

Serbo-Croatian n-words and their scope

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I THE QUANTIFICATIONAL STATUS OF N-WORDS A number of languages dispose with negatively marked expressions, dubbed as n-words (Laka 1990). In strict Negative Concord (NC) languages, such as Serbo-Croatian (S-C), n-words must appear in the same clause with a verbal marker of sentential negation. This is the case regardless of their position (subject/object, preverbal/postverbal, adjunct) and more n-words in one clause always yield the reading of one single logical negation. Some analyses treat all n-words as negative quantifiers (Haegeman&Zanuttini 1996, De Swart&Sag 2002), whereas others take the ones that appear in strict NC languages as a special instance of Negative Polarity Items, both in an indefinite/existential incarnation taking scope below negation (Laka 1990, Ladusaw 1992) or in a universal incarnation, where they outscope negation (Giannakidou 2000).

II MAJOR OBSTACLE – DE MORGAN'S LAWS The characterization of both sentential negation and its combination with (an) n-word(s) as anti-additive environments means that they fulfil the de Morgans's equivalence which states that a disjunction in the scope of negation is equivalent to a conjunction scoping over negation (1). Thus an n-word in a simple negative sentence can be interpreted both as a narrow-scope existential and as a wide-scope universal (2).

$$(1) \neg(P \vee Q) = \neg P \wedge \neg Q$$

$$(2) \neg\exists x.P(x) \Leftrightarrow \forall x.\neg P(x)$$

III SERBO-CROATIAN N-WORDS AND NECESSITY MODALS – EVIDENCE FOR AN EXISTENTIAL ANALYSIS A way to disentangle the two readings is through exploiting the so-called split-scope effects (Penka 2010). Necessity modals are used as interveners and, unlike in German, such configurations in SC give rise to only one interpretation. Crucially, as shown in (3), this reading provides evidence for a narrow-scope existential interpretation of S-C n-words, in both subject (3a) and object positions (3b).

(3)a. *Niko* ne mora da ode. a.' $\sqrt{[\neg > \square > \exists]}$; a." $*[\neg > \exists > \square] = [\forall > \neg > \square]$
n-person_{NOM} not have-to_{3Sg} that leave_{3SgPRES}

'It is not required that someone (or other) leaves'

b. Ne moraš *nikoga* da podmitiš. b.' $\sqrt{[\neg > \square > \exists]}$; b." $*[\neg > \exists > \square] = [\forall > \neg > \square]$
not have-to_{2Sg} n-person_{ACC} that bribe_{2SgPRES}

'It is not required that you bribe someone (or other)'

In the case of the interpretations in (3a') and (3b'), it is not possible to transform this configuration into any other that would represent the S-C n-word *niko* as a wide-scope universal. With the readings in (3a'') and (3b''), this would be possible. However, these latter interpretations, in which no one in particular is required to leave (3a'') and there is no requirement for someone in particular to be bribed (3b'') are not available in S-C independently from the readings in (3a') and (3b').

IV SHIMOYAMA'S TESTS – TOWARDS A UNIVERSAL ANALYSIS Certain quantificational adverbs can also be used to create contexts that will tease apart the narrow-scope existential from the wide-scope universal interpretation of n-words, as proposed by Shimoyama (2011). Japanese quantificational adverbs, such as the equivalents of 'mostly/usually' that outscope negation and 'mostly/usually' that scope below negation are used in order to break the anti-additive context of the clausemate sentential negation and the n-word. It is shown that the reading in which only a wide-scope universal interpretation is possible for the n-word is available independently from another possible reading. This finding, together with the inaccessibility of the interpretation for which a narrow-scope existential analysis of n-words in Japanese would be supported, leads Shimoyama to the conclusion that these expressions can be analysed as universals taking scope above negation.

V SERBO-CROATIAN SUBJECT TO SHIMOYAMA'S TESTS – UNIVERSAL ANALYSIS NOT CONFIRMED When applied to S-C data, Shimoyama's diagnostic can be invalidated. The results obtained with these data are affected by syntactic, semantic and pragmatic factors. I will show that in S-C:

(i) The exclusivity of a wide-scope-universal reading (4b) is not confirmed for object n-words, as shown for *niko* in (4a), whereas there is no object position in the Japanese data.

(4) a. Marija obično ne posećuje *nikoga*.

Marija usually not visit_{3Sg.PRES} n-person_{ACC}

b. *'For every x, it is usually the case that Marija doesn't visit x'

$[\forall > Q\bar{1}]$

c. 'It is usually not the case that Marija visits someone'

$[Q\bar{1} \exists] = [Q \forall \bar{1}]$

Obično is an adverb that outscopes sentential negation, meaning roughly 'in the majority of cases, not VP'. Nevertheless, in a context that excludes (4c), the sentence in (4a) is rejected.

(ii) Some speakers accept the sentence in (5a), with an n-word in subject position, even when provided with a context that eliminates the interpretation of the n-word given in (5c).

(5) a. *Niko* obično nije odlazio na časove.

n-person usually not_{AUX3Sg} go to classes_{ACC}

b. 'For every x, it was usually the case that x didn't go to classes'

$[\forall > Q\bar{1}]$

c. (*)'It was usually not the case that someone went to classes'

$[Q\bar{1} \exists] = [Q \forall \bar{1}]$

Since it is impossible to transform the scopal configuration in (5b) into an equivalent one that would represent the n-word as an existential, this could be evidence for an analysis of S-C n-words as wide-scope universals, the same as Japanese. However, this runs into problems.

The scopal relation between the sentential negation and the quantificational adverbs is essential for the diagnostic, nonetheless, this relation is blurred by the syntactic and the semantic properties of these adverbs.

Due to the choice of predicates used both in the test-sentences with n-words in preverbal (5) and in postverbal (4) position, verbs such as 'go._{IMPERF}' in S-C (5a) force distributivity over the actions of individuals (denoted by the n-word *niko*) and not over events that these individuals participate in. Predicates that are instead describing situations or states, such as 'stay' or 'to be', don't yield such an effect and the n-word-wide-scope-only reading is not available.

The same goes for collective predicates, as shown in (6), where it is impossible to distribute over individuals denoted by the subject n-word.

(6) a. *Niko* se obično nije sastajao u biblioteci.

n-person_{REFL} usually not_{AUX3Sg} gather in library_{LOC}

'Usually no one gathered in the library'

(iii) The diagnostic which is supposed to unambiguously show the narrow-scope existential interpretation of n-words, using adverbs outscoped by negation, failed in Japanese.

(7) a. Doktor nije pregledao često *nikoga*.

doctor not_{AUX3Sg} examine often n-person_{ACC}

b. 'It is not the case that often, the doctor examined some (or other) patient'

$[\bar{1}Q > \exists]$

c. *'For every patient x, it is not the case that the doctor examined x often.'

$[\forall > \bar{1}Q] = [\bar{1}\exists Q]$

In a context which is compatible with the interpretation in (7c), but incompatible with (7b), (7a) is rejected. An attempt of confirming only (7b) independently from (7c) is not possible because of the entailment relation between (7b) and (7c). This adds further evidence in favor of an existential analysis of S-C n-words.

Finally, an important issue is word order and, especially, its relation to information structure. The word orders featured in the data reflect the relevant 'un-transformable' readings in the surface string. However, these positions of n-words are not immune to focalisation and topicalisation. A somewhat related issue is that of difficulties in processing these complex quantificational configurations. Such difficulties are encountered by informants, which indicates possible intervention effects (Chierchia 2013) that occur with these high-end-of-scale adverbs, whereas there is no such effect with necessity modals.

VI REFERENCES Chierchia 2013. *Logic in Grammar: Polarity, Free Choice, and Intervention*. Oxford Studies in Semantics and Pragmatics 2. Oxford: Oxford University Press. | De Swart & Sag 2002. "Negative Concord in Romance". *Linguistics and Philosophy* 25: 373-417. | Giannakidou 2000. "Negative... Concord?". *Natural Language and Linguistic Theory* 18: 457-523. Kluwer Academic Publishers. | Haegeman & Zanuttini 1996. "Negative Concord in West Flemish". In A. Belletti, and L. Rizzi (eds): *Parameters and Functional Heads. Essays in Comparative Syntax*. 117-179. Oxford: Oxford University Press. | Ladusaw 1992. "Expressing Negation". In the Proceedings of SALT II, eds. Barker, C. & Dowty D. Columbus: Ohio State University Department of Linguistics. | Laka 1990. "Negation in syntax: On the nature of functional categories and projections". MIT PhD Thesis. | Penka 2010. *Negative Indefinites*. Oxford University Press. | Shimoyama 2011. "Japanese indeterminate Negative Polarity Items and their scope". *Journal of Semantics* 28(4):413-50.