

Ordinary property and identifying property wh-words: two *kakoj*-s in Russian

1. Determiners or adjectives? Russian words *kakoj-to* and *kakoj-nibud'* are indefinite pronouns formed by combining the wh-word *kakoj* ‘what/which’ and the series marker *-to* or *-nibud'*. *Kakoj-to* and *kakoj-nibud'* are traditionally analyzed as two parallels to English *some* additionally marked for scope possibilities of the NP they modify (Dahl 1970, Padučeva 1985, a.m.o.) Such analyses are based on interpretation facts from sentences like those in (1): NPs with *kakoj-to* can get the widest scope, NPs with *kakoj-nibud'* cannot. Meanings of the two on this analysis should be in the determiner type $\langle et, \langle et, t \rangle \rangle$, and their syntax should be that of determiners.

- (1) a. Každaja devočka uvidela **kakogo-to** kotenka.
 Every girl saw *kakoj-to* kitten.
- b. Každaja devočka uvidela **kakogo-nibud'** kotenka.
 Every girl saw *kakoj-nibud'* kitten.
- (2) a. ^{OK} for (1a): $\exists x: \text{kitten}(x) \wedge \forall y: \text{girl}(y) \rightarrow \text{saw}(x)(y)$
 b. ^{OK} for (1a,b): $\forall y: \text{girl}(y) \rightarrow \exists x: \text{kitten}(x) \wedge [\text{saw}(x)(y)]$

This difference with respect to the possibility to get the widest scope works for the whole *-to* and *-nibud'* series, not just for *kakoj* pronouns. However, in all other cases, it is the scope of the pronoun itself that is restricted, not of the phrase it modifies. To capture the scope constraint, Yanovich 2005 analyzes *-to* and *-nibud'* morphemes as choice-functional variables (Kratzer 1998, a.m.o.), *-to* being a simple choice function, and *-nibud'* – a choice function that is Skolemized for one argument. Such analysis allows to correctly derive the scope facts for the *-to* and *-nibud'* series, except for *kakoj-to/-nibud'*. Since the root of these pronouns is the adjective wh-word *kakoj* ‘which/what’, they are adjectives, not determiners, the interpretations for (1) should be the ones in (3), not in (2), and the scope constraint works for their own scope (that is, $\exists p$ in (3)), not for the scope of their NP ($\exists x$, which may have both possible scopes in (3)).

- (3) a. ^{OK} for (1a): $\exists p (\exists x) \forall y: \text{girl}(y) \rightarrow (\exists x) [\text{kitten}(x) \ \& \ p(x) \ \& \ \text{saw}(x)(y)]$.
 b. ^{OK} for (1a,b): $(\exists x) \forall y: \text{girl}(y) \rightarrow \exists p (\exists x) [\text{kitten}(x) \ \& \ p(x) \ \& \ \text{saw}(x)(y)]$.

Though some native Russian speakers agree that (1) may have the meanings in (3), all of them allow for the meanings in (2) too. Moreover, even for those accepting (1) meanings in (2) *and* in (3), the (2) meanings are much more natural and easy to get. Thus the determiner approach is more faithful to real speaker intuitions than the adjective approach.

But the adjective approach has a nice side to it too: first, the fact that some speakers do accept the meanings in (3) cannot be explained under any version of the determiner approach at all; secondly, the scope facts for *-to* and *-nibud'* pronouns are the same for *kakoj-to* and *kakoj-nibud'* and for the other pronouns in their series (Yanovich 2005). If we treat them separately, as we should do under the determiner approach, we will need to add some independent stipulation to capture *-to/-nibud'* distinction for *kakoj-to* and *kakoj-nibud'*.

Thus the adjective approach is better in all aspects except for generating the right interpretations for *kakoj-to/-nibud'* NPs. If we could eliminate this only shortcoming – the inconsistency with the basic facts – the Adj approach would win over the D approach.

2. *Kakoj-to* and *kakoj-nibud'* as adjectives: new evidence. Adjectives may occupy structural positions at different layers of the DP structure. Specifically, they may belong to the NP level or to the NumP level. In the case of “three bold lions” (below NumP adjective), “bold” predicates of atom individuals (that is, of individual lions); in “bold three lions” (above NumP adjective), the adjective predicates of a plural individual named by “three lions”. In a scenario when a group of three lions as a whole is bold, but every single lion of this group is timid when not with his comrades, this difference affects truth conditions.

Determiners sit in D^0 , and thus cannot be found below NumP: “the three lions” is OK, but “three the lions” is not. So we have a nice test for *kakoj-to/-nibud'*: can they be found below and above NumP, like adjectives, or only above NumP, like determiners?

Though Russian allows DP-internal scrambling, luckily for us, when a numeral is present, Russian marks modifiers above NumP with the case that matches the case of the whole DP (and the numeral), and modifiers below NP with Genitive, as N itself. (4) shows that *kakoj-to/-nibud'* may be present at both layers. Thus *kakoj-to/-nibud'* has the syntax of adjectives.

- (4) a. Kakije-to/-nibud' tri l'va.
 kakoj-to/-nibud'.NOM three.NOM lion.GEN
- b. Tri kakix-to/-nibud' l'va.
 three.NOM *kakoj-to/-nibud'*.GEN lion.GEN

3. Proposal: two *kakoj*-s. I propose that the *kakoj* root is ambiguous between *kakoj*₁ that ranges over simple properties, and *kakoj*₂ that ranges over identifying properties, that is, properties which are true of exactly one individual. As there are two *kakoj*-s, there are also two *kakoj-to*-s and two *kakoj-nibud'*-s, one formed with *kakoj*₁, and the other with *kakoj*₂. The meaning for *kakoj*₁-to is straightforward, and the meaning for *kakoj*₂-to is as follows:

- (5) IDENT =^{def} { $p_{\in\langle et \rangle}$: $\exists x p(x) \ \& \ (\neg \exists y p(y) \ \& \ x \neq y)$ }
 [[*kakoj*₂-to]] = $f(\text{IDENT})_{\in\langle et \rangle}$, f – a choice function.
 [[*kakoj*₂-to *mal'čik*]] = $\lambda x.[f(\text{IDENT})]_{\in\langle et \rangle}(x) \ \& \ \text{boy}(x)$, f – a choice function.

If we use *kakoj*₁-based pronouns, we straightforwardly get adjective meanings as in (3). As for *kakoj*₂ pronouns, they cannot help us to directly derive the determiner meanings in (2). But the meanings derived with them entail the readings in (2), and, I argue, that is the source of confusion for those who used the determiner approach.

A. If f is not Skolemized (an option possible only for *-to*), the wide-scope meaning is:

- (i) “ $(\exists x) \forall y: \text{girl}(y) \rightarrow (\exists x) (f(\text{IDENT}))(x) \ \& \ \text{kitten}(x) \ \& \ \text{saw}(x)(y)$ ”

Let us show that (i) entails (2a). For (2a) to be true, there should be one kitten that was seen by every girl. If (i) is true, then every girl saw some x which is a kitten and of which some property p chosen by f is true. But since $p \in \text{IDENT}$, it can be true of only one kitten, and every two kittens that were seen by different girls must be in fact the same one. Hence (i) entails (2a), no matter which scope $(\exists x)$ takes.

B. If f is Skolemized for one argument, and this argument is bound by “every girl” (the only option for *-nibud'*, and possible for *-to*), the resulting meaning will be:

- (ii) “ $(\exists x) \forall y: \text{girl}(y) \rightarrow (\exists x) (f(\text{IDENT})(y))(x) \ \& \ \text{kitten}(x) \ \& \ \text{saw}(x)(y)$ ”

As (i) entails (2a), (ii) entails (2b): for (2b) to be true, there should be some kitten or other for every girl to see. If (ii) is true, then for different girls f chooses different p -s that can be true of different kittens. However, if $(\exists x)$ would take the wide scope, then all kittens will have to be the same one. But if the speaker were to say that, she would not need to use *-nibud'*. Once this pragmatic reasoning is applied, (ii) entails (2b), but not stronger (2a).

References:

Dahl, Ö. (1970): Some notes on indefinites. *Language* 46, 33-41. **Kratzer, A. (1998):** Scope or pseudoscope? Are there wide scope indefinites? In Rothstein, S., ed., *Events and Grammar*, 163-196. **Padučeva, E.V. (1985):** Vyskazyvanije i ego sootnesennost' s dejstvitel'nost'u [*Utterance and its relation to reality*]. **Schlenker, P. (2004):** Scopal Independence: On Branching & Wide Scope Readings of Indefinites & Disjunctions. Ms. **Yanovich, I. (2005):** Choice-functional Series of Indefinites and Hamblin Semantics. *SALT XY Proceedings*.