Iconically motivated subject drop in two sign languages

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Syntax of the World's Languages 8

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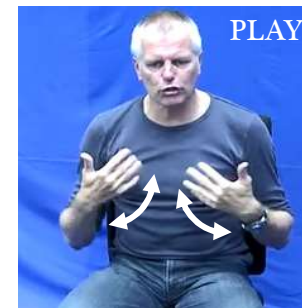Amsterdam Center for Language and Communication

NWO

Verb types (Padden 1988)

1. Agreement verbs

2. Spatial verbs

3. Plain verbs

BEAT

HELP

GO

LEAVE

THINK

PLAY

(Examples from DGS Corpus)

Plain verbs (Padden 1988)

We make a subdivision:

A. Body-anchored verbs

B. Neutral verbs

THINK

BE-SAD

PLAY

DIE

(Examples from DGS Corpus)

Overview

1. Null subjects in sign languages
2. Hypothesis
3. Data and annotation
4. Results
5. Statistical analysis
6. Conclusions

Null subjects in sign languages

Lillo-Martin (1986, 1991):

- American SL has two types of null arguments:
    1. Empty category *pro* licensed by agreement: agreement verbs
    2. Variable bound by an empty topic: agreement + plain verbs

Glück & Pfau (1998) and Bos (1993) report similar results for German SL (DGS) and SL of the Netherlands.

Bahan et al. (2000):

- There is always agreement in American SL:
    1. Manual (agreement verbs)
    2. Non-manual (all verbs): head tilt/eye gaze
- → Subject drop is licensed under either form of agreement.

Hypothesis

1. Subjects in clauses with body-anchored verbs can only be dropped when they are *first person* (based on Oomen 2017).
   → Iconicity effect

2. In clauses with neutral verbs, subjects of all persons can be dropped.

→ We investigate two sign languages:
   - German Sign Language (DGS)
   - Russian Sign Language (RSL)

Data

- DGS Corpus: subset of 58 dialogues (~8h30) (Blanck et al. 2010)
- RSL corpus: ~230 mostly monologues (~5h30) (Burkova 2015)

- Verbs selected based on 80 verb meanings from ValPaL list (Hartmann et al. 2013; Malchukov & Comrie 2015)

Tokens identified (excl. impersonals):
- DGS: 630 tokens
- RSL: 220 tokens

Annotation

1. Verb, e.g. BOIL, BE-SAD1, LOOK-AT2…

2. Verb type:
   - Body-anchored
   - Neutral

3. Subject referent:
   - Person: 1/2*/3
   - Overtness: O/N

Results

DGS:

Body-anchored (N=471)	Overt	Null
1st	174	103
3rd	141	10

Neutral (N=159)	Overt	Null
1st	41	30
3rd	60	20

RSL:

Body-anchored (N=151)	Overt	Null
1st	21	37
3rd	64	7

Neutral (N=69)	Overt	Null
1st	6	3
3rd	36	23

The exceptions

Expectation:

- Categorical pattern (i.e. no null 3rd person subjects with body-anchored verbs)

- Reality

  - Very few examples, but how to assess it?

- Solution 1: statistical analysis
- Solution 2: look at counterexamples

Solution 1

- Mixed-effect logistic regression
  - Dependent variable: 3N; binary
  - Independent variable: verb type
  - Random factors: verb, signer
  - **Hypothesis**: 3N are significantly less likely with body-anchored verbs

- Result:
  - Significant negative effect of body-anchored verb type in both languages

Solution 2

Possible explanations:

- Example can be interpreted as impersonal construction
- Person of the subject unclear from context ($\rightarrow$ can be first person)
- Very slight pointing present ($\rightarrow$ subject is in fact overt)
- 2 examples in RSL: parentheticals

Conclusions

- Body-anchored verbs and neutral verbs in RSL and DGS behave differently w.r.t. subject drop patterns.
  - Body-anchored verbs allow subject drop when the subject is first person only.
    - → iconicity effect: default first-person interpretation.
    - → Modality-specific constraint.
  - Neutral verbs do not pose constraints on subject drop.

Thank you!

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What's role shift?

- A mechanism to construct the thoughts, utterances, or actions of a referent; triggers a context shift.
- Shoulder shift; facial expressions; change in eye gaze direction:

Example from NGT

```
                          rs              rs
BEAR  / CL(w/e):MOVE / BE-NERVOUS
'The bear approached. [The boy] got
nervous.'
```

Results – examples with role shift

DGS:

Body-anchored (N=100)	Overt	Non-overt
1st	41	15
2nd	0	3
3rd	16	25

Neutral (N=13)	Overt	Non-overt
1st	5	2
2nd	0	0
3rd	2	4

RSL:

Body-anchored (N=200)	Overt	Non-overt
1st	42	49
2nd	0	2
3rd	28	79

Neutral (N=34)	Overt	Non-overt
1st	8	13
2nd	0	0
3rd	6	7

Statistical analysis

- **Expectation**: categorical pattern (no non-overt 3rd person subjects with body-anchored verbs

- **Reality**: very few examples, but how to assess it?

- Solution 1a: mixed-effect logistic regression
  - Dependent variable: 3N (3rd person non-overt); binary
  - Independent variables: verb type, role shift
  - Random factors: verb, signer
  - **Hypothesis**: 3N are significantly less likely with body-anchored verbs without role shift

Statistical analysis

- **Expectation**: categorical pattern (no non-overt 3rd person subjects with body-anchored verbs

- **Reality**: very few examples, but how to assess it?

- **Solution 1b:** mixed-effect logistic regression without role shift
  - Dependent variable: 3N; binary
  - Independent variables: verb type
  - Random factors: verb, signer
  - **Hypothesis**: 3N are significantly less likely with body-anchored verbs

Statistical analysis

- **Expectation**: categorical pattern (no non-overt 3rd person subjects with body-anchored verbs

- **Reality**: very few examples, but how to assess it?

- **Solutions 1a-b:** statistical analysis

- **Solution 2:** look at counterexamples in detail, try to find out what is going on there

Statistical analysis

- **Model 1:** predicting 3N based on verb type and role shift:
  - <u>Significant negative effect of body-anchored verb type</u> in both languages
  - Significant positive effect of role shift in both languages
  - Significant positive interaction in RSL, non-significant positive interaction in DGS

- **Model 2:** predicting 3N based on verb type (no role shift)
  - <u>Significant negative effect of body-anchored verb type</u> in both languages

- Hypothesis confirmed