

## Serbo-Croatian n-words and their scope

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### I. What is the quantificational status of n-words?

- Serbo-Croatian (S-C) is a strict NC language:

(1) a. Niko nije otišao.                      b. Stevan nije video nikoga.                      c. Niko nije video nikoga.  
 n-person<sub>NOM</sub> didn't leave                      Stevan didn't see n-person<sub>ACC</sub>                      n-person<sub>NOM</sub> didn't see n-person<sub>ACC</sub>  
 Nobody left.                      Stevan saw nobody./Stevan didn't see anybody.                      Nobody saw anybody.

- A sentence which features sentential negation and one or more n-words is characterized as an anti-additive (AA) environment – de Morgan's equivalence:

$$(2) \neg(P \vee Q) = \neg P \wedge \neg Q$$

→ Thus an n-word in a simple negative sentence can be interpreted both as a narrow-scope existential (3a) and as a wide-scope universal (3b).



→ Standard analyses consider n-words as semantically non-negative indefinites/existentials that have to be in the scope of a negative operator (Laka 1990, Ladusaw 1992, Zeijlstra 2004), like in (3a).

### II. Testing n-words – intervention with modals and intervention with Q-adverbs

• Problem:  $\neg \exists x.P(x) \Leftrightarrow \forall x.\neg P(x)$

→ Is there a way to disentangle the two readings?

Certain diagnostics that can be called upon in order to disentangle the  $\neg \exists$  from the  $\forall \neg$  interpretation of n-words.

Mechanism: the AA environment is neutralized by inserting another quantificational element between the sentential negation and the n-word at LF.

1) Modals:  $\neg \square > \exists$

→ Inspired by the split-scope readings in Germanic languages (Penka 2010, Zeijlstra 2011), involving negative determiners (like *no*) and necessity modals (like *must*).

→ The discussed languages are not NC and the main issue is whether and how the negative determiner is decomposed into negation and an indefinite.

2) Q-adverbs:  $\neg Q > \exists$

→ As proposed by Shimoyama (2011), Japanese quantificational adverbs, such as the equivalents of *mostly* and *usually*, can be used to break down the AA environment.

→ Jap. indeterminate NPIs (equivalent to n-words) behave like wide-scope universals, when the tests with Q-adverbs are applied.

### III. S-C n-words as existentials – intervention with modals

The modal auxiliary *morati* always scopes under negation (like *have to*):

$[\neg > \square] \approx$  'There is no obligation to',  $\neq$  'There is an obligation not to'

→ When an n-word appears in a sentence with this necessity modal and negation, two scopal configurations are logically possible, as in (a) and (b).

a.  $[\neg \square > \exists]$ ;                      b.  $[\neg \exists > \square] = [\forall \neg > \square]$

(4) Niko ne mora da ode.  
 n-person<sub>NOM</sub> not have-to<sub>3sg</sub> that leave<sub>3sg</sub>  
 'It is not required that someone (or other) leaves' =  $[\neg \square > \exists]$

(5) Ne moraš nikoga da podmitiš.  
 not have-to<sub>2sg</sub> n-person<sub>ACC</sub> that bribe<sub>2sg</sub>  
 'It is not required that you bribe someone (or other)' =  $[\neg \square > \exists]$

→ Only one reading (a) is available in S-C and, in this reading, the n-word can have only a narrow-scope existential interpretation.

→ This is regardless of the structural position of the n-word – subject in (4) and object in (5).

### IV. S-C n-words as existentials ? – intervention with Q-adverbs

(i) Neg > Often :  $[\neg Q > \exists]$  'Existential test'

→ There is NO equivalent reading in which the n-word could be represented as a wide-scope universal!

(ii) Usually > Neg :  $[\forall > Q \neg]$  'Universal test'

→ There is NO equivalent reading in which the n-word could be represented as a narrow-scope existential!

(6) a. Doktor obično nije nikoga pregledao.  
 doctor usually didn't n-person<sub>ACC</sub> examine<sub>3sg</sub>

b. \*'For every x, it was usually the case that the doctor didn't examine x'  $[\forall > Q \neg]$

c. 'It was usually not the case that the doctor examined someone (or other)'  
 (c.)  $[Q > \neg \exists] = [Q > \forall \neg]$

→ (6c) entails (6b). However, in a context that invalidates (6c) and supports (6b), the sentence is rejected by speakers.

→ *Obično* is a Positive Polarity Item (PPI), i.e. it always outscopes sentential negation.

→ Once it is replaced with a Q-adverb that can be in the scope of negation, such as *često* (= often), different scopal configurations can be tested, as in (7).

(7) a. Doktor nije često nikoga pregledao.  
 doctor didn't often n-person<sub>ACC</sub> examine<sub>3sg</sub>

b. 'It was not often the case that the doctor examined someone (or other)'  $[\neg Q > \exists]$

c. ?\*'There was no x such that the doctor examined x often'  $[\neg \exists > Q] = [\forall \neg > Q]$

→ (7b) entails (7c). In a context that is compatible only with (7c), but not with (7b), most of the speakers reject the sentence (7a).

(6): the reading in which the n-word can only be analyzed as a WS- $\forall$  is not available independently from the other possible reading.

(7): the reading in which the n-word can only be analyzed as a NS- $\exists$  seems to be the only available.

→ These facts point toward a narrow-scope existential analysis for S-C n-words.

### V. Problem: subject position

When S-C n-words are in subject position, the tests with Q-adverbs tend to give less conclusive results.

(8) a. Niko obično nije išao na časove.  
 n-person<sub>NOM</sub> usually didn't go on classes<sub>ACC</sub>

b. ?'For every x, it was usually the case that x didn't go to classes'  $[\forall > Q \neg]$

c. 'It was usually not the case that someone (or other) went to classes'  
 (c.)  $[Q > \neg \exists] = [Q > \forall \neg]$

→ Again, (8c) entails (8b). Nevertheless, this time, when speakers are presented with a context that invalidates (8c) and supports (8b), some of them accept the sentence (8a).

→ This comes as an effect caused by structural and pragmatic factors: The sentence-initial position is common for topics and it yields a presupposition of non-emptiness, whereas the combination with the predicate 'go' favours distributivity over the members of the set denoted by the n-word.

### VI. Conclusions & To-do-list

Serbo-Croatian n-words are existentials!

→ Modals are known as non-interveners (Chierchia 2013). Tests based on modals thus show stable judgements.

→ Q-adverbs often act as interveners and cause degradedness.

→ N-words in subject position: information-structural effects.

→ Comparison with languages where n-words have been claimed to be universals: Japanese, Greek, Korean, Hungarian.