A parametric comparison of two scalar particles in Russian

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Introduction: The lexical entry for *even* is standardly taken to be along the lines of (1) (Horn 1969, Karttunen and Peters 1979, Rooth 1992, Giannakidou 2007, Lahiri 1998, Guerzoni 2003):

(1) $||even||^{g,c} = \lambda C. \lambda p: \forall q [q \in C \land q \neq p] \rightarrow p > q. \lambda w: \exists q \in C\ q \neq p \land q(w) = 1. p(w) = 1$
        where $C \subseteq ||p||^F \land ||p||^O \in C \land \exists q\ q \neq p \land q \in C.$

In words: *even* has two presuppositions: (a) <u>Scalar:</u> its prejacent, p is stronger (e.g. less likely / more noteworthy) than every other alternative q in the contextually supplied set of focus alternatives C and (b) <u>Additive/existential</u> there is at least one alternative q in C, distinct from p which is true in w. It asserts that p is true in w. Debates on this account which stem from English-related data mainly revolve around the ordering of alternatives on the scale, the type of scale and the presence of an additive/existential presupposition. Typological research of languages with more than one *even*-like particle showed that key points of disagreement co-relate with parameters underlying the variation between such particles (Gust and van der Auwera 2011, Giannakidou 2007, Crnič 2012).

Goal: The focus of this research is a comparison of two Russian scalar particles: *daže*, the standard *even*-like particle (cf. Gust and van der Auwera 2011) and *voobšče* (Iatridou and Tatevosov 2016), which, as we show below, presents a more challenging behavior along three parameters of variation: additivity, ordering of the scale and type of alternatives.

Specific observations and analysis of the particles along three parameters of variation:

Additivity: The inherent additivity of English *even* (as captured in (1)) was doubted in e.g. Rullmann 1997, Wagner 2014, Greenberg 2016, due to its felicity with mutually exclusive as well as with entailed alternatives (cf. also Krifka (1991), von Stechow (1991)). In contrast, we claim that *daže* fits the entry in (1) better in being indeed inherently additive, based on its infelicity in mutually exclusive alternatives (3) and with entailed alternatives (4). On the other hand, we suggest that *voobšče* is, in fact, an exclusive particle, as it is banned in the presence of additional alternative being true (2) and fully grammatical with mutually exclusive as well entailed alternatives (3-4) (although in these sentences p is still taken to be stronger than its alternatives. Cf. other exclusive '*even*-like' particles like Japanese -*dake-demo* (Nakanishi 2006) or German *auch nur* (Guerzoni 2003)):

(2) *Bil priglasil Mèri i daže /#voobšče Džona. "Bill invited Mary and even John".*
(3) A*: Klèr dekan?   B: Net, ona voobšče/#daže prorektor.*
     A: *"Is Claire a dean?"* B: *"No, she is even a prorector".*
(4) *Džon professor. On voobšče/#daže [polnyj]F professor!*
     "John is a professor. He is even a [full]F professor".

Ordering on the scale: Examining the reasons behind reversal of the scalar presupposition of *even* from the prejacent being " strongest" (e.g. least likely) to "weakest" (e.g. most likely), as in (5) and (6), resulted in the emergence of two theories: the scope theory (Kartunnen and Peters 1979, Wilkinson 1996, Lahiri 1998, Guerzoni 2003) taking *even* to scope above the DE operator, and the lexicalist theory (Rooth 1985, von Stechow 1991, Giannakidou 2007, Crnič 2012), suggesting that in addition to the PPI *even* with the semantics in (1), there is also an NPI *even*, which presupposes that *p* is the weakest among the alternatives. Crucially, for both theories association of *even* with "weak" elements can only be done in the context of DE operators:

(5) Mary cannot solve even the easiest task.
(6) I doubt that John read even "Nuclear Physics"/"Moother Goose".

Turning now to Russian we can see that *daže* is 'well behaved'as it is only felicitous with weakest alternatives if in the presence of DE operators (7-8):
(7) *Džon daže pročital "Jadernuju fiziku"/#"Matušku Gusynju".*
   "John understands even "Nuclear Physics"/#"Moother Goose"."
(8) *Džon daže ne pročital "Matušku Gusynju"/#"Jadernuju fiziku".*
   "John does not understand even "Mother Goose"/#"Nuclear Physics"
In contrast, *voobšče* is surprising as it can felicitously modify both the weakest and the strongest alternative, crucially not only in DE contexts (10), but also in matrix sentences (9):
(9) *Džon voobšče pročital "Jadernuju fiziku"/"Matušku Gusynju".*
   "John read even "Nuclear Physics"/"Moother Goose"."
(10) *Ja somnevajus', čto Džon voobšče pročital "Jadernuju fiziku"/"Matušku Gusynju".*
    "I doubt that John read even "Nuclear Physics"/"Moother Goose"."
The absence of dependency between the DE context and the strength of the prejacent of *voobšče* is of particular significance, as it is the presence of this context that was reported to be the key reason behind the ambiguity of *even*-like operators. In fact, this behavior of *voobšče* makes it a super-flexible scalar particle, which can fluctuate between an *even*-like and a scalar *only*-like particle (indicating that p is weaker among the alternatives, cf. Beaver & Clark 2008). This flexibility is further evidenced in the comparison with *tolko,* the standard *only* in Russian (11):
 (11) a. *Mèri pročitala 2 stat'i. Džon pročital voobšče / #tolko 5.*
     "Mary read 2 articles. John read even 5" (*even*-like reading of *voobšče*)
    b. *Mèri pročitala 5 statej. Džon pročital voobšče / tol'ko 2.*
     "Mary read 5 articles. John read only 2" (*only*-like reading of *voobšče*)
Type of alternatives operated over: As observed in Iatridou and Tatevosov 2016 ("Our *even*") *voobšče,* unlike *daže,* can appear with discursive function, analyzed by them as an *even*-like operation over question, indicating that the prejacent question is the least likely to be asked (12).
(12) *A: Davaj vstretimsja použinat' u Oleany. B: Eto voobšče/#daže gde?*
    A: Let's meet at Oleana for dinner. Is that OK? B: Where is that even?
In addition, we observe that *voobšče,* but not *daže* can operate over "covert-based" degree-based and domain-based alternatives, similarly to what has been suggested for Hebrew *bixlal* (Greenberg 2016, cf. Tsirkin-Sadan 2015): Only *voobšče* appears in contexts like (13) and (14), where its use is justified due to (indirectly) assigning higher value to the standard of tallness in (13) and using a wider domain in (14) (cf. Kadmon & Landman 1993):
(13) *Jon vysokiy. Bill voobšče/#daže vysokiy.*
    John is tall. Bill is very tall/taller ("Tall even relative to a higher standard")
(14) *U nas net malen'koj kartoški. U nas voobšče/#daže net kartoški.*
    We don't have small potatoes.We don't have potatoes (at all)("Not even in a wider domain")
Significance and potential directions: The comparison of *daže* and *voobšče* in this paper is novel, and is important not only as a step towards a fuller understanding of the scalar particles system in Russian (including also the NPI *xot*), but in having potential wider contributions for e.g. the cross linguistic research of parametric variation of *even*-like and, more generally, scalar particles, the additive/exclusive distinction and of focus/alternative sensitivity. The challenging, *even*-like */ only*-like flexibility of *voobšče*, as well as its 'exclusivity', is particularly interesting, and can contribute to the development of a unified semantics for scalar particles in natural language (cf. Grubic 2012, 2015, Zimmermann 2015, Greenberg & Orenstein 2016, Liu 2016), and more generally to the research on the scalarity-polarity interface. *Voobšče*'s ability to operate over both 'discursive' and covert-based alternatives potentially supports a direction where in the

former case it operates over a covert speech act operator, and is thus a special case of the latter case (cf. Wiagand 2016 on English *just*).