Prosodic Description of Scopally Ambiguous Sentences in Russian

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Quantifier Scope has received wide attention in the linguistics literature since the seminal works by Chomsky (1976), May (1977, 1985) and others. Certain syntactic constructions such as Antecedent Contained Deletion and Inverse Linking have received a natural explanation with the postulation of covert A-Bar movement operation Quantifier Raising (QR) that is usually taken to account for the syntactic ambiguity of sentences containing two or more quantifier phrases (May 1977, 1985 and many others).

While the syntactic mechanism of Quantifier Raising (especially in English) is well studied and fairly well understood surprisingly little is known about the prosody of scopally ambiguous sentences cross-linguistically. The present research is the first attempt to fill this gap in one language, Russian. The paper discusses the results of a production experiment undertaken in the summer of 2008 in St. Petersburg, Russia with the purpose of obtaining normative prosodic data on doubly quantified sentences in Russian (N=7). Based on resent findings from psycholinguistic research (most notably, Fodor 2002, Kitagawa and Fodor 2006, Hirotani 2004) we hypothesized that the so-called "scope freezing" status of Russian (Ionin 2003) could be due to the prosody native speakers assign to such sentences. In this initial study we concentrated on sentences with two quantifier phrases, existential *kakoj-to* and universal *každyj* in subject and object position in simple SVO sentences. The target sentences were embedded into disambiguating contexts reflecting the intended surface and inverse scope interpretations to facilitate speakers' use of intended prosody (Baltazani 2002). Some of the disambiguating contexts are provided in (1a-d). Recorded target sentences were labeled in ToBI and analyzed within autosegmental-metrical framework (Pierrehumbert 1980).

Analysis of the data showed that speakers of Russian can indeed disambiguate scopally ambiguous sentences prosodically when the context is compatible with only one of the two possible scope meanings. The most notable disambiguation strategy found in prosodic realizations across subjects and sentences was prosodic phrasing of inverse scope realizations into one intermediate phrase (ip). Surface scope realizations, on the other hand, were phrased either as one or more intermediate phrases (2), as evidenced by pitch reset at the ip boundary and pre-boundary lengthening phenomena (Beckman and Pierrehumbert 1986, Beckman 1996, Gussenhoven and Rietveld 1992, among others). Furthermore, the prosodic realizations that were successfully disambiguated to reflect the two scope interpretations of the target sentence also differed in prosodic focusing and pitch placement strategy. Thus, for instance, while the quantificational determiner was often focused when the QP was in the subject position the same determiner was rarely focused when the QP was in object position.

The above mentioned results replicate some of those previously reported for other languages. Thus, Hirotani (2004) found that native speakers of Japanese were biased against assigning inverse scope interpretation when the two scope taking elements were separated by a Major Phrase[1] boundary. These findings are also consistent with the speakers' preference to construe the moved constituent within the smallest intonational phrase (Broderick 1996). Hirotani (2004) proposed that prosodic grouping into a single Major Phrase is enforced by a Scope Prosody Correspondence Constraint, according to which the scope of a term A should not extend beyond the Major Phrase (MaP) that A is contained in. Furthermore, our subjects' dispreference to focus the object but not the subject prosodically replicates the results from scope disambiguation of Greek (Baltazani 2002).

The two above mentioned prosodic disambiguation strategies can be unified and made sense of in terms of an alignment constraint, AlignL (Focus, MaP) (Truckenbrodt, 1999; and others). This constraint requires the left edge of a focused item to coincide with the left edge of a Major Phrase (=ip). Thus, focusing the object QP results in prosodic phrasing that biases against inverse scope due to the left edge of the object QP being aligned with the left edge of an intermediate phrase. This, as our own data and the data reported in Hirotani (2004) suggest, is infelicitous on an inverse scope interpretation. Such an account predicts that focusing the subject QP (as opposed to the object QP) is felicitous on an inverse scope reading (assuming the whole sentence is realized as one ip in focused subject sentences).

[1] Major Phrase = intermediate phrase

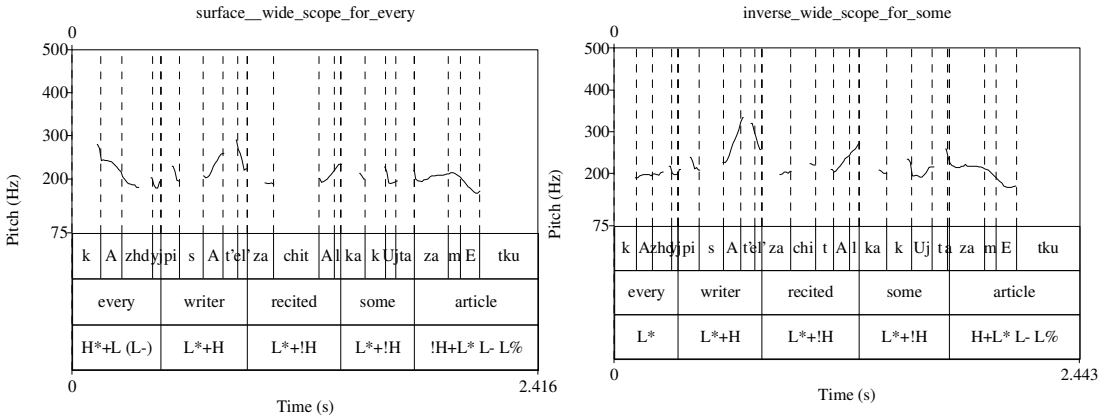
(1) a. **Some > every (surface scope):**
Last year several famous professors decided to change jobs. Surprisingly, all of them found themselves at the same place: **some department hired every professor.**

b. **Some > every (inverse scope):**
It's a shame that our department dissolved, we had terrific professors. This is exactly the reason why none of the professors were left without a job though, all of them found positions at other departments: **some department hired every professor.**

c. **Every > some (surface):**
At children's party presents were given out. The presents included dolls, toy cars and books with pictures. Somehow the books turned out to be the most popular present. Nobody chose the dolls but the books were all gone: **every child wanted some book**.

d. **Every > some (inverse):**
Today kids in the kindergarten almost had a fight. They were allowed to select a souvenir from among the available books and toys. Nobody could have imagined they will all want the same thing: **every child wanted some book.**

(2) Sample prosodic contours



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