

Case marking in sign language: the role of modality and parsing

Theoretical framework. Within the generative grammar theoretical framework, Benedicto & Brentari (2004) propose that, in American Sign Language (ASL), verbal classifiers pattern in two groups: (i) those associated with internal arguments (the direct object of transitive verbs and the subject of unaccusatives), and (ii) a group associated with external arguments (the subject of transitives and of unergatives). Classifiers associated with internal arguments are whole entity classifiers, while classifiers associated with external arguments are body part and handling classifiers.

Data collection. This research is based on data elicited from three deaf native signers of Italian Sign Language (LIS) describing a set of pictures. The signers have been video recorded with a video camera and the signing strings have been transcribed and glossed in ELAN (Crasborn & Sloetjes 2008).

Hypothesis and objectives. The present research, while confirming the validity of Benedicto & Brentari's proposal for Italian Sign Language (LIS), reports a new finding: in LIS, while the choice of the classifier predicate in the sentence is driven by argument structure alternations (transitive vs. intransitive and unaccusative vs. unergative), the hand selection (dominant vs. non-dominant) producing the (verbal and nominal) classifier provides crucial information on the argument's syntactic role. More specifically, the classifier is produced with the dominant hand when the argument it is associated with is the sentence subject (regardless of its thematic role), and it is produced with the non-dominant hand when it is the sentence object. In this sense, it may be analysed as some sort of a case marker. One challenging case is the production of a marked word order in a transitive predicate taking two arguments. Since LIS is a SOV language (Geraci 2006), the juxtaposition of the two arguments in LIS might yield two competing interpretations. Consider (1) produced after viewing a picture where a woman combs the hair of a sitting child:

(1) CHILD_i CL:SIT_i MOTHER COMB_i

At first glance, two interpretations might be available for (1): (i) two independent clauses with the word order SV SV, as in (1a)

(1) a. CHILD_i CL:SIT_i. MOTHER COMB_i

‘The child sits. The mother combs (him).’

or (ii) a single sentence displaying the marked order OSV, as in (1b):

b. CHILD_i CL:SIT_i MOTHER COMB_i

‘The sitting child, the mother combs (him).’ ‘The mother combs the sitting child.’

When trying to elicit the two available interpretations for (1), namely, (1a) and (1b), my informants provided slightly different signing strings differing for: (i) the length in the pauses between signs; (ii) the distribution of the prosodic marker ‘eye blink’ marking sentence boundaries in sign language (Wilbur 1994, a.o.); (iii) hand selection in the production of the classifier.

More specifically, when the interpretation of (1) corresponds to (1a), namely, two independent clauses, the signing pause between the classifier CL:SIT and the sign MOTHER is much longer, an eye blink, acting as a sentence boundary, is produced between the two signs, and the classifier following the NP CHILD is produced with the dominant hand (DH). When the interpretation of (1) corresponds to (1b), namely a single sentence with the OSV order, the signing pause between the signs CL:SIT and MOTHER is equal to the pauses between other signs in the sentence, no eye blink is produced between them, and the classifier following the object NP CHILD is produced with the non-dominant hand (NH). Notice that in (1) the classifier CL:SIT is associated with the unergative structure CHILD CL:SIT, but it is unable to provide information on the syntactic role of the NP CHILD in the broader sentence CHILD CL:SIT MOTHER COMB. The only cue to the syntactic role of the NP CHILD is the selection of the dominant vs. non-dominant hand: the classifier is produced with the dominant hand when selecting the NP subject (1a), it is produced with the non-dominant hand when modifying the NP object (1b). Hand selection in the production of the classifier turns out to be crucial also to clarify the subject-object asymmetry in wh- questions (Cecchetto et al. 2009) and relative clauses (Branchini and Donati 2009, a.o.), as shown below. Wh-questions in LIS may be ambiguous between a subject and an object

reading. The employment of a nominal classifier following the NP object and produced with the non-dominant hand specifies subject wh-questions:

Subject wh- question: BIRD CL:ENTITY (NH) BITE GOOSE WHICH ‘Which goose bites the bird?’

Object wh-question: BIRD BITE GOOSE WHICH ‘Which goose does the bird bite?’

An opposite pattern holds in subject vs. object relative clauses: object RCs are disambiguated through the presence of the nominal classifier:

Subject RC: CHILD ANGEL WATER WET PE SISTER POSS1 ‘The child that wets the angel is my sister.’

Object RC: CHILD CL:ENTITY (NH) ANGEL WATER WET PE SISTER POSS1 ‘The child that the angel wets is my sister.’

It seems that signers are provided the cue for the interpretation of the arguments’ syntactic roles very early in the sentence, namely, as soon as the classifier is produced.

As opposed to spoken languages displaying case marking, however, in LIS, the alternation in hand selection as well as the presence of the nominal classifier in the sentence is optional. The proposal for the observed asymmetry with respect to the compulsory presence of case marking in spoken languages who employ this grammatical device, invokes the role played by grammar-external factors, such as modality and parsing: in potentially ambiguous transitive sentences where both arguments compete for the subject position, sign languages may resort to other modality-driven grammatical cues, such as spatial and non-manual agreement to compute the syntactic roles of the predicate arguments.

Conclusions. In LIS, the choice of the predicate classifier follows Benedicto and Brentari’s generalization: whole entity classifiers are associated with internal arguments, body parts and handling classifiers are associated with external arguments. Although not a compulsory option in LIS, when ambiguity of syntactic roles emerges in the sentence, the hand selection for the production of classifiers unequivocally indicates the syntactic role of the argument it predicates something about:

- classifiers selecting the sentence subject are produced with the dominant hand (regardless of its thematic role): CHILD CL:SIT (‘the child sits’) vs. MAN CL:FALL (‘the man falls down’);

- classifiers modifying the sentence object are produced with the non-dominant hand: CHILD CL:SIT (‘the sitting child’), MAN CL:FALL (‘the fallen man’). The optionality of this grammatical marker akin to a case marker in spoken languages, may be due grammar-external factors directly linked to the visual modality, namely, the availability of non-manual and manual agreement.

Openings and further research. It remains to be ascertained whether the presence of the (verbal and nominal) classifier in transitive ambiguous declarative, interrogative and relative clauses is still optional in the absence of manual and non-manual markers of agreement and how the parsing of these sentences improves in the presence versus absence of this (case) marker, as compared to the other modality-driven strategies. Investigation in this direction might yield a new understanding of the computation of subject and object wh-questions and relative clauses in sign languages.

References

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