

Other discourse-structural relationships that are expressed with simultaneous constructions include the simultaneous appearance of an enumeration morpheme or an index sign on one hand together with one or a series of other signs on the other hand. For these constructions, in contrast to those that express primarily locative and/or temporal relationships, it is not uncommon for the signs on the two hands to get produced simultaneously. For example, to identify the chairperson at a meeting, one hand may point at the person in question while the other hand simultaneously signs CHAIRPERSON (Vermeerbergen, 2001). Enumeration morphemes may be used, for example, in the production of a list of colors. A signer may use the enumeration morphemes corresponding to the numerals ONE, TWO, and THREE on one hand, while simultaneously signing the colors RED, WHITE, and YELLOW on the other hand (Vermeerbergen, 2001).

Although he does not use the term *simultaneous construction,* Liddell (2003) discusses similar constructions containing signs he calls *buoys* that are produced on the non-dominant hand and are held in place while the dominant hand continues signing. Semantically, their presence in sign space helps guide the procession of discourse. Liddell identifies four different types of buoys, two of which have couterparts in existing typologies of simultaneous constructions, examples of which have been described above. *List* and *pointer* buoys correspond essentially to simultaneous constructions with index and enumeration signs, respectively. A *THEME buoy* takes the form of a raised, vertical index finger on the non-dominant hand and signifies the discussion of an important discourse theme. Finally, a *fragment buoy* is an articulatory trace of two-handed sign during a subsequent one-handed sign. Similar to what Mathur (2002) calls RESIDUE, it does not serve a semantic or syntactic function. Thus, they are not true simultaneous constructions as Miller (1994) defines them, where the use of the term *construction* is emphasized because the elements that are simultaneously expressed must stand in some relationship to each other, be it syntactic, discursive, or iconic.

3 Signing perspective

In event narratives, signing perspectives are differentiated by the way in which event space is projected onto sign space. The place that the signer occupies conceptually with respect to the represented event is an important diagnostic feature and motivates the terminology used in this paper. In *character perspective*, the signer is within the event conceptually and has the vantage point of a character in the event. In the character's role, the signer "constructs" the actions, thoughts, and emotions attributed to it (cf. Metzger 1995, on the notion of constructed action). The projected event space is life-sized, encompassing and extending around the signer. In *observer perspective*, the signer is outside of the event conceptually, and views the scene from the vantage point of an external observer. Event space is projected onto the area of space in front of the signer.

For what I call character and observer perspective, Liddell (2003) distinguishes between surrogate and depictive space[1], while Dudis (2004) distinguishes between a participant and a global viewpoint, and Morgan (2002) uses the terms shifted and fixed referential spaces.[2] Slobin et al. (2003) also use the term perspective, but distinguish between a protagonist and a narrator perspective. The terms character and observer, as used here, stem from McNeill's (1992) distinction between a character and an observer viewpoint in gestures accompanying speech.

3.1 Prototypical manifestations of signing perspective

The perspective from which event space is mapped onto sign space is determined to a large extent by articulatory constraints on the type of information that can be expressed by different classifier forms used for referent representation. In classifier predicates, referents are mapped onto the signer's hands at different levels of representation by reflecting certain salient geometric properties in the handshape. The representation of intransitive event types of motion and location entails the mapping of whole referents onto the signer's hands with *entity* classifiers. Referent location, orientation, and motion is depicted by the position, orientation, and movement of the hands in sign space. The signer is external to the event and projects event space onto sign space from observer perspective. To represent transitive event types of handling and manipulating objects, however, the active referent is mapped onto the signer's body, and the hands represent the referent's hands. *Handling* classifiers depict the referent's handling of objects through the appropriate position and configuration of the hands.

[1] Liddell (1994, 1995) distinguishes between surrogate and token space.
[2] Morgan (1999) uses the terms shifted and referential framework.

The signer's role as a character within the event means that the event space is projected as life-sized from that character's perspective.

These relationships between referent representation, information type representation, and event space projection determine what I take to be the prototypical manifestations of observer perspective and character perspective signing. In addition, the vantage point from which an event is represented – either from the perspective of an external observer or from the perspective of an event protagonist – influences the localization of referents in sign space. Canonically, two animate referents are represented in sign space as located across from each other. The spatial locations in which these referents appear differs depending on the perspective from which the event space is depicted. In observer perspective, where the signer is not a part of the event, the canonical locations of two animate referents are opposite each other to the left and the right of the signer's body. In character perspective, however, where one of the referents is mapped onto the signer's body, the other referent is located opposite the signer's body. Thus, the direction of movement of signs depicting interaction between the two referents is along the lateral (left-right) axis for observer perspective and along the sagittal (front-back) axis for character perspective representations.

In sum, the prototypical manifestations of the two signing perspectives can be characterized in terms of the signer's vantage point on the event, the size of the event space, the type of classifiers used for referent representation, and the canonical direction of movement of signs depicting interaction between two referents (see figure 1). Figure 2 gives a schematic-pictorial representation of the prototypical manifestations of character and observer perspectives.

	Character perspective	**Observer perspective**
Vantage point	Signer part of event	Signer outside of event
Event space projection	Life-sized (space surrounding signer)	Model-sized (space in front of signer)
Classifiers	Handling	Entity
Direction	Sagittal axis	Lateral axis

Figure 1: Prototypical manifestations of signing perspective

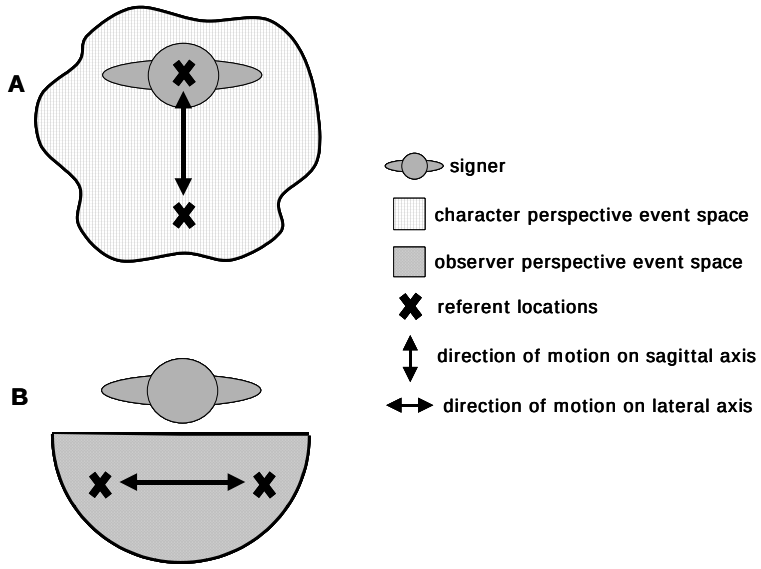


Figure 2: Schematic-pictorial representation of: (A) prototypical character perspective and (B) prototypical observer perspective signing

3.2 **Non-prototypical manifestations of signing perspective**

The relationship between type of information and referent representation determines different conceptual locations of the signer with respect to the event, and forms the basis for distinguishing between event space representation from observer or character perspective. In the section above, I presented four interdependent criteria that define the manifestation of signing perspective: (1) the signer's vantage point on the event, (2) the size of the projected event space, (3) the type of classifiers that occur, and (4) the main direction of movement of the interaction-depicting sign. The alignment of these criteria as they appear in figure 1 represent the prototypical manifestations of character and observer perspective. Different alignments are characterized by a combination of elements associated with both perspectives, and display what I call non-prototypical manifestations of signing perspective.

An example of a non-prototypical alignment of the features that determine perspective is the use of an entity classifier to depict referent motion along the sagittal axis in an otherwise (contextually-determined) life-sized projection of event space which contains the signer as a referent (as evidenced, for example, by the facial expression). This example shows that the information type, here encoding an intransitive event of motion, determines the use of an entity classifier, which is prototypically aligned with observer perspective. The other criteria that contribute to signing perspective, however, are prototypically aligned with character perspective. Taken together, the manifestation of the criteria that determine signing perspective display a non-prototypical alignment.

Importantly, non-prototypical manifestations of perspective contain elements prototypically associated with both observer and character perspective. In terms of referent representation, this entails the involvement of two or more articulators to encode event information. Thus, formally, non-prototypical alignments can be subsumed under simultaneous constructions, according to the criteria of the general definition given by Miller (1994). They involve the production of distinct, but related meaning units on independent articulators, representing referents on different scales of representation. The next section gives an overview of previous research on this type of simultaneous construction that expresses information in both perspectives.

4 Previous research on the simultaneous use of different perspectives

The simultaneous representation of referents on both observer and character event space scales has not been widely discussed in the literature, but is recognized as a frequent phenomenon in narratives by the researchers who have studied it (Liddell, 1998, 2000, 2003; Liddell and Metzger, 1998; Fridman-Mintz and Liddell, 1998; Dudis, 2002, 2004; Engberg-Pedersen, 1993; Aarons and Morgan, 2003; Morgan, 2002). Liddell and Dudis use mental spaces and conceptual blending theories (cf. Fauconnier, 1997, Fauconnier and Turner, 1996) to describe the production of *simultaneous blends*, where elements from two conceptual event spaces (one corresponding to an observer perspective view on the event, the other to a character perspective view) are mapped onto different articulators and/or locations in space. The availability of different *partitionable zones* of the body, including the hands, face, mouth and body, makes possible the simultaneous representation of elements from conceptual spaces with different scale properties (i.e. the scale of an observer perspective vs. a character perspective event space) (Dudis, 2004).

Liddell (2000) and Dudis (2004) give examples from American Sign Language of simultaneous blends involving the representation of a vehicle on one hand using an entitiy classifier and the simultaneous representation of the vehicle's driver on the body. A *zoomed out,* or observer perspective view of the scene, is portrayed through the use of an entity classifier to depict, in Liddell's example, a car stopped at an intersection, and in Dudis'example, a motorcycle going up a hill. Simultaneously, by mapping the drivers of the vehicles onto the body, the signer can depict their facial expressions and behaviours (e.g. the driver of the car looking both ways before crossing the intersection) through a *zoomed in* or character perspective view of the scene. Aarons and Morgan (2003) describe similar constructions from South African Sign Language in what they call the creation of multiple

perspectives. For example, to simultaneously depict different event components of an intransitive motion event, a signer simultaneously maps a moving animate referent (i.e. a parachutist floating through the air) onto his hand and onto his body.

In addition, Aarons and Morgan (2003) and Engberg-Pedersen (1993), for Danish Sign Language, describe the encoding of transitive relationships between two referents through the simultaneous representation of one referent on the body and the other referent on the hand. For Engberg-Pedersen, the backgrounded referent is represented on the body as the patient or spectator of the event. The motion and location of the agent is represented with an entity classifier from the patient's vantage point. For example, the interaction between two basketball players can be depicted by mapping one player onto the body and representing the motion of the other player relative to the body with an entity classifier on the hand. The referent mapped onto the body is backgrounded with respect to the referent mapped onto the hand (cf. the mapping of the backgrounded player onto the non-dominant hand with a *hold*-morpheme discussed in section 2). Finally, Morgan (2002) discusses the use of overlapping reference spaces (i.e. perspectives) to represent either the same referent or two different referents in encoding the temporal simultaneity of events in British Sign Language narratives.

5 Signing perspective and discourse structure constraints

All of the examples discussed in the previous section exhibit what I call non-prototypical alignments of signing perspective. Their use and occurrence is analyzed within conceptual frameworks that explain the specific combination of elements they exhibit, including assumptions about the role of agentivity and point of view marking in encoding events. In this paper, I explain the occurrence of non-prototypical alignments in narratives in terms of discourse structure constraints and semantic-pragmatic conventions for representing events. Different event types entail referent representation on different scales, i.e. corresponding to both observer and character perspective, yet the use of prototypical manifestations of perspective to encode these event types is relatively rare in discourse. Instead, event narratives exhibit a high degree of non-prototypical alignments, representing elements from both perspectives. I argue that the use of non-prototypically aligned forms can be motivated by discourse constraints of efficiency and informativeness, in conjunction with a pragmatically-determined preference to focus on the interaction between characters (Leeson and Saeed, 2002) and to represent events from an egocentric point of view (Engberg-Pedersen, 1993).

The explication of efficiency and informativeness principles in discourse dates back to Grice's (1975) conversational maxims. Grice's two principles of quantity are formulated as "make your contribution as informative as required" (Q1) and "do not make your contribution more informative than is required" (Q2). In later research on pragmatic theory, the essence of these maxims was reformulated as the *Q-principle* (Principle of Quantity) and the *I-principle* (Principle of Informativeness), respectively (Horn, 1984; Atlas and Levinson, 1981; and Levinson, 2000).[3] In a discourse context, the two principles pull in opposite directions, minimizing the speaker's effort on the one hand (i.e. maximizing the speaker's efficiency via the *I-principle*), and minimizing the addressee's effort on the other hand (i.e. maximizing the hearer's input via the *Q-principle*).

In this paper, efficiency and informativeness are examined with respect to the expression of locative information in narratives. Specifically, the focus of analysis is on the representation of referent location, motion, and action in event spaces projected from character and/or observer perspectives. The projection of two event spaces, or the use of both observer and character perspective event spaces, in a narrative has the consequence that referents in the event get associated with different locations in sign space. For example, a signer may locate two animate referents opposite each other on the lateral axis in an event space determined by observer perspective (see figure 2 (B)). However, to construct the actions of a referent, the signer must switch to character perspective and map the referent onto the body. In doing so, because the relative spatial relationships between referents in the event space remain the same, the referent-location associations in sign space change. Thus, the referents that were located across from each other to the right and left on the lateral axis in observer perspective are now located at the signer's location and opposite the signer on the sagittal axis in character perspective (see figure 2 (A)).

Narratives in which signers use both perspectives, i.e. with both observer and character event space projections, are potentially neither very efficient in terms of the signer's effort nor very clear in terms of the amount of information integration that the addressee is faced with. I argue that simultaneous constructions that depict information from both observer and character perspective help to clarify and make explicit the relationship between the two event spaces. In this way, non-prototypical manifestations of signing perspective are a response to discourse constraints on efficiency and informativeness. Their function is

[3] Horn uses the label *R-principle* for what Levinson calls the *I-principle*.

especially important with respect to referent-location assocations and the encoding of spatial information.

Alternatively, a signer may project event space from only one perspective in the course of a narrative. Both Engberg-Pedersen (1993) and Leeson and Saeed (2002) note a semantic-pragmatic convention or preference for encoding events, especially transitives, from the point of view of an agentive referent. In terms of signing perspective, this means that signers prefer to map an animate referent onto the body and project a life-sized event space from that character's perspective. The efficiency of using only one event space projection is potentially high in terms of both the signer's and the addressee's effort. In prototypical character perspective, however, the information the addressee receives, especially concerning spatial relationships, may remain underspecified. As argued, the expression of different types of information, specifically, transitive and intransitive event types, is tied to referent representation at different levels, i.e. with handling and entity classifiers, respectively. Through the use of simultaneous constructions characterized by non-prototypical perspective alignments, signers can represent both types of information within a character perspective event space projection. Thus, here too, non-prototypical manifestations of perspective serve both informativeness (or clarity) and efficiency of expression in discourse.

6 Locative functions of non-prototypically aligned simultaneous constructions

This paper looks at the use of non-prototypical manifestations of signing perspective in event narratives to make locative information about referent location, action, and motion in transitive and intransitive event types explicit. These non-prototypically aligned forms are subsumed under the general definition of simultaneous constructions, because they involve the use of independent articulators to encode distinct meaning units. They differ from the locative simultaneous constructions usually presented in the literature in two crucial respects: (1) they are not simultaneous *classifier* constructions, that is, they involve the use of articulators other than the hands; and (2) they involve the expression of elements from different perspectives, i.e. observer and character perspective, at the same time.

In German Sign Language event narratives, the use of simultaneous constructions of this type is very common. I argue in this paper that their occurrence can be linked to the pressures of discourse structure constraints, in particular with respect to encoding spatial relationships. On the one hand, there is pressure to be as informative and precise as possible in encoding referent location, action, and motion within event space. On the other hand, there is pressure to be as efficient and clear as possible in presenting this information.

As noted in the previous section, signers may use both observer and character event space projections or project event space only from a character perspective. In dependence of the event space projections used by signers in the course of a narrative, I present two different types of non-prototypical forms that demonstrate two main functions with respect to making spatial information explicit. In one case, non-prototypical manifestations of signing perspective function to provide a full semantic specification of an encoded event. These forms primarily occur when signers narrate an event from character perspective, projecting a life-sized event space and keeping an animate referent mapped onto the body throughout. In the other case, when signers use both an observer and a character perspective event space projection, simultaneous constructions that utilize both event spaces function to create a mapping between meaningful locations in the two representations.

I present an analysis of the use of such simultaneous constructions in German Sign Language event narratives. Narratives were elicited from different signers on the basis of a short cartoon stimulus clip featuring an animate referent engaged in activity in a fixed event space. [4] Pairs of signers were videotaped during data collection sessions. One signer watched the stimulus film and narrated the story to the second signer, who then retold the story to the first signer without having seen the video clip. Data were transcribed and coded using ELAN.[5] Coding was for classifier forms, signing perspective, simultaneous constructions, locative constructions, and location-referent associations. The narratives chosen for analysis in this paper are taken from a larger corpus of German Sign Language data.[6] The constructions presented in the following sections are exemplary of occurrences in the data corpus as a whole.

7 Simultaneous constructions in character perspective narratives

In sign language, decisions about narrative structure, that is, about which aspects of an event to represent and how, are directly reflected in the choice of signing perspective. As discussed in section 5 above, Engberg-Pedersen (1993) notes that narrators are inclined to represent events from an egocentric point of view, which entails mapping an animate referent onto the body in signing (see also Leeson and Saeed 2002). In addition, a preference for

[4] See the appendix for content description and stills of the stimulus film.
[5] ELAN is the **E**uropean Distributed Corpora **L**inguistic **AN**notator (ELAN), developed at the Max Planck Institute for Psycholinguistics. It is similar in layout to SignStream.
[6] The corpus consists of video recordings of elicited event narratives, spatial descriptions of object configurations, and route descriptions. In total, narratives were elicited from seven pairs of different signers for 18 cartoon stimulus clips, comprising five hours of recorded material. Recordings of natural conversation supplement the elicited material.

signing from character persepctive seems to be supported by certain factors inherent in the event structure. For example, if there is only one animate referent, or a referent that is identified as the primary protagonist, signers tend to adopt this referent's perspective as the dominant point of view from which to narrate an event (cf. Engberg-Pedersen's (1993) empathy convention for referent mapping). This is strengthened further if the protagonist engages in manual activity, which the signer must necessarily represent in character perspective. In addition, a fixed vantage point from which the event is viewed also seems to influence the choice to represent the event from one dominant perspective. This is especially relevant for event narratives elicited from stimulus films where there can be an effect of a fixed versus a variable camera angle. The stimulus film used to elicit the narratives presented here has a fixed camera angle and features a primary protagonist engaged in manual activity (see stimulus description in appendix). The features that characterize it may thus encourage signing from the main protagonist's point of view.

Sections 7.1 and 7.2 below present examples of simultaneous constructions that occur in narratives told in character perspective. The signers depict the event from the perspective of the primary protagonist (i.e. the mouse), who is kept mapped onto the body, and construct the referent's actions and emotions through the use of the head, body, and handling classifiers mapped onto the hands. The simultaneous constructions, i.e. non-prototypically aligned forms, occur to represent information that is not felicitously or unambiguously represented in prototypical character perspective signing – in particular, referent change of location and/or orientation. They provide a full semantic specification of events either by supplementing an event component that cannot be depicted by a character perspective-aligned form (section 7.1) or by disambiguating such a form (section 7.2).

7.1 Full semantic specification through supplementation

The type of simultaneous construction presented in this section is characterized by the simultaneous depiction of different event components of the same event on different articulators. The encoding of both components is necessary to fully specify the totality of semantic content of the event. In the stimulus film, the mouse moves forward in an exaggerated lunge attempting to catch a pancake in a pan that it holds in its hand (see stills 3 and 4 in the appendix). The mouse's movement consists of two separate event components: (1) a change of location, i.e. the mouse runs forward, and (2) a change of posture, i.e. the mouse leans forward. Of these two components, only the change of posture can be represented with a form prototypically aligned with character perspective, i.e. by leaning the

torso forward (see figure 3). Representing the mouse's change of location with a character perspective form would entail an infelicitous movement of the whole body, and thus must be encoded instead with an entity classifier, a form prototypically aligned with observer perspective (see figure 4).

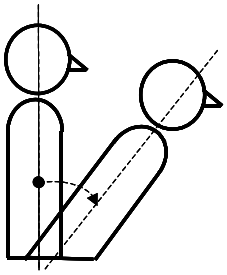


Figure 3: Mouse's change of posture encoded by moving torso from **posture$_1$** to **posture$_2$**

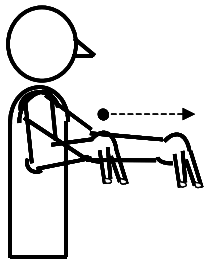


Figure 4: Mouse's change of location encoded by moving hand from **location$_1$** to **location$_2$**

In the example presented here, the signer encodes both the change of posture and change of location event components simultaneously by combining the repesentations in figures 3 and 4. The resulting simultaneous construction is a non-prototypically aligned form that involves the use of the body as a character perspective articulator and the hand as an observer perspective articulator.[7] This is schematically represented in figure 5 (a-b), and shown in video stills from the signer's narrative in figure 6. Both articulators encode distinct pieces of information that are necessary to achieve full semantic specification of the event. Moreover, each articulator is associated with a particular perspective and encodes information that is felicitously represented only in that perspective. The meaning contributed by the entity classifier supplements the otherwise character perspective-determined representation.

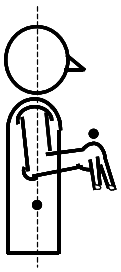


Figure 5(a): The hand and the torso are at **location$_1$/posture$_1$**

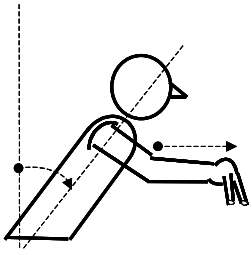


Figure 5(b): The hand and the torso are at **location$_2$/posture$_2$**

[7] Note that figure 3 represents a non-prototypically-aligned form in and of itself, because the hand moves along the sagittal axis. In prototypical observer perspective, the entity classifier would move along the lateral axis. For the sake of simplicity and clarity, the change of location information is depicted in figure 3 as the signer actually encodes it.

Figure 6: mouse(signer)-hold-pan(LH: handlingCL)-lean-forward + mouse(RH: entityCL)-run-forward

With respect to encoding locative information, the use of this simultaneous construction is both very efficient and informative. Different components of the event that are prototypically aligned with different perspectives and necessarily have to be depicted on different articulators, can be represented simultaneously. The efficiency of the single construction with the non-prototypical manifestation of perspective allows the signer to remain in a character perspective event space, with the animate referent mapped onto the body. In addition, it is maximally informative to the addressee because it fully specifies the mouse's movement. All of the relevant spatial information is simultaneously encoded in a complex form involving two independent articulators and elements from both perspectives.

7.2 Full semantic specification through disambiguation

Instead of encoding different components of the same event, it is also possible that the two active articulators in a simultaneous construction encode the same information. In narratives signed predominantly from character perspective, with the primary protagonist mapped onto the body, the use of the body as an independent articulator is limited to movements that do not involve actual changes of body location. Possible meaningful movements include turns of the torso from side to side and leans forward and backward (as in the example in the previous section). However, the meaning of these movements may be ambiguous. In the stimulus film, the mouse moves repeatedly back and forth between two distinct orientations that differ by 90º (see still 1 (facing stove) and still 2 (turned from stove) in the appendix). To represent the mouse's change of orientation in character perspective, a corresponding 90º turn of the torso and shoulders is not felicitous. Instead, signers can felicitously turn only about 45º from the middle, as shown in the schematic representation in figure 7 (a-b).

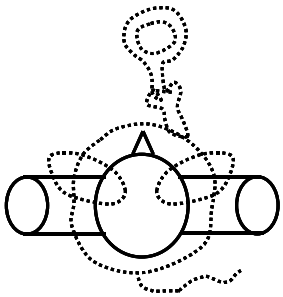


Figure 7(a): Signer faces forward = mouse faces stove

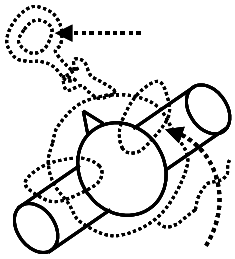


Figure 7(b): signer turns torso ≠ mouse turned from stove

As it is, however, this form is ambiguous, and could be interpreted in several different ways in this context.[8]

(1) as a small turn of the body (i.e. a gradient interpretation of about 45º)

(2) as a large, substantial turn of the body (i.e. ≥ 90º)

(3) as a lateral displacement of the pan (i.e. to the left)

In my data, the majority of signers used a torso turn to encode this event, and simultaneously articulated an oral component that has the form of the German preposition *um* ("about, at"). In German Sign Language, *um* is used in both the concrete and abstract domains to mean "turn around, turn over" or to signify a change of state. The semantic contribution of *um* fully specifies the character perspective form by disambiguating it. It signifies to the addressee that the turn of the body is to interpreted as a substantial change in referent orientation (i.e. interpretation (2) above).[9]

The simultaneous construction used here thus involves the use of the torso and the mouth as independent articulators. Although both articulators encode the same event component, the information is not redundant. The use of the torso alone to encode the referent's change of orientation (in prototypical character perspective signing) cannot convey the intended information unambiguously. The specific semantic contribution of the oral component clarifies the meaning of the other form. In addition to its efficiency, the simultaneity of expression provides the addressee with explicit information about the nature of the spatial relationship.

[8] A turn of the torso and shoulders is also associated with the phenomenon of role shift (cf. Padden, 1990). Because there is only one animate referent involved in this specific event, however, the phenomenon is not relevant here.

[9] One signer turned his torso to depict the mouse's change of orientation without asimultaneously accompanying form (or any other related spatial information). The signer to whom the narrative was told, who then retold the event, misinterpreted the intended meaning of the torso turn as a lateral displacement of the pan. In a repeat of the narrative by the original signer to clarify the misunderstanding, the oral component *um* did accompany the torso turn.

This example departs somewhat in form from the type of non-prototypically aligned simultaneous constructions discussed in this paper. Oral components, articulated on the mouth, are not as such associated with a particular signing perspective. In the case of *um*, the form appears simultaneously with signs that depict or denote the turning of a concrete or abstract entity. Thus, semantically, it encodes information whose expression in sign space is associated with an observer perspective event space projection. In this example, an entity classifier form depicting the mouse's change in orientation could additionally have accompanied the torso turn and the mouthed element *um.*

8 Simultaneous constructions in observer and character perspective narratives

Speakers make choices about what aspects of an event to focus on and which forms to choose for linguistic packaging. No two narratives of the same event will be exactly alike in terms of hierarchical structure, foregrounding and backgrounding, or choice of perspective. When signers inscribe sign space from both an observer and a character perspective event space projection in the course of a narrative, however, the relationship between the two spaces with respect to referent-location associations has to be clear. One way of doing this is through the use of simultaneous perspective constructions. The simultaneous representation of an event from both observer and character perspectives, i.e. in both event space projections, can explicity establish a mapping between corresponding meaningful locations in the two event spaces.

The next two sections illustrate examples of such simultaneous constructions in event narratives in which signers use both observer and character perspective event spaces. With these constructions, signers explicitly encode the same locative information about referent location and orientation in both spaces at the same time. In both examples given, the simultaneous construction again contributes to discourse coherence with respect to the expression of spatial information by increasing efficiency while being maximally informative. In the first case, the signer simultaneously represents a referent's change of orientation with forms accessing both character and observer perspective space, thereby establishing a distinctive link between the corresponding locations in the two spaces (section 8.1). In the second case, the signer uses a simultaneous construction to identify the goal location of a transitive motion event in both observer and character perspective event spaces at the same time (section 8.2).

8.1 Mapping between perspectives for efficiency and explicitness of expression

I have emphasized the role of articulatory constraints in determining the relationship between referent and information type representation, and have aligned signing perspective with certain ways of structuring space. Here, as in the example in section 7.2, the relevant spatial relationships are the two orientations of the main protagonist, i.e. the mouse, with respect to the stove. The mouse either faces the stove or is turned 90º to the left of the stove (see stills 1 and 2 in the appendix). At the beginning of the narrative in this example, narrative structure is determined by a linear sequence of prototypical manifestations of observer and character perspectives. The signer first uses entity classifier forms in a "traditional" observer perspective simultaneous construction to depict the spatial relationship between the mouse and the stove, and then represents the mouse's manual activity in this orientation (facing the stove) in character perspective. The signer returns to an entity classifier observer perspective representation to depict the mouse's change of orientation, and again follows it with character perspective signing to construct the mouse's activity in the new orientation.

Having established both orientations in an observer perspective event space, the signer employs a simultaneous perspective construction to map them onto two distinct orientations of the torso in character perspective event space. The construction itself consists of a lateral turn of the hands, shoulders, and torso from left to right (see figure 8). The beginning location indexes the mouse in the orientation turned away from the stove; the end location indexes the mouse facing the stove. Character perspective is manifested through the presence of a handling classifier on the signer's dominant (right) hand and the turn of the torso and shoulders representing the mouse's body turning. Simultaneously, the spatial orientations specified in observer perspective event space are accessed by a spatially modifiable lexical predicate meaning BACK/RETURN-TO, executed by the non-dominant (left) hand. This sign is not a typical observer perspective form, i.e. not an entity classifier. However, the spatial modification of the sign is understood with conceptual recourse to the spatial information previously specified in observer perspective using two-legged entity classifiers.

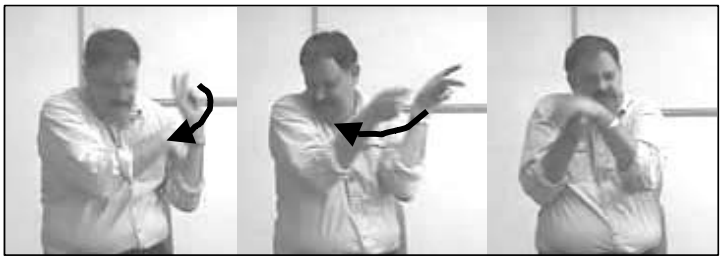


Figure 8: mouse(signer)-hold-pan(RH: handlingCL)-turn-right(to stove) + BACK/RETURN-TO(LH: loc_2-to-loc_1)

Through the simultaneous construction, the slightly left orientation of the torso and shoulders is distinctively linked to the orientation of the mouse turned 90º from the stove, and the slightly right orientation is linked to the orientation of the mouse facing the stove. As illustrated by the example presented in section 7.2 above, the body cannot be used as the sole articulator to unambiguously depict a significant change of orientation of an animate referent mapped onto the signer's body. Additional locative information has to be supplied in order to correctly interpret the meaning of a torso turn. In this example, the simultaneous perspective construction supplies this additional information by utilizing the meaningful locations already established in an observer perspective event space. After the simultaneous construction, moving between the two orientations of the body in character perspective explicitly and unambiguously encodes the mouse's movement between the two orientations with respect to the stove. The signer's efficiency in discourse is increased through the use of the simultaneous perspective construction, because it allows him to remain in character perspective while maintaining maximal precision in the encoding of spatial information regarding the mouse's location and orientation. A schematic representation of the signer's narrative is given in figure 9 below.

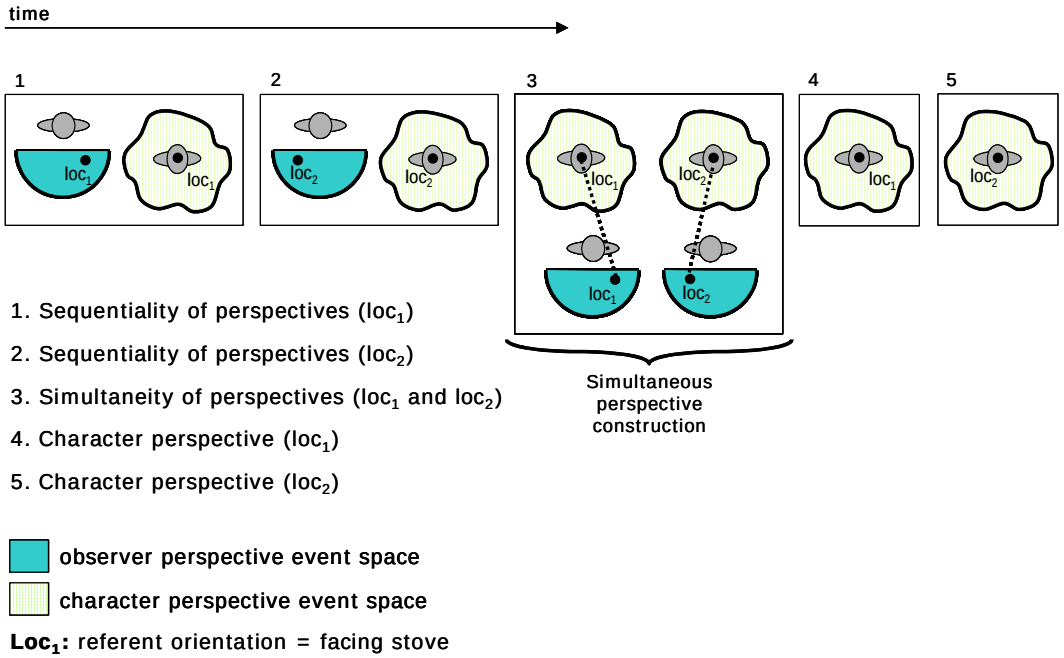


Figure 9: Schematization of the use of sequentiality and simultaneity of perspectives in discourse.

8.2 Mapping between spaces to shift event component focus

Transitive motion events are often characterized by the transfer of an inanimate referent between two animate referents. The localization of referents and the representation of the path of motion in space is influenced by which aspects of the event a signer chooses to focus on in narration, and can be aligned either with character or with observer perspective. On the one hand, a signer who focusses on the interaction between animate referents and the manner of object transfer is more likely to represent the event from character perspective. Thus, the location and motion of referents in space would correspond to the depiction in figure 2 (A) in section 3.1 above, with the path of motion represented along the sagittal axis from a referent mapped onto the signer's body to a referent conceptually located across from the signer (see also figure 10 below). On the other hand, depiction of the path of motion is more likely to be along the lateral axis (between two referents located to the right and left of the signer, as in figure 2 (B) in section 3.1) when the narrative focus is on the path component itself (see also figure 11 below).

In the example presented here, the signer focusses on the interactional and manner components, as well as on the path component of the relevant transitive event by representing the former in character perspective and the latter in observer perspective. The relationship between the two event spaces with respect to referent locations is created through the use of a simultaneous construction with which the signer changes from one representation to the

other. In the stimulus film, two animate referents (i.e. the mouse and the elephant) stand across from each other, each holding a pan, flipping a pancake between them (see still 5 in the appendix). This is represented schematically in a character perspective event space in figure 10 and in an observer perspective event space in figure 11 (cf. Fridman-Mintz & Liddell, 1998 for the use of the wavy line and semi-circle to symbolize character and observer event spaces, respectively).

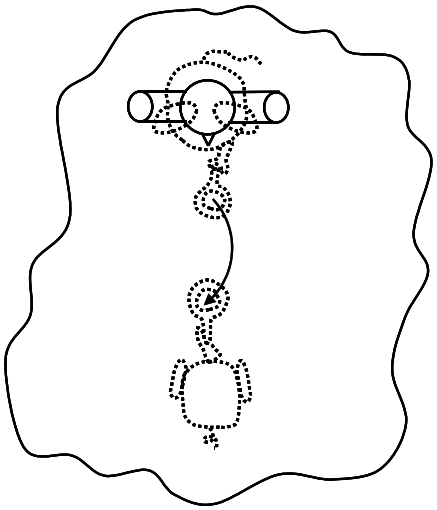


Figure 10: Locations of mouse and elephant in character perspective event space.

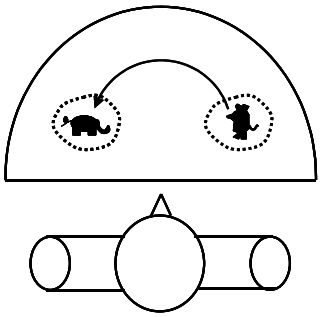


Figure 11: Locations of mouse and elephant in observer perspective event space.

The signer begins in character perspective with the mouse mapped onto the body, encoding the manner in which the pancake is caused to move through the air with a handling classifier (i.e. by flipping the pancake out of the pan). The signer's eyes follow the path of the pancake upward out of the pan, but do not follow it back down to the conceptual location of the elephant opposite the signer's body. Instead, the eyes follow the path of the pancake to a goal location located to the left of the signer's body. Thus, at the apex of the pancake's path, the eyes separate out as an independent articulator from the character perspective representation, completing the trajectory at a location determined by an observer perspective event space representation. This simultaneous construction, involving the body and dominant hand as articulators in character perpsective and the eyes as articulators in observer perspective, explicitly identifies the pancake's goal location simultaneously on the sagittal and lateral axes. The handling classifier form on the dominant hand remains in place, keeping the character perspective space simultaneously active until the transitive event is completely encoded, i.e. until the transferred object reaches its goal location, the elephant. The simultaneous construction is shown in figure 12. The signer's subsequent focus on the path component of the event is shown in figure 13.

Figure 12: mouse(signer)-hold-pan(RH: handlingCL)-flip-pancake(eyes: path sagittal)-to-elephant(opposite signer) + pancake(eyes: path lateral)-to-elephant(locL)

Figure 13: pancake(RH: entity CL)-flip-betwee-elephant(locL)-and-mouse(locR)

Through the simultaneous construction, the signer links corresponding referent locations in observer and character perspective representations. The signer uses the left side of space for the elephant's location previous observer perspective representations in the narrative, and thus the simultaneous construction does not newly establish the elephant's observer perspective loction. However, the construction is a unique example of the simultaneous use of different articulators and different perspectives to encode the same event in different ways. In terms of discourse structure, the construction is extremely efficient and informative in explicitly and distinctly mapping referent-locations between event spaces. Other means, e.g. sequentiality of perspectives in conjunction with lexical identification of referents at specific locations, could achieve such explicit marking, but certainly at the cost of efficiency and clarity. Moreover, the switch from character to observer perspective marks a shift in focus from the manner to the path component of the motion event.

9 Summary and discussion

This paper investigated the use of simultaneous constructions in German Sign Language narratives under the pressures of articulatory constraints on referent and information type representation, on the one hand, and discourse structure constraints of efficiency and informativeness of expression, on the other hand. The focus was on constructions that involved the simultaneous depiction of elements associated with observer and character perspectives using manual and non-manual articulators. These constructions were characterized as non-prototypical manifestations of signing perspectives, and differ in both form and function from similar constructions discussed in the previous literature. The explicit encoding of locative information is generally discussed within typologies of bimanual simultaneous constructions, where referents are represented by entity classifiers on the hands. The simultaneous representation of elements from different perspectives, i.e. both

observer and character perspective, has not been extensively investigated with an eye to specific functions within discourse.

I presented two main functions related to the encoding of spatial relationships that the use of non-prototypically aligned forms perform in discourse. In one function, non-prototypically aligned forms appear in narratives encoded predominantly or exclusively in character perspective. Event information that cannot get represented in character perspective is simultaneously encoded on an articulator that accesses an observer perspective representation. In this way, the simultaneous construction functions to provide a full semantic specification of the character perspective form by disambiguating it or by supplementing it with additional locative information. In the other function, non-prototypically aligned forms appear in narratives that use both observer and character perspective event space projections. Here, the use of simultaneous perspective constructions serves to create a mapping between the two event spaces by simultaneously encoding the same information in both spaces. The use of simultaneous constructions of both types allows signers to be very precise in encoding locative information about referent location, motion, and action, while maintaining clarity and efficiency of presentation.

The representations illustrated in this paper hinge both on the simultaneity of expressed elements and on the close relationship between them, and are truly *simultaneous constructions* in this sense. To emphasize the importance of this point, it is necessary to elaborate on the example of the simultaneous blend described by Dudis (2004), in which a signer depicts a motorcyclist ascending a hill (see section 4). Dudis notes that the representation of the motorcyclist alone, i.e. in a character perspective representation with the motorcyclist mapped onto the body, would suffice to convey the information that the top of the hill had been reached, without showing any path movement of the motorcycle using an entity classifier. For example, Dudis lists the following cues on the face and body from which the end of the ascent of the hill could be inferred: the eye gaze changes from being directed upward to horizontal; the facial expression changes from tense to relaxed; the torso and hands (gripping the handlebars) move slightly forward. However, the existence of partitionable zones of the body, i.e. the availability of different independent articulators for information representation, presents the signer with the possibility of simultaneously representing the motorcycle's advance up the hill through the use of an entity classifier. Again, it is important to note here that, as Dudis states, the cues available in one perspective (for example, the character perspective cues listed above) would suffice for the specification of the motorcycle's having reached the top of the hill. The partitionable zones of the body allow the

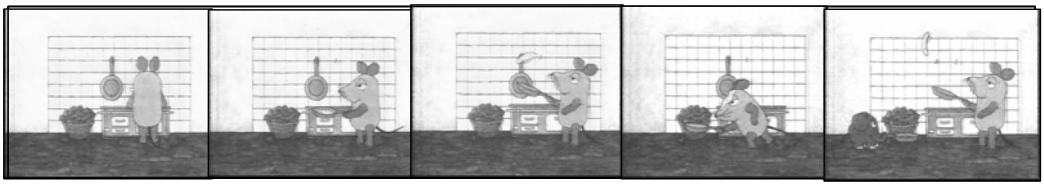
signer to depict additional distinct visible elements to give a richer, more detailed representation of the event.

In contrast to this, the type of simultaneous constructions that I have presented in this paper do more than give a richer, more detailed representation. The information encoded in one perspective cannot be inferred from what is encoded in the other perspective. The full semantic specification of the mouse's movement in the example discussed in section 7.1, for example, necessarily involves the encoding of both the mouse's change of location and its change of posture. Thus, the totality of the event cannot be encoded without both the representation associated with observer perspective (i.e. to encode the change of location with an entity classifier) and the representation associated with character perspective (i.e. to encode the change of posture with the torso). The possibility of encoding both event components simultaneously makes use of a unique affordance of the visual-spatial modality and allows precise encoding of locative information that is both elegant in form and efficient in expression.

Appendix:

Description of stimulus film

The stimulus film features a personified mouse, engaged in the activity of preparing a pancake. The mouse is seen from the back, facing a stove, with its arms and shoulders moving (still 1). The mouse then turns from the stove to face left, such that the viewer can see that it is holding a pan in which it has prepared the pancake (still 2). The mouse makes numerous attempts at flipping the pancake into the air to catch it in the pan that fail because the pancake lands on the floor some distance in front of the mouse instead. Each time, the mouse picks up the pancake and turns right to face the stove again to prepare a new pancake. In a last attempt, the mouse flips the pancake into the air (still 3) and then lunges forward to catch the pancake at the location it has landed previously, but the pancake lands on its head instead (still 4). Finally, the mouse calls its friend, the elephant, gives it a pan, and they flip the pancake back and forth between them (still 5). This sequence repeats three times.



Still 1 Still 2 Still 3 Still 4 Still 5

- Still 1: Mouse faces stove
- Still 2: mouse turns 90º to left, holds pan with pancake in it
- Still 3: mouse moves pan upward to flip pancake into air
- Still 4: mouse lunges forward to catch pancake, pancake lands on head
- Still 5: mouse and elephant flip pancake back and forth

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