# Syntactic Structure of the Nominal Complex in Russian Sign Language

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**Based on joint work with Kirill Aksenov (NRU HSE)**

## Theoretical Background

"When any or all of the items (demonstrative, numeral, and descriptive adjective) precede the noun, they are always found in that order. If they follow, the order is either the same or its exact opposite" [Greenberg 1963]

**Dem Num A N | N Dem Num A | N A Num Dem**

Later several "impossible" word orders were attested. Cinque (2005) proposed a new definition of the Universal 20: all attested orders (namely, 14 out of 24 logically possible orders) can be derived from the order (Dem > Num > Adj > N).

Scott (2002) 's adjectives hierarchy:

Subjective Evaluation > Size > Length > Height > Speed > Depth > Width > Weight > Temperature > Wetness > Age > Shape > Color > Nationality/Origin > Material > Typing Attribute
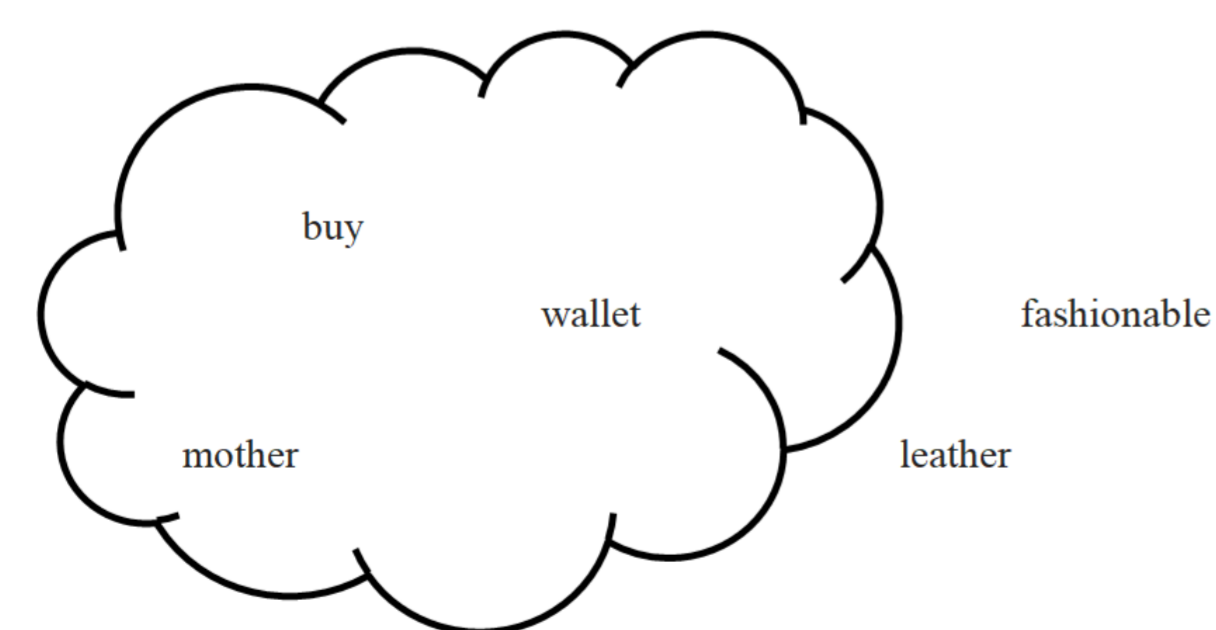
## Aims

- which orders are acceptable and which are not
- explain variability
- underlying word order

## Methodology

There were 2 elicitation tasks. Informants were working in pairs to reduce loan translations from spoken language.

Number of informants (pairwise):

- 12 in the acceptability judgments task
- 8 in the 'clouds' task



Насколько правильное предложение? (7)
Is this sentence correct?

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| totally ungrammatical! Совсем неправильно! | ○ | ○ | ○ | ○ | ○ | Absolutely correct! Абсолютно правильно! |

## 'Clouds' Task Results

Ac Am N > Am Ac N, N Ac Am, Ac N Am

Ae Ac N > Ae N Ac

Num Ac N > Ac Num N

As Ac N > Ac As N

Ae Am N > Am Ae N, N Am Ae, Am N Ae, Ae N Am, N Ae Am

As Am N > N Am As, Am As N, N As Am, N.As Am, Am N As

Ae Num N > Num N Ae

**(As) Ae (As) Num (As) Ac Am N**

Table 1. General tendency for the preposition.

| preposition | 0.68 |
|---|---|
| postposition | 0.21 |
| _ N _ | 0.08 |
| N _ N | 0.03 |

Table 2. Dependency on the number of modifiers by noun.

| | Estimate | Std. Error | z value | Pr(>|z|) |
|---|---|---|---|---|
| (Intercept) | 0.8136 | 0.1869 | 4.353 | **1.34e-05 *** ** |
| modifiers+1 -many | 0.7887 | 0.2102 | 3.751 | **0.000176 *** ** |

There is no correlation with the modifier type according to another generalized linear mixed model (with the modifier type as a predictor).

There is a slight dependency of position on age of the informants.

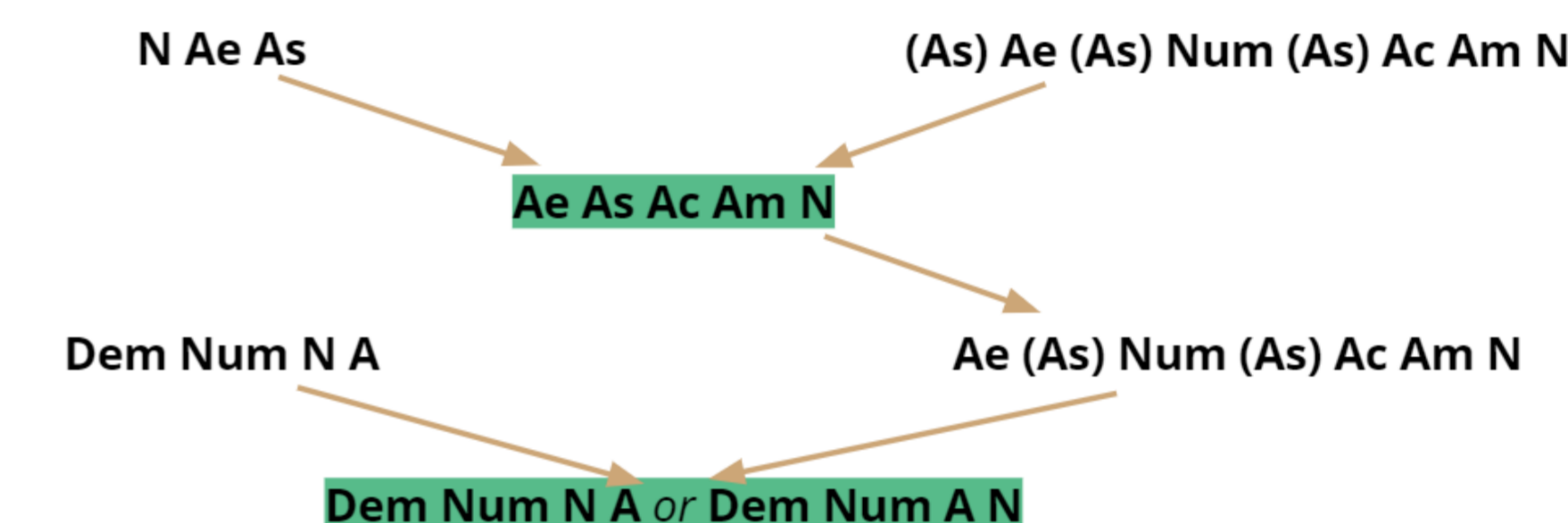## Acceptability Judgments Task Results



Position of numeral and adjective
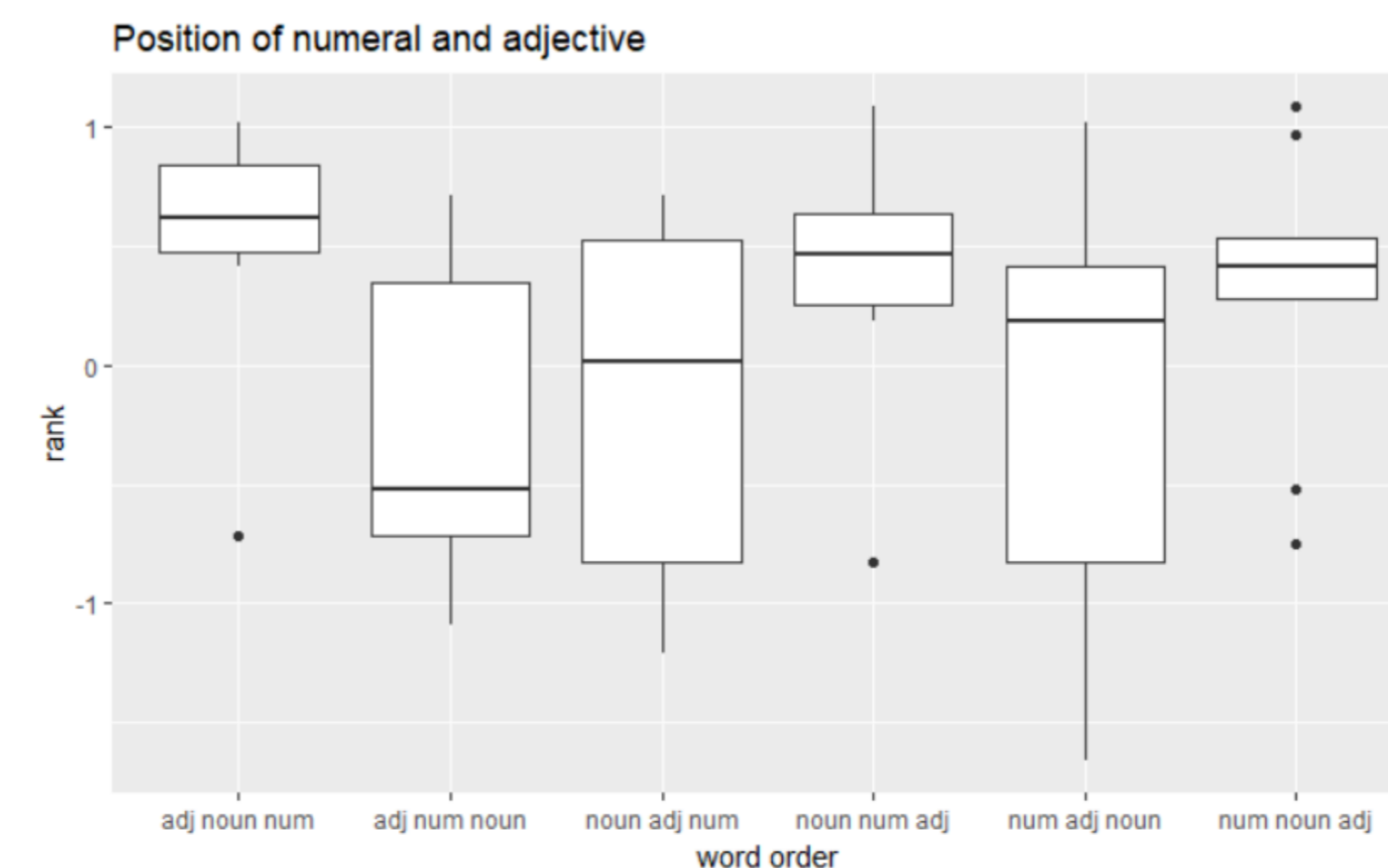
## Acceptability Judgments Task Results

| A N Dem (w) | N Ae As (w) | Num Dem N (w) | Num N A (w) |
|---|---|---|---|
| * N Dem A | * As N Ae | * Dem N Num | * A N Num |
| Dem N A | N As Ae | Dem Num N | * Num A N |
| A Dem N | | | * N A Num |
| | | | * A Num N |
| | | | N Num A |

Num Dem N A → **Dem Num N A**

## Comparison of the Results

N Ae As     **(As) Ae (As) Num (As) Ac Am N**

→ **Ae As Ac Am N**

Dem Num N A     Ae (As) Num (As) Ac Am N

→ **Dem Num N A** *or* **Dem Num A N**

## Conclusions

- We obtained lists of acceptable orders and some unacceptable orders for combinations of pairs of modifiers
- Variability
  - is partially explained by a number of modifiers accompanying noun
  - Position with respect to noun does not depend on type of the modifier
- Underlying order
  - relative ordering of adjectives: **Ae As Ac Am N**
  - underlying order: **Dem Num N A** or **Dem Num A N**

## Future Perspective

- influence of lexical items
- dependency on sociolinguistic factors
- extend with other possible NP constituents (possessives, quantifiers, ordinal numerals ...)
- explore tendency to parceling

## Selected References

1. Cinque, G. (2005). Deriving Greenberg's Universal 20 and Its Exceptions. Linguistic Inquiry, Vol. 36, No. 3, 315–332.
2. Greenberg, J. (1963). Some Universals of Grammar with Particular Reference to the Order of Meaningful Elements. In Greenberg, Joseph H. (ed.), Universals of Human Language, 73–113.