An agreement analysis of body-anchored verb constructions

Marloes Oomen & Vadim Kimmelman (University of Amsterdam)

Subject drop, in clauses with both verbs that are said to have agreement properties (*agreement verbs*) and verbs that do not (*plain verbs*), is allowed in many – if not all – sign languages. Previous accounts have suggested that null subjects are variables bound by an empty topic [1], that they are licensed by non-manual agreement through eye gaze or head tilt [2], or that they represent ellipsis of a bare NP [3]. In the case of agreement verbs, it has also been proposed that null subjects are licensed by agreement [1].

We show that it is necessary to reconsider the analysis of null subjects in clauses with plain verbs, arguing that such verbs are, in fact, in an agreement relation with their subject. Analysis of corpus data from two languages (German Sign Language (DGS) Corpus [4] and Russian Sign Language (RSL) corpus [5]) reveals that an apparent constraint applies to a subset of plain verbs: verbs that are articulated on the body (*body-anchored verbs*) strongly disfavor the drop of a third-person subject (even when they are clearly topical), while null first-person subjects occur frequently (Tables 1 and 2; top). We analyzed the exceptions – examples with null third-person subjects (grey cells) – and found them to result from annotation errors. Thus, we interpret the pattern as categorical. We ignore clauses with second person subjects due to the small number of examples available but we expect them to pattern in the same way as third-person subjects – a hypothesis the available data appears to support. In contrast to clauses with body-anchored verbs, null subjects are permitted across the board in clauses with verbs that are articulated in neutral space directly in front of the signer (*neutral verbs*; Tables 1 and 2, bottom).

Additional data (not tabulated) show that null subjects of all persons are free to occur with both verb types whenever there is role shift on the verb (a non-manual means of marking a context shift in which the signer conveys the thoughts or actions of another referent [6]).

Table 1: Subject referents in DGS

Body-anchored (N=428)		
person	**null**	**overt**
1st	103	174
3rd	10	141
Neutral (N=151)		
person	**null**	**overt**
1st	30	41
3rd	20	60

Table 2: Subject referents in RSL

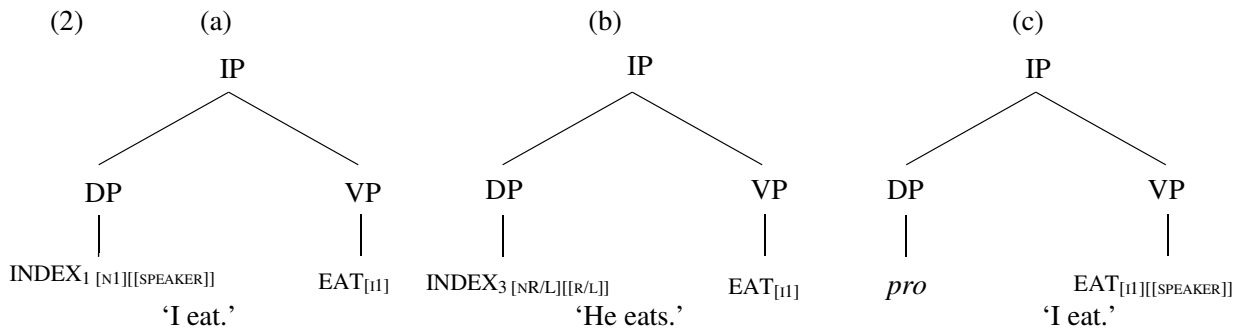| Body-anchored (N=129)		
person	**null**	**overt**
1st	37	21
3rd	7	64
Neutral (N=68)		
person	**null**	**overt**
1st	3	6
3rd	23	36

We argue that body-anchored verbs are actually default first-person forms – an iconicity effect that arises because they typically refer iconically to a mental or physical location in the body [7] – but this default specification can be overridden when a third-person overt subject is present. This state-of-affairs can be construed as a mismatch in person features comparable to gender mismatch in spoken languages. We use [8]'s approach to resolving such a clash. In Russian (and some other languages) a noun can be marked with e.g. masculine gender while the verb is marked with feminine gender (which gets interpreted) (1). [8] argues that nouns, verbs, and adjectives have inherent or non-inherent formal gender features, and that a respective semantic feature [[MALE/FEMALE]] can be inserted as a last resort to resolve formal feature clash. Agreement is feature-checking between sisters. (1) is well-formed because a semantic feature is inserted on the verb.

(1) *nov-yj   vrach   prishl-a*   [Russian]
     new-**M** doctor.**M**   come.PST-**F**
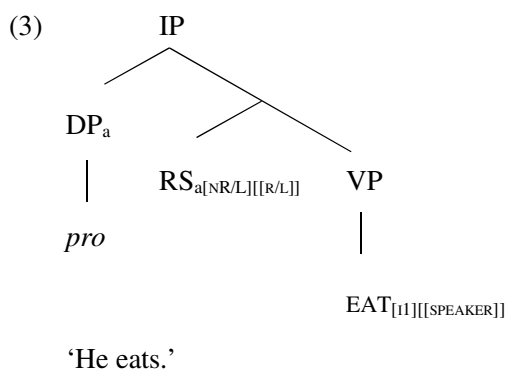   **'**The new doctor came.**'**

Building upon this analysis, we propose that body-anchored verbs represent first-person forms equipped with an inherent first-person feature 'I1', which enter into an agreement relation with the subject. Subjects are endowed with a non-inherent feature – 'N1' for first person subjects and, following [9], 'NR/L' for third

person subjects – and an interpretable feature ([[SPEAKER]] or [[R/L]]). R/L stands for right/left and is an abstract feature used for reference tracking [9].

Features match in the case of a first-person subject (2a), but clash when there is a third-person subject in the clause (2b) – a situation parallel to (1). We adopt [8]'s solution to this issue and posit that a clash between formal features is allowed because a semantic feature [[R/L]] is introduced, such that it overrides the first-person feature on the verb to yield the correct interpretation. Crucially, a null subject does not have any features; following [8], we propose that an interpretable feature is introduced on the verb as a last-resort strategy, yielding a first-person interpretation (2c).

(2)　(a)

```
          IP
         /  \
       DP    VP
        |     |
 INDEX_1 [N1][[SPEAKER]]   EAT_[I1]
        'I eat.'
```

(b)

```
          IP
         /  \
       DP    VP
        |     |
 INDEX_3 [NR/L][[R/L]]   EAT_[I1]
        'He eats.'
```

(c)

```
          IP
         /  \
       DP    VP
        |     |
       pro   EAT_[I1][[SPEAKER]]
        'I eat.'
```

This analysis can easily be extended to explain why a third-person interpretation of null subjects with body-anchored verbs is possible in clauses with role shift. A verb marked with role shift still has the [I1][[SPEAKER]] feature specification, but due to the presence of a context-shift operator, the referent who is the speaker in the context of role shift can be interpreted as third person in the global context (3).

(3)

```
              IP
             /  \
         DP_a    \
           |      \
          pro   RS_a[NR/L][[R/L]]   VP
                                     |
                              EAT_[I1][[SPEAKER]]
         'He eats.'
```

Finally, we argue that neutral verbs do not have an inherent feature specification; all possible non-inherent person features (and thus also all possible semantic features) can appear on the verb. No feature clash occurs with overt subjects, and in the case of null subjects, the feature specification on the verb determines interpretation.

Our account captures the idea that certain iconically motivated properties of body-anchored verbs need to be preserved in syntax. At the same time, the analysis is based on a modality-independent mechanism of feature-checking and the possibility of feature-mismatch configurations.

References [1] Lillo-Martin, D. 1986. Two kinds of null arguments in American Sign Language. *Natural Language & Linguistic Theory* 4. 415–444. [2] Bahan, B. et al. 2000. The licensing of null arguments in American Sign Language. *Linguistic Inquiry* 31. 1-27. [3] Koulidobrova, E. 2017. Elide me bare. Null arguments in American Sign Language. *Natural Language & Linguistic Theory* 35. 397-446. [4] Blanck, D. et al. 2010. The DGS Corpus project – Development of a corpus-based electronic dictionary German Sign Language - German. Poster presented at TISLR 10. [5] Burkova, S. 2015. Russian Sign Language corpus. http://rsl.nstu.ru/. [6] Herrmann, A. & M. Steinbach. 2012. Quotation in sign languages: A visible context shift. In *Quotatives. Cross-linguistic and cross-disciplinary perspectives*, 203-230. John Benjamins. [7] Meir, I. et al. 2007. Body as subject. *Journal of Linguistics* 43. 531-563.[8] Matushansky, O. 2013. Gender confusion. In *Diagnosing syntax*, 271-294. Oxford University Press. [9] Steinbach, M. & E. Onea. 2016. A DRT analysis of discourse referents and anaphora resolution in sign language. *Journal of Semantics* 33, 409-448.