Universal laziness of pronouns

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It is well-known that certain kinds of pronouns are difficult to analyze as just individual type variables. Famous examples include e-type pronouns and different kinds of pronouns of laziness, including paycheck pronouns.

In this talk, we propose that there is yet another kind of pronouns of laziness, namely, these are the pronouns that stand for universally quantified NPs like "every boy". We claim that such pronouns exist but have very limited distribution. The core examples for this work come from Russian, although we consider it more than likely that similar examples can be found in other languages.

Puzzle

Take the following scenario:

> There are two brothers, Sam and Jeremy, and two sisters, Mary and Claire, non-related to Sam and Jeremy. Sam and Jeremy are thinking about marrying Mary and Claire.

With this scenario, the sentence in (1) is grammatical and interpretable. Moreover, it is trivially true.

> (1) *(Pogovorim o Sème i Džeremi. /'Let's talk about Sam and Jeremy.')*
>
> | Esly | by | [každyj | iz | nix]$_1$ | ženils^{j}a | na | odnoj | iz | sestër, |
> |---|---|---|---|---|---|---|---|---|---|
> | if | would | every | from | them | married | on | one | from | sisters |
> | ego$_1$ | brat | stal | | by | ego$_1$ | svojakom. | | | |
> | his | brother | became | | would | his | brother-in-law | | | |
>
> 'If each of them married one of the sisters, his brother would become his brother-in-law.'

How could the seeming binding interpretation be obtained? There are several options that one could try, most of them giving infelicitous results.

a) Quantifier variable binding

Suppose that the QNP "každyj iz nix"/'every one of them' in (1) could directly bind the pronoun "ego"/'his'. For it to be possible, this QNP would have to undergo QR out of the conditional clause, which in itself seems improbable. But even it were a legitimate movement, it would result in a logical form with very different truth conditions. For example, it would predict that if Sam marries one of the sisters, and Jeremy doesn't, they would become brothers-in-law, which is not true.

b) Situation binding

Another possibility would be to say that binding in (1) is merely an illusion, the crucial mechanism for getting the interpretation being situation binding, as proposed in (Fox & Sauerland 1997) for universal quantifiers in generic contexts in English, see also (Sauerland to appear) for a similar analysis for negative and interrogative quantifiers in Greek. Crucially, the analysis involves quantification over minimal situations involving just a singleton set denoted by the restrictor of the universal quantifier, so that the meaning of *every NP* would be trivialized to *the NP*. The core English example is given in (2).

> (2) Her thesis year is the hardest for every student.   (Fox and Sauerland 1997)
>
> 'For every minimal situation *s*, [the student in s]'s thesis year is the hardest for [every student in s].'

The pronoun is interpreted as a definite description and the QP, essentially, too, since its restrictor in every minimal situation denotes just a singleton set.

The semantics of (2) then will be as shown in (3):

> (3) For every minimal situation *s* in which [the brother in *s*] marries one of the sisters, [the brother in *s*]'s brother becomes [the brother in *s*]'s brother-in-law.

Again, this analysis faces the same problem as the one sketched in (a).

Analysis

There might be a point missing. For (1), a minimal relevant situation couldn't involve just one individual — the context and the presupposition carried by the plural pronoun inside the QP would require a minimal situation to have both brothers in it. If so, the interpretation of (1) would be the following (pre-final version):

> (4) For every minimal situation s in which [each of the two brothers in s] marries one of the sisters, [each of the two brothers in s]'s brother becomes [each of the two brothers in s]'s brother-in-law.

But (4) is not the correct interpretation again, as *his* in *his brother-in-law* cannot be a GQ. The correct truth conditions for (1) should be as in (5) (final version):

> (5) For every minimal situation s in which [each of the two brothers in s] marries one of the sisters, [each of the two brothers in s, x]'s brother becomes x's brother-in-law.

So the first occurrence of a pronoun (*he*) in the consequent in (1) is interpreted as a GQ, and the second occurrence *(his)* is interpreted as a variable bound by it[1].

Theoretical consequences

We would like to claim that examples like (1) illustrate a phenomenon that might be called Quantifier Replacement. It is a rule by which a pronoun can be interpreted as a universal generalized quantifier (UGQ) that includes a situation variable. It may well be the same phenomenon is at stake in (2): the pronoun stands for a UGQ, which is in that case equivalent to a definite description. In (1), the effect of Quantifier Replacement is more transparent, as the universal quantifiers there quantify over sets of two elements, not singleton sets, as in (2).

The interpretation of pronouns as universal quantifiers strongly reminds of the transformation-era (much criticized) rule of Pronominalization. Such an operation couldn't possibly come for free. It is restricted in many ways, not all of them well understood. At the very least, the principle formulated in (6) holds:

> (6) If the pronoun could be interpreted as bound variable, it can't be interpreted as a universal quantifier.

The principle in (6) prevents the UQ interpretation of pronouns in sentences like (7):

> (7) Everybody$_1$ thinks he$_1$ is a genius.

Moreover, this interpretation is subject to some more (possibly language-specific) constraints on situation binding, which are also discussed in the talk.

References:

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Fox, D. and U. Sauerland. 1997. Illusive scope of universal quantifiers. In *Interfaces in Linguistic Theory, 149-176.* Lisbon.

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Sauerland U. to appear. On Greek Illusions: A semantic account of Alexopoulou's Generalization. In *Greek Syntax and Semantics.* Cambridge, MA: MITWPL.

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[1] We could assume the ban on binding from non-c-commanding position and situation semantics for the consequent in (1), as in (Büring 2004), but we believe it is irrelevant for our purposes.