

SCOPING NPIS OUT OF DPS

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We present new data showing that quantifiers can take scope over the DPs in which they surface. We identify some problems for two types of non-movement accounts of these data (see Sauerland 2005 for arguments that QR is possible out of DPs, *pace* Larson 1985 i.a.).

1. *Any*-DPs tend to be unacceptable in singular definite descriptions, even when these occur below negation, (1). This is attributed to singular definite descriptions constituting Strawson upward-entailing environments, in which NPIs are unacceptable (e.g., Lahiri 1998).

(1) * John didn't read the book that was written by any Russian author.

2. However, (2), a minimal variant of (1), is acceptable (imagine asserting (2) after going through a list of Russian authors paired with their salient books: John didn't read the book that Dostoyevsky wrote, John didn't read the book that Tolstoy wrote, etc.; note that asserting (1) in this setup does not improve its acceptability). The interpretation of (2) is in (3), where the existential quantifier appears in the immediate scope of negation (the sentence also presupposes that each Russian author wrote a single salient book). How do we get at this interpretation?

(2) John didn't read the book that any Russian author wrote.

(3) $\neg\exists x(x \text{ is a Russian author} \ \& \ \text{John read the book } x \text{ wrote})$

3. One possible analysis is that we are dealing with a special 'free-choice *any*' in (2), which is a universal quantifier (e.g., Dayal 1998). Sharvit (1999) argues that universal quantifiers can scope out of DPs by means of an appropriate typeshift (which is restricted to universal quantifiers). Following Ladusaw (1979), however, it can be shown that this analysis would in many cases yield incorrect interpretations (see Chierchia 2013; Crnić 2019 for independent issues). For example, (4a) has a stronger meaning, (4b), than the wide-scope reading of *every Russian author* (or its intermediate-scope reading for that matter), (4c): it is judged false in a situation in which there are five Russian authors, each of whom wrote a unique book, and that book was read by four different people (that is, twenty readers altogether).

(4) a. Fewer than five students read the book that any Russian author wrote.

b. $= \max_n \left(\exists x \left(x \text{ is a Russian author} \ \& \ n \text{ students read the book that } x \text{ wrote} \right) \right) < 5$

c. $\neq \forall x \left(x \text{ is a Russian author} \ \rightarrow \max_n (n \text{ students read the book that } x \text{ wrote}) < 5 \right)$

4. Another possible analysis is to take *any*-DP to be a choice function indefinite whose scope is determined by existential closure over the choice function higher in the clause; that is, that the sentence in (2) has the representation in (5) (see Schwarz 2011 for a review).

(5) neg [\exists_f [John read [the book_y that f(Russian author) wrote y]]]

In contrast to the first analysis, the meaning of (5) correctly corresponds to (3). However, two issues emerge. First, the contrast between (1) and (2) is unexpected: wide-scope construals of indefinites in non-subject positions, as in (1), are well attested. Second, the required intermediate readings, as in (3), appear not to be attested for other indefinites, (6) (which only allows for the widest/lowest-scope interpretations of the indefinite).

(6) John didn't read the book that a Russian author wrote.

5. In light of these issues, one may want to entertain a movement approach to the above data. Indeed, the meaning in (3) is derived straightforwardly on such approach; namely, it follows from the LF in (7), in which the NPI has QRed out of the DP. Furthermore, the subject/non-subject asymmetry between (1)/(2) could be attributed to independent restrictions on A'-movement (e.g., Bruening 2001; see also Sauerland 2000). Many non-trivial issues arise, however, including issues involving (i) movement out of purported islands and (ii) asymmetries in what quantifiers may undergo such movement (as exemplified by the contrast between NPIs vs. other indefinites in (2) vs. (6)). We hope to attend to these and other issues in the future.

(7) neg [[any Russian author]_x [John read the book_y [that x wrote y]]]

BIBLIOGRAPHY

- Bruening, Benjamin. 2001. QR obeys superiority: Frozen scope and ACD. *Linguistic Inquiry* 32:233–273.
- Chierchia, Gennaro. 2013. *Logic in grammar: Polarity, free choice, and intervention*. Oxford, England: Oxford University Press.
- Crnič, Luka. 2019. *Any: Logic, likelihood, and context*. Manuscript, The Hebrew University of Jerusalem.
- Dayal, Veneeta. 1998. *Any* as inherently modal. *Linguistics and Philosophy* 21:433–476.
- Ladusaw, William A. 1979. Polarity sensitivity as inherent scope relations. Ph.D. thesis, University of Texas at Austin, Austin, TX.
- Lahiri, Utpal. 1998. Focus and negative polarity in Hindi. *Natural Language Semantics* 6:57–123.
- Larson, Richard K. 1985. Quantifying into NP. Manuscript, Massachusetts Institute of Technology.
- Sauerland, Uli. 2000. Syntactic economy and Quantifier Raising. Manuscript, Universität Tübingen.
- Sauerland, Uli. 2005. DP is not a scope island. *Linguistic Inquiry* 36:303–314.
- Schwarz, Bernhard. 2011. Long distance indefinites and choice functions. *Language and Linguistics Compass* 5:880–897.
- Sharvit, Yael. 1999. Functional relative clauses. *Linguistics and Philosophy* 22:447–478.

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