



НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ
УНИВЕРСИТЕТ

Influence of non-manual negation on word order in Russian Sign Language

Lena Pasalskaya

National Research University
"Higher School of Economics"

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- Properties of sign languages
- Negation in sign languages
- Overview of Russian Sign Language
- Analysis
- Conclusions



Visual-gestural modality:

- iconicity (signs often depict the referent)

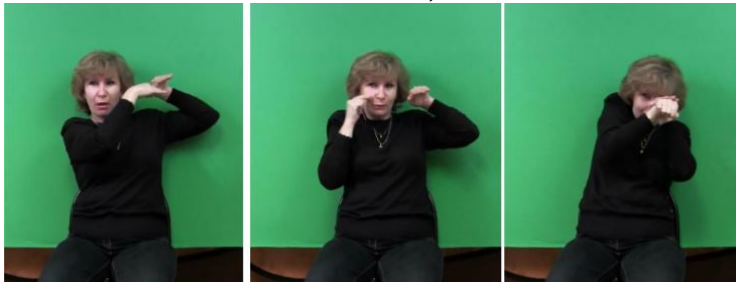


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- simultaneity (the simultaneous expression of information by two hands, by non-manual marking)



'A cat climbs in the shelves behind [him].' (Kimmelman 2014)



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- phonological (phonological constituent of a sign along with another 4 components)
- morphological (e.g. introduce adverbial meaning)
- syntactic (e.g. mark topics, conditions, **negation** etc.)



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'Santi does not eat meat.'



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 - repeated side-to-side movement or wrist twisting
 - single sideways movement
 - a hand orientation with the palm facing outward
 - a round 'O'-type handshape

- facial expressions: lowered eyebrows, narrowed eyes, pursed lips, and wrinkling nose





- facial expressions
- head movements:
 - the negative headshake – a side-to-side movement of the head
 - the negative head turn – a single sideward head movement
 - the backward tilt of the head



- facial expressions
- head movements
- spreading of non-manual marking

(3) $\frac{\text{hdshake}}{\text{IX3 NOT MEMBER}}$ [Sweden SL, Zeshan 2004]
'He is not a member.'



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- do not confuse with Signed Russian language



- basic word order – SVO (Kimmelman 2012)

(4) MOTHER BUY BOOK

[Elicited RSL]

‘Mother bought a book.’



- basic word order – SVO (Kimmelman 2012)
- manual negation follows the predicate and has clause-final position (Kimmelman 2007)

(5) a. MOTHER BOOK BUY NOT [Elicited RSL, (ignoring non-manual)]

‘Mother did not buy a book.’

b. *MOTHER NOT BUY BOOK

‘Mother did not buy a book.’

c. ??MOTHER BUY NOT BOOK

‘Mother did not buy a book.’

d. MOTHER BUY BOOK NOT

‘Mother buy not a book.’



- basic word order – SVO (Kimmelman 2012)
- manual negation follows the predicate and has clause-final position (Kimmelman 2007)
- the predicate and NOT form a single unit (new unit has the additional Movement between two parts, the loss of repetition in the first part, and one mouthing along the whole unit)



- basic word order – SVO (Kimmelman 2012)
- manual negation follows the predicate and has clause-final position (Kimmelman 2007)
- the predicate and NOT form a single unit
- both NOT and the predicate must obligatorily be accompanied by non-manual negation



- the subject and the object are either topicalized, or accompanied by non-manual negation

(6) a. $\overline{\text{INDEX-2}} \overline{\text{BUY}}^{\text{top}} \overline{\text{BOOK NOT}}^{\text{hs}}$ [Elicited RSL]

'As for you, as for book, you do not buy a book.'

b. $\overline{\text{INDEX-2 BUY BOOK NOT}}^{\text{hs}}$

'You do not buy a book.'

c. * $\text{INDEX-2 BUY } \overline{\text{BOOK NOT}}^{\text{hs}}$

'As for you, as for book, you do not buy a book.'



- the subject and the object are either topicalized, or accompanied by non-manual negation
- negation is in complementary distribution with resultative secondary predicates

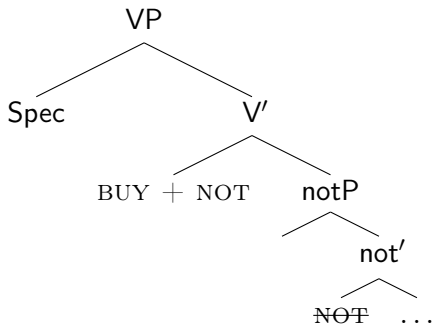
(7) a. BOY CL:GLASS.DRINK EMPTY [Elicited RSL]

‘A boy has drunk the whole glass to the bottom’

b. $\frac{\text{BOY CL:GLASS.DRINK}}{\text{NOT}}^{\text{hs}}$

‘A boy has not drunk the glass.’

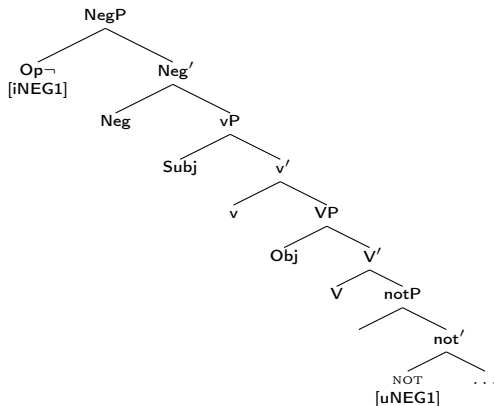
- NOT is part of a complex predicate. It heads the notP projection, which V takes as a complement. NOT undergoes movement to the V head and forms with it a compound:



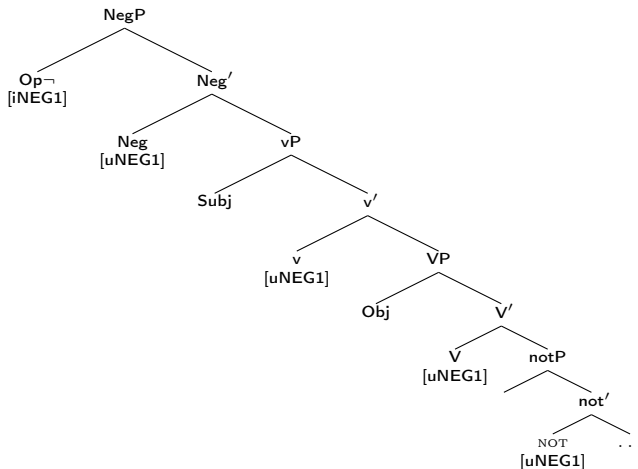


- This element (NOT) is lexically specified for carrying an uninterpretable feature ([uNEG1]). Merging of an element with an uninterpretable feature triggers:
 1. A covert negative operator Op_{\neg} with the corresponding interpretable feature in the Specifier of NegP (Zeijlstra 2004).
 2. The corresponding uninterpretable feature in the head of every projection up to Op_{\neg} with the corresponding interpretable feature.

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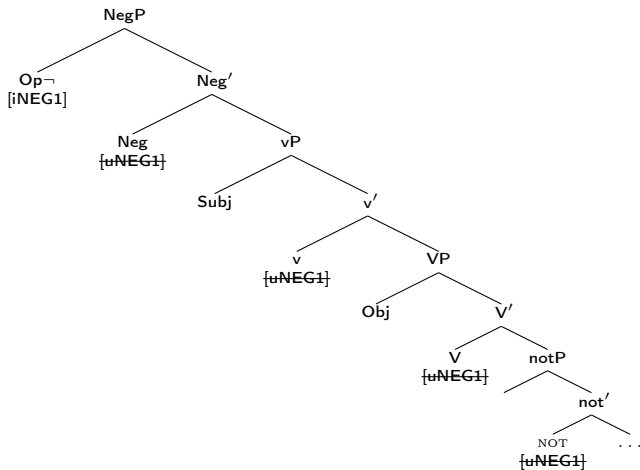


- An Agree operation deletes all uninterpretable features.

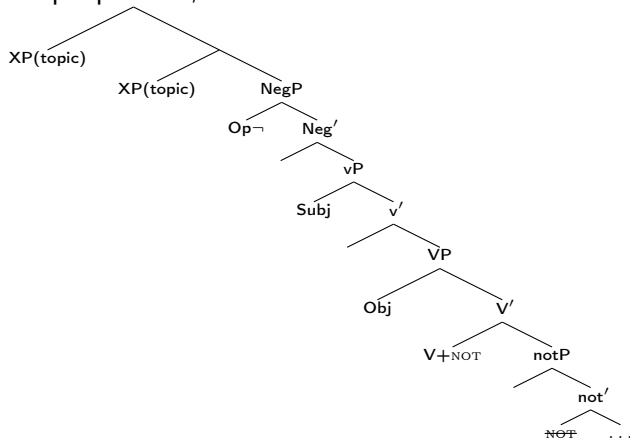
Agree (Haegeman and Lohndal 2010)

Given that α c-commands β and that the feature sets on α and β are identical, α agrees with β if β has either an interpretable or an uninterpretable feature.

An Agree operation deletes all uninterpretable features.



The subject, the object, or both of them undergo A-bar movement to the topic position; NOT moves to the V head.





Non-manual negation is an instance of negative concord, post-syntactic operation (topicalized arguments are not accompanied by non-manual negation).

Norris (2014) proposes that concord consists of following operations:

1. **Agr node insertion:** heads that show concord drive insertion of special agreement nodes with unvalued features.

Agr Node Insertion (Norris 2014: 152)

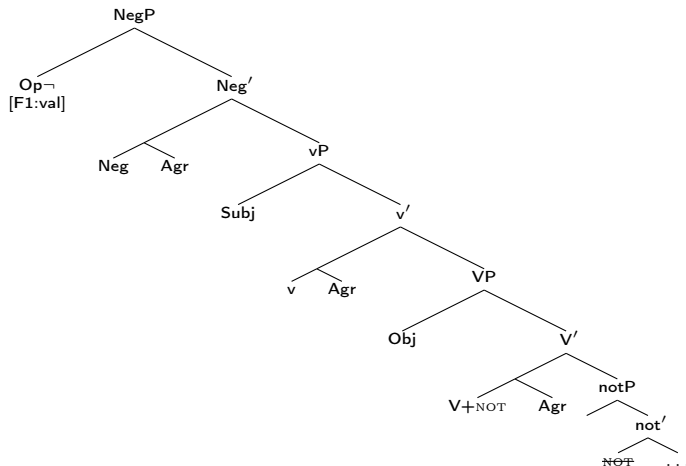
$X \rightarrow [X \text{ Agr}]_x$

2. **Feature Copying:** Agr^o nodes get their features valued through a mechanism called Feature Copying. This mechanism copies the value to Agr nodes from the closest dominating source.

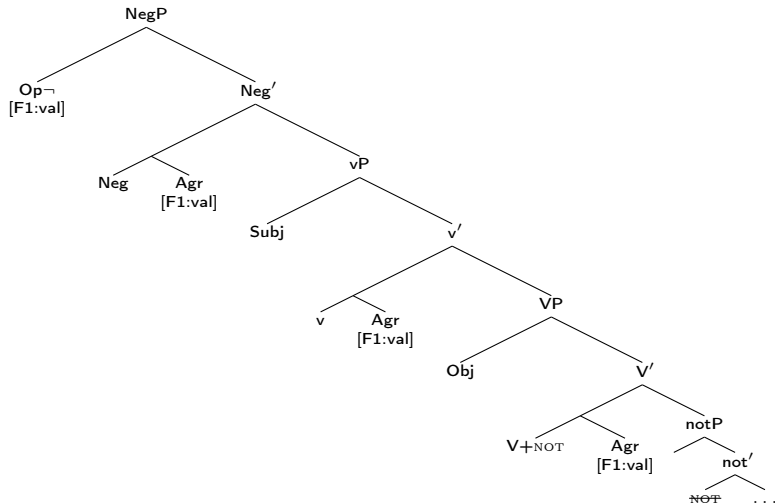
Feature Copying (Norris 2014: 126)

The features of the closest c-commanding K to any particular Agr node are copied onto it.

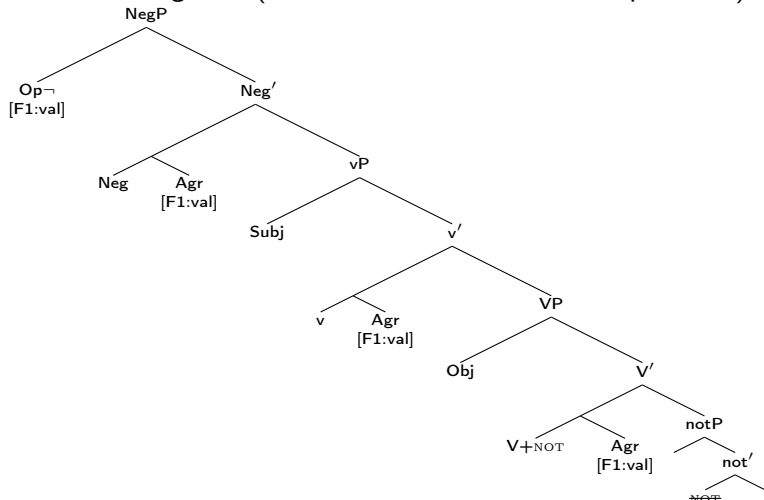
Agr nodes are inserted on heads that had uninterpretable features in the syntax:



Agr nodes subsequently receive valued features from Op_{\neg} .



Valued features [F1:val] on Agr nodes are phonologically realized by non-manual negation (head movements and facial expressions).





This analysis implicates that non-manual marking of negation in fact does not occur on the subject and the object, but occurs on surrounding nodes. The observed spreading over the subject and the object is due to the fact that they are located in midway nodes and thus are accompanied by non-manual marking during fluent signing.



- Negative constructions in RSL consist of manual and non-manual negation.
- Word order in negative constructions is SOV Neg (NOT cannot be omitted, it follows the predicate, and occurs in clause-final position).
- Non-manual negation spreads over the whole clause, excluding topicalized constituents.



- Manual negative element is part of a complex predicate carrying an uninterpretable feature.
- Merging of the negative element with an uninterpretable feature triggers a negative operator Op_{\neg} , and the corresponding uninterpretable features in the head of every projection up to Op_{\neg} .
- Uninterpretable features are deleted through Agree operation takes place in the syntax.
- Post-syntactically, special Agr nodes are inserted on heads that had the uninterpretable feature in the syntax.
- These Agr nodes have unvalued feature that are valued by Op_{\neg} through Feature Copying.
- Valued features on Agr nodes are realized by non-manual marking of negation.



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- Pfau, R. & Quer, J. (2002). V-to-Neg raising and negative concord in three sign languages. Lisa BRUNETTI Italian Focus and elliptic effects p. 3 João COSTA & Maria Cristina FIGUEIREDO SILVA Notes on nominal and verbal agreement in, 27, 73.
- Zeijlstra, H. (2004). Sentential negation and negative concord (Doctoral dissertation, External Organizations).

Thank you!