ISCH COST Action IS1006 SignGram

STSM final report

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Introduction

Signs are articulated with two hands, while speakers have only one mouth to utter words with. The symmetry of the two hands makes simultaneous articulation possible in sign languages and there are indications that from below the level of single signs up to the structuring of discourse, the two hands contribute to communication in a fashion unparalleled in spoken languages. A type of manual simultaneity, the perseveration of the non-dominant hand while the dominant hand continues signing, has been shown to serve as a marker of prosodic constituent boundaries (Sandler, 2002). Furthermore, it has been suggested by earlier studies (eg. Miller, 1994) that manual holds may also show syntactic relations to the signs articulated by the dominant hand or have important discourse functions (eg. Liddell, 2003).

These constructions pose a challenge to descriptive grammars of sign languages for at least three reasons. First, due to their modality-specific nature, there is no precedent in the descriptions of spoken languages as to how to deal with them. Second, it is not always clear

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to which part of the grammar these constructions belong: are they a discourse phenomenon, or are they also part of syntactic constructions, in a given case? Third, there seems to be individual variation in their use, which makes it difficult to elicit these structures. The project proposed here aims to begin to address this issue by laying the foundations for a more detailed linguistic analysis of these two-handed constructions.

Goal of the STSM

The aim of the STSM was to explore the linguistic levels and properties that are relevant to the description of manual holds (or buoys), create a tool to investigate these aspects of analysis and test two specific hypotheses concerning the morphological and syntactic status of the held hand.

Description of the work carried out during the STSM

A review of the relevant literature was conducted, in which available research on manual simultaneous constructions was surveyed with the aim of highlighting levels of analysis that are relevant in the study of these constructions. At the host institute, I gained access to the BSL Corpus. This allowed me to look at examples of manual holds in BSL and how they were annotated, as well as discuss these examples with researchers there.

On the basis of the literature review and discussions with researchers at the host institute, an annotation schema was created and implemented as an ELAN template. A pilot study of videos from the Corpus NGT (Crasborn, Zwitserlood & Ros, 2008) tested two specific hypotheses in relation to buoys as well as the viability of the annotation schema.

Main results

1. Literature review and annotation schema

The review of the literature yielded the following aspects that seem relevant when describing simultaneous manual holds:

- the phonetic properties of the hold
  For example, which hand is held and does the hold neccessitate dominance reversal?

- morphological properties
  Does the held hand originate in a one-handed sign or a sub-sign morphemic unit? What type of morpheme is held?

- the information structural characteristics of the hold

For example, is the sign held the topic or focus of the sentence?

- the scope of the hold
  Is the hold maintained over multiple signs or clauses?

- syntactic properties
  How does the hold relate to other constituents in the sentence?

- discourse structural properties
  For example, does the hold represent a discourse topic or signal a certain type of coherence relation?

- the patterning of the above-mentioned aspects
  Are certain characteristics more likely to appear together? For example, are short holds of morphemic units more likely to have a syntactic role?

Based on these findings, I developed an annotation schema containing 22 tier types, 13 of which are associated with controlled vocabularies (CVs). Some of these tiers and vocabularies are based on tiers used in the BSL and Auslan Corpora. The annotation schema is implemented as an ELAN template and described in a separate document.

2. Pilot annotation

104 instances of manual holds were annotated in 12 files from the Corpus NGT. 63 holds originated in one-handed activity, of these 31 lexical signs, 25 points and 7 classifiers. 41 holds originated in two-handed signs.

The majority (73%) of holds were short in duration (overlapping with one sign on the other hand: 35 tokens, two signs: 25 tokens, three signs: 16 tokens). Only two tokens were found where the hold overlapped with more than ten signs on the other hand. In terms of clauses[1] spanned by holds, again the majority (71%) overlapped with only one clause. 16% spanned two clauses, and the remaining 13% spanned more than two (with a maximum of seven clauses).

The annotation schema was adjusted based on the experiences of the pilot annotation. It also became evident that some annotations are redundant, in the sense that the same information is available or extractable from several tiers. However, this seems necessary at this point due to deficiencies of the annotation software. Specifically, exporting overlapping annotations from multiple tiers while preserving their alignment appears nearly impossible. This is a major obstacle in pursuing questions about the patterning of multiple linguistic properties.

[1]Due to the difficulties of identifying sentence boundaries in signed (as well as spoken) languages, I annotated tentative, 'clause-like' units (see Johnston, 2011).

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3. Morphemic status of holds

I hypothesized that only morphemic elements can serve as the source for buoy constructions. I considered all holds originating in one-handed signsto be morphemic. In the case of one hand persevering from a two-handed sign, I considered the hand as morphemic if it could be construed as a meaningful submorphemic unit, such as a classifier handshape. In ten cases (seven different lexical signs), I could not analyze the held hand as a subsign morphemic unit. Further research is needed to investigate whether these non-morphemic manual holds show specific patterns that distinguish them from holds that originate in morphemic units.

4.The syntactic role of the held hand

The second question I tried to answer based on the pilot annotation was which syntactic roles manual holds may fulfill, and whether this role remains constant when a buoy is held over multiple clauses. From the pilot annotation it appears that syntactic role of manual holds is not always clear. In some cases, it is difficult to see how the held hand is integrated into the syntactic structure of the clause, or indeed if it participates in it at all. I found that bothverbal elements and arguments can be held. The status of the hold is not necessarily constant over multiple clauses.

Future collaboration with the host institution

There is interest on both sides to extend the current work to cross-linguistic comparison of buoy constructions involving BSL, but a joint project has not been planned yet.

Foreseen publications

While there are no articles that follow directly from this STSM, the results will serve as the basis for future research on the Sign Language of the Netherlands, with at least two articles planned within the next year.

References

Crasborn, O., Zwitserlood, I. & J. Ros (2008). Corpus NGT. An open access digital corpus of movies with annotations of Sign Language of the Netherlands. Nijmegen: Centre for Language Studies, Radboud University Nijmegen. Available online: http://www.corpusngt.nl

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Johnston, T. (2011). Auslan Corpus annotation guidelines. Manuscript, Centre for Language Sciences, Department of Linguistics, Macquarie University, Sydney, Australia. Available online: http://www.auslan.org.au/video/upload/attachments/AuslanCorpusAnnotationGuidelines30November2011.pdf

Liddell, S. (2003). *Grammar, Gesture and Meaning in American Sign Language*. Cambridge: Cambridge University Press.

Miller, C. (1994). Simultaneous constructions in Quebec Sign Language. In *Word-order issues in sign language: working papers*, Mary Brennan and Graham H. Turner (eds.), 89–112. Durham: ISLA.

Sandler, W. (2006). Phonology, Phonetics, and the Nondominant Hand. In: *Papers in Laboratory Phonology: Varieties of Phonological Competence*, Louis Goldstein, D.H. Whalen, and Catherine Best (Eds.), 185-212. Berlin: Mouton-de Gruyter.

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