## Verb-Stranding Verb Phrase Ellipsis in Russian: Evidence from Unpronounced Subjects

Rafael Abramovitz (MIT) - rafabr@mit.edu

**Introduction** In this paper, I contribute to the debate on the status of verb-stranding verb phrase ellipsis (VVPE) in Russian, arguing that a heretofore-unnoticed unpronounced subject construction is the result of VVPE, supporting the conclusions in Gribanova (2013, 2017), contra Erteschik Shir et. al. (2013) and Bailyn (2014). **Background** Russian attitude predicates require that the null subject of finite verbs embedded under them be bound by the matrix subject (1), as discussed in Avrutin and Babyonyshev (1997) et seq. That the null embedded subject (NES) is interpreted particularly as a bound variable is made clear when the matrix subject is a quantifier, as in (2), since the NES can only be interpreted as bound by that quantifier. Crucially, this is not simply a side-effect *pro*-drop; in Slovenian, also a pro-drop language, there is no obligatorily bound reading of embedded *pro*-dropped subjects (3).

- (1) Vanja skazal, čto spojët. V.NOM said.M.SG that sing.3SG.FUT 'Vanja<sub>i</sub> said that  $he_{i/*j}$  will sing.'
- (2) každyj student skazal, čto pridët na večerinku every.NOM student.NOM said.M.SG that come.3SG.FUT to party.ACC '[Every student]<sub>i</sub> said that (s) $he_{i/*i}$  would come to the party.'
- (3) Peter je rekel, da  $pro_{3sg}$  bo pel. Peter.NOM 3SG.PST say.M.SG that 3SG.FUT sing.M.SG 'Peter<sub>i</sub> said that  $he_{i/j}$  will sing.'

**Data** Unlike in (1) and (2), there are environments in which the NES is not bound by the matrix subject. The second sentence in (4) is string identical to that in (1), but here the silent embedded subject is bound by the the subject in the previous sentence. I'll call the construction exemplified in (4) the *nonlocal coreference construction* (NLCC). The reading found in (4) does not obtain by merely introducing the intended referent of the null pronoun (5). Furthermore, having two synonymous VPs does not allow this reading either (6).

- (4) Miša spojët? Vanja skazal, čto spojët. Misha.NOM sing.3SG.FUT Vanja.NOM say.M.SG.PST that sing.3SG.FUT 'Will Misha<sub>j</sub> sing? Vanja<sub>i</sub> said that  $he_{*i/j/*k}$  will sing.'
- (5) A Miša čto? # Vanja skazal, čto spojët.
  but M.NOM what V.NOM say.M.SG.PST that sing.3SG.FUT
  'What's the deal with Misha<sub>j</sub>? Vanja<sub>i</sub> said that he<sub>i/\*j</sub> will sing.'
- (6) Miša ispolnit pesnju? # Vanja skazal, čto spojët.
  M.NOM perform.3SG.FUT song.ACC V.NOM say.M.SG.PST that sing.3SG.FUT
  'Will Misha<sub>i</sub> perform a song? Vanja<sub>i</sub> said that he<sub>i/\*i</sub> will sing.'

This data shows that the verbs have to be identical in order to license this phenomenon, a standard property of VP ellipsis. Additionally, if the verb is transitive, the object must be silent for the NLCC reading to obtain (7a). When the object is overt and the subject is silent, only the local coreference reading is available (7b). If the verb is ditransitive, both the direct object and the indirect object must be silent. In fact, anything *v*P-internal must be silent in order to get nonlocal coreference, though high adverbs like *navernoje* 'probably' may be in the embedded clause (8).

- (7) a. Miša razbil vazu? Vanja skazal, čto razbil. M.NOM break.M.SG.PST vase.ACC V.NOM say.M.SG.PST that break.M.SG.PST 'Did Misha<sub>i</sub> break the vase? Vanja<sub>i</sub> said that  $he_{*i/i}$  broke the vase.'
  - b. Miša razbil vazu? Vanja skazal, čto razbil vazu. M.NOM break.M.SG.PST vase.ACC V.NOM say.M.SG.PST that break.M.SG.PST vase.ACC 'Did Misha<sub>j</sub> break the vase? Vanja<sub>i</sub> said that  $he_{\#_i/*_j}$  broke the vase.'

(8) Miša pridët na večerinku? Vanja skazal, čto navernoje pridët. M.NOM come.3SG.FUT to party.ACC V.NOM say.M.SG.PST that probably come.3SG.FUT

'Will Misha<sub>j</sub> come to the party? Vanja<sub>i</sub> said that  $he_{*i/j}$  will probably come.'

The licensing conditions on the NLCC are therefore that the verbs must be identical, that everything in the vP must be silent, but that material outside the vP, such as high adverbs, can be overt, all of which are consistent with an ellipsis account. An unexpected type of constraint this type of coreference is that the subject must be referential: quantifiers and indefinites are prohibited in this position. As (9b) shows, it is impossible to interpret the silent subject as the quantificational subject in (9a). This restriction also applies to negative indefinites like *nikto* 'no one', which must be pronounced in order to be interpreted in the embedded clause, and also to bare nouns when they are interpreted as indefinites.

- (9) a. Každyj student prinës nužnyje knigi v školu včera? each.NOM student.NOM bring.M.SG.PST necessary.ACC books.ACC to school.ACC yesterday 'Did each student bring the necessary books to school yesterday?
  - b. Učitel' skazal, čto prinës. teacher.NOM say.M.SG.PST that bring.M.SG.PST
    '#The teacher said that he brought it.'
    - \* 'The teacher said that each student did.'

**Analysis** The licensing conditions on the NLCC suggest that it is a type of ellipsis. Since this kind of ellipsis requires identity of the verbs despite their being pronounced, this is VVPE. Furthermore, since the subjects have to be identical and both must be unpronounced, I analyze the subject as remaining in [Spec,vP] in the elided clause, rather than moving to [Spec,TP], as in the antecedent. This, combined with a slightly less restrictive version of Takahashi and Fox (2005)'s definition of parallelism domains, accounts for the inability of non-referential subjects to appear in Russian VVPE clauses. I propose that a constituent PD may be a parallelism domain iff it is semantically identical to a constituent AC when AC is interpreted under an assignment function that gives the same interpretation to each trace in AC that it gets from its binder. Consider the structure of the TPs in the antecedent and in the embedded clause in the elided sentence in (4), found in (10a) and (10b), respectively. I assume that head movement is not relevant to this case of ellipsis licensing.

(10) a.  $[_{TP} \text{ Miša } \lambda 1 [ \text{ FUT } [_{AspP} \text{ PFV } [_{vP} 1 [ v [_{VP} \text{ sing } ] ] ] ] ]$ 

b.  $[_{TP} [ FUT [_{AspP} PFV [_{vP} Miša [ v [_{VP} sing ] ] ] ] ]$ 

If we take the assignment function  $[1 \rightarrow Miša]$  and use it to interpret the vP in (10a), we get the meaning [Miša sing], which is identical to the meaning of the vP in (10b). Since this assignment function gives the same interpretation to the trace 1 as the higher up lambda-abstractor in combination with the DP *Miša*, the vP in (10a) is a licit AC, making the vP in (10b) a licit parallelism domain. This allows vP ellipsis to take place. Compare this with a minimal pair with a quantificational subject from (9), schematized in (11a) and (11b).

- (11) a.  $[_{TP} [\text{Every student}] \lambda 1 [ \text{FUT} [_{AspP} \text{PFV} [_{vP} 1 [ v [_{vP} \text{sing}]]]]]$ 
  - b.  $[_{TP} [ FUT [_{AspP} PFV [_{vP} [Every student] [ v [_{VP} sing ] ] ] ] ]$

The meaning of the vP in (11b) is  $\forall x$  [student(x) $\rightarrow$  sing(x)], which no assignment function can cause [1 sing] to be interpreted as. Consequently, vP is not an acceptable parallelism domain, and the smallest parallelism domain is instead TP, as both TPs are semantically identical simpliciter. However, this causes a MaxElide problem, as Russian independently has sluicing, making vP ellipsis impossible if the parallelism domain is TP. This accounts for the asymmetry between referential and nonreferential subjects in Russian VVPE clauses.

**Conclusion** Based on novel data concerning the interpretation of silent subjects in embedded clauses, I argue in favor of Gribanova (2013)'s conclusion that Russian has VVPE. I also account for a curious ban on non-referential subjects in Russian VVPE clauses using a redefinition of the parallelism domain based on interpretation under assignment functions.

**Selected References** Vera Gribanova. Verb-stranding verb phrase ellipsis and the structure of the Russian verbal complex. *Natural Language and Linguistic Theory*, 31:91-136, 2013. Shoichi Takahashi and Danny Fox. MaxElide and the rebinding problem. in *Proceedings from SALT XV*, pp. 223-240