

Verb-Stranding Verb Phrase Ellipsis and the Structure of the Russian Verbal Complex*

Vera Gribanova

May 2, 2011

To appear in *Natural Language and Linguistic Theory*
(pre-publication version)

Abstract

This paper investigates novel evidence from Russian Verb-Stranding Verb Phrase Ellipsis (VVPE), and argues for its use as a probe into the syntactic structure of morphophonologically inseparable but morphosyntactically complex verbs. The first step is to distinguish internal argument drop from VVPE, because they appear identical on the surface. I present novel evidence that Russian internal argument drop is illicit in syntactic islands, while VVPE is licit. Once this bifurcation established, it allows us to explain previously obscured differences in the syntactic licensing of subject *vs.* internal argument drop in Russian. The second step uses the verb matching requirement on the stranded verb in Russian VVPE to establish which parts of the verbal complex originate inside the domain of ellipsis, and which parts originate outside. A surprising finding is that the verb matching properties of the Russian VVPE construction do not align with what has been demonstrated to hold of other languages in which VVPE is available. Unlike the strict matching requirement of Hebrew (Goldberg, 2005a,b) or Irish (McCloskey, to appear) VVPE, the matching requirement in Russian VVPE appears to be sensitive to discourse factors, at least for certain speakers. This last discovery results in a significant contribution to our understanding of the nature of the identity requirement in ellipsis licensing.

Keywords: verb phrase ellipsis & verb-stranding & Russian & verb movement & argument drop & clause structure

*This project has a long history, originating as part of my dissertation and evolving very significantly as a result of extensive input from some very generous people. I am deeply grateful to Jim McCloskey, Jorge Hankamer, Sandy Chung, and Maria Polinsky especially for their mentorship and extensive comments. I am thankful for the very constructive comments of Marcel den Dikken and two anonymous *NLLT* reviewers. Thanks to Pranav Anand, Arto Anttila, John Bailyn, Ryan Bennett, Željko Bošković, Adrian Brasoveanu, Jeroen van Craenenbroeck, Boris Harizanov, Robert Henderson, Ray Jackendoff, Olga Kagan, Paul Kiparsky, Ruth Kramer, Beth Levin, Jason Merchant, Line Mikkelsen, Justin Nuer, Jaye Padgett, David Pesetsky, Adam Morgan and the Polinsky Lab at Harvard University, Chris Potts, Kyle Rawlins, Ivan Sag, Erik Schoorlemmer, Anna Szabolcsi, Matt Tucker, Yakov Testelec, Michael Wagner, and audiences at UCSC, MIT, NYU, UC Berkeley, Stanford, McGill, LSA 2008/2010 and FASL 17 for their helpful suggestions and comments. I thank the many native Russian speakers who participated in the online judgment task, and especially Boris Glants, Alexander and Irina Gribanov, Olga Kagan, Flora and Anatoly Tomashevsky, and Alla Zeide for discussion of the Russian data. All errors are my own.

0 Introduction

This paper develops the empirical and theoretical basis for the use of a particular phenomenon — Verb-Stranding Verb Phrase Ellipsis (VVPE) — as a diagnostic for the position and morphosyntactic independence of functional morphology in Russian. The hypothesis explored here is that a significant part of the morphology of Russian finite verbs, though morphophonologically unified and inseparable, can be understood in syntactic terms as functional material merged in a high domain of the clause. A key assumption of this work is that word parts that are syntactic should be sensitive to syntactic phenomena; this paper seeks to justify that assumption by developing an understanding of one such piece of evidence — identity requirements on parts of the stranded verb in Verb-Stranding Verb Phrase Ellipsis (VVPE) — that can help to detect the syntactic structure of functional morphology. In the course of the discussion, I defend the position that certain morphological pieces of verbs are syntactically independent units, and that those components are spread across numerous domains in syntactic space in a way that can be probed via the independent syntactic process of VVPE.

Two separate strands of literature — one on verb movement (Bailyn, 1995b, *inter alia*) and one on superlexical prefixation (Svenonius, 2004a, 2008; Fowler, 1994; Babko-Malaya, 2003, *inter alia*) — suggest that Russian verbs move to a position between T and vP in canonical clauses, and that this position is likely to be an Asp projection. Though the connection between these two strands of research has not yet been directly explored, both areas of investigation relate directly to, and rely on, our understanding of the structure of the Russian verbal complex. What is ultimately at stake in these investigations is a central issue in linguistic theory: what are the principles that govern how clauses are built, and what is the range of possible variation in how those principles do their work in particular languages?

The results of the aforementioned investigations provide us with a picture of the functional architecture of the Russian clause (and such a picture is fleshed out in §1); but without further corroboration, this picture remains a preliminary one. The present investigation establishes its accuracy, on the basis of evidence from what I will ultimately conclude is a previously un-noticed instance of VVPE in Russian (1).

- (1) Èto daže esli ja vody v rot naberu?
That even if I water.GEN in mouth collect.1SG.FUT

‘Is that even if I fill my mouth with water?’¹

Daže esli i naberëte. Da ved’ ne naberëte, ne naberëte že!
Even if and collect. Yes but NEG collect, NEG collect EMPH

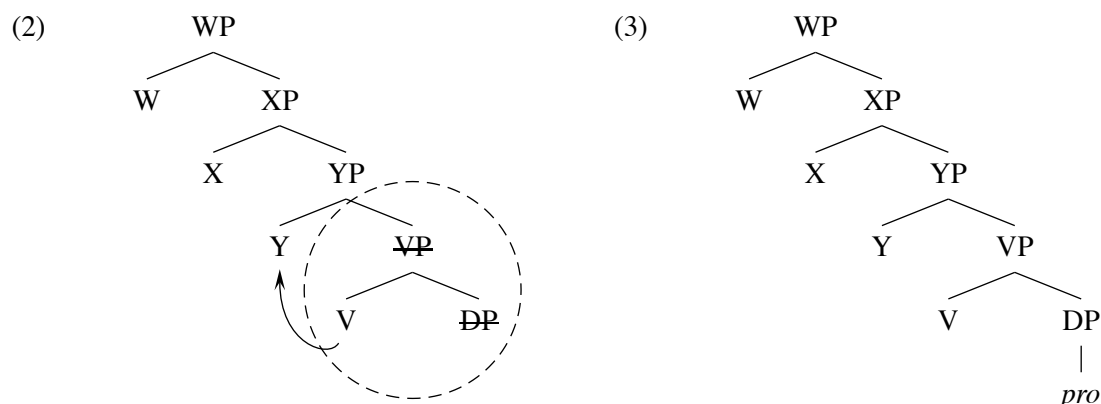
‘Even if you fill (it with water). But you won’t fill (it with water), you won’t fill (it with water)!’
(Ju. O. Dombrovskij. *Fakul’tet nenužnyx veščej*, čast’ 2, 1978)²

Analogous constructions have been explored for Irish, Hebrew, Ndenduele, Portuguese (McCloskey, 1991; Doron, 1991, 1999; Goldberg, 2002, 2005a; Sherman (Ussishkin), 1998; Ngonyani, 1996; Martins, 1994, 2000), and more controversially for several of the East Asian languages (Saito, 1985; Kim, 1999; Otani and

¹The idiomatic meaning of ‘fill one’s mouth with water’ is ‘keep silent’.

²All cited examples were found via corpus searches of the Russian National Corpus (<http://www.ruscorpora.ru/search-main.html>), unless otherwise noted.

Whitman, 1991; Hoji, 1998), but never Russian. Preliminarily, there are two ways to characterize the gap in the second and third sentences of (1). The first involves movement of the verb to a position outside the ellipsis domain, in conjunction with ellipsis of a VP-like constituent (i.e., ellipsis of the verb's arguments and modifiers but not the verb itself) (2). Alternatively, (1) could be an instance of argument drop: the presence of a 'null' pronoun which is underlyingly present but not pronounced (3).³



Here I argue that both strategies are available to speakers of the language, and that they can be differentiated in specific syntactic environments. I further illustrate that identity conditions on the stranded verb in such constructions, when probed carefully, can be understood to support the preliminary conclusions — reached via the unification of the two previously mentioned strands of research — about the distribution of the parts of the verb across syntactic space. Before this can be demonstrated, however, the empirical properties of VVPE must be carefully explored in order to *a)* distinguish the construction from argument drop, and *b)* understand the verb-matching properties of the construction. This investigation, in turn, opens the door to two independently interesting research paths: the argument drop data lead to conclusions about syntactic restrictions on Russian argument drop, and the verb-matching investigation sheds light on the nature of ellipsis licensing conditions. Though both of these topics will be discussed in some detail, the primary focus of the discussion will be the consequences of the investigation for Russian clause and verbal structure, and the development of our understanding of VVPE as a diagnostic for that structure.

VPE has been used as a diagnostic for English VP constituency in nearly every introductory generative syntax course, a strategy I believe was first used publicly by Ross (1969). Ellipsis leaves only remnants that are not inside the VP (4), providing a straightforward way to distinguish the position of modals and the infinitival *to* from the position of the main verb in English.

- (4)
- a. Angela wasn't ready to compete in the Triathlon, but Sadie really wanted to [_{VP} ~~compete in the Triathlon~~].
 - b. Angela couldn't compete in the Triathlon, but you really should [_{VP} ~~compete in the Triathlon~~].

Thus, although the language-specific details are different for Russian, the idea that we can identify which

³An alternative analysis of such constructions is NP ellipsis, as described by Kim (1999). I do not consider that possibility in any detail here, but the strong requirement for verb matching, modulo contrastive focus effects, described in §2.2.1, should serve as evidence against such an approach just as it serves for evidence against an argument drop approach.

parts of the verbal complex originate inside the VP via VP ellipsis is not a new one. The strategy pursued in this paper leverages a version of this test: it is shown that though the Russian verb moves via head movement to a position outside the ellipsis site, there is still a subtle way to test which parts of the verb originated inside the ellipsis domain. Because ellipsis is subject to licensing conditions which impose identity requirements — the nature of which we will discuss in some detail in §2.2.1 — on the elided material, probing identity requirements on the verbal complex in examples like (1) can help expose the parts of the verbal complex that originated inside the ellipsis site. Parts of the verbal complex that are subject to no identity requirement can be understood to have originated in higher domains, thus confirming their status as functional projections above the VP/vP domain.

The primary goal of this paper is to arrive at a thorough and accurate understanding of VVPE as a test for functional structure. As a first step in this process, I discuss the preliminary syntactic picture that arises from unifying the current strands of research on Russian verb movement and prefixation (§1), with the aim of establishing the need for independent syntactic evidence that can buttress this proposed structure. I then turn to exploring the usefulness of VVPE as a diagnostic for functional structure (§2). I produce novel evidence that helps to distinguish between the two analyses sketched in (2) and (3) (§2.1). Distinguishing between these two possible analyses also leads to novel observations about a previously un-noticed asymmetry in the syntactic licensing conditions that hold for object *vs.* subject drop (§2.1.3). §2.2 explores the evidence relating to the matching requirement for parts of the verbal complex, and discusses in some detail the nature of that requirement. Once VVPE is established as a legitimate and reliable test for functional structure, I apply it to the case of Lexical and Superlexical prefixation in §2.3, and then in §3 to other pieces of the Russian verbal complex, such as the Secondary Imperfective suffix (2IMPF) and the Semelfactive suffix (*nu*).

1 A Preliminary Picture

Preliminarily, work on verb movement in Russian suggests that the verb moves, but not as high as T (Bailyn, 1995b). The identity of the projection to which “short verb movement” takes place has been much debated, but this has typically been perceived as a question of labeling and thus not crucial to an analysis. Bringing in the discussion on aspectual prefixation, however, sheds new light on this question, and makes it a much more relevant one. In this domain, it has been independently proposed that a subclass of aspectual prefixes, dubbed superlexical prefixes (SP), are merged high, into an Asp projection that is located between T and vP (Svenonius, 2004a). A further proposal, which will be defended here, is that the verb undergoes head movement to this projection, to ensure surface adjacency to the superlexical prefix (Babko-Malaya, 2003; Fowler, 1994). The tentative union of these proposals, then, involves a structure like (5).

- (5) [T [Asp [v [V ...]]]]

Both above-mentioned strands of research point to the same conclusion: the structure of the Russian verbal complex involves at least one functional projection between T and vP, and there is head-movement of the verb to that position. Below I briefly review the evidence that led to these conclusions; later sections of this paper will be devoted to demonstrating that evidence from VVPE, and in particular the identity conditions on the stranded verb, further confirm both these conclusions.

1.1 Verb Movement

Early generative analyses of Russian syntax (King, 1995; Bailyn, 1995a,b) convincingly established that there is movement of the verb in Russian, though there has been disagreement about the landing site of this purported movement. King (1995), for example, claimed early on that the verb moved to T, but this was subsequently refuted by Bailyn (1995b), who demonstrated that the traditional tests for verb movement (Pollock, 1989) indicate a lower landing site. For example, neither low adverbs (6) nor floating quantifiers (7) intervene between the verb and object, indicating that the finite verb is positioned relatively low, probably below T.⁴

- (6) Ivan často ubiraet (*často) komnatu.
Ivan.NOM often cleans.3SG (*often) room.ACC
'Ivan often cleans his room.'

- (7) My vse čitaem (*vse) gazetu.
We.NOM all read.1PL (*all) newspaper.ACC
'We all read the newspaper.'

Two pieces of evidence suggest that the verb still undergoes movement, although to a lower position than T. The first, to be discussed in §1.3, is that, assuming the parts of the verb are syntactically independent, head movement would unite these pieces so that the verb can be pronounced as a morphophonological unit. The second is found in examples like (8), in which an auxiliary occupies T and the verb has undergone across-the-board movement out of the VP/vP domain (Bailyn, 1995b):⁵

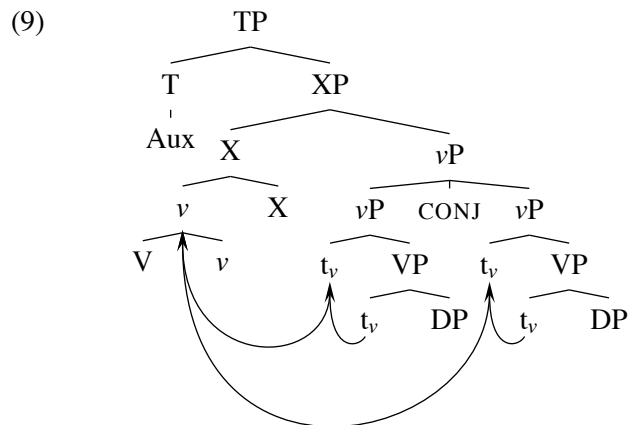
- (8) Petja budet priglašat' Mašu v muzej segodnja, a Dinu v kino
Petja.NOM will.3SG invite.INF Maša.ACC in museum today CONJ Dina.ACC in movie
zavtra.
tomorrow
'Peter will invite Masha to the museum today, and Dina to a movie tomorrow.'

If, as standardly assumed, Russian auxiliaries are housed in T, then the verb in such constructions moves to a position X between T and vP (9).⁶

⁴The traditional negation test is probably irrelevant for Russian, given that negation is always proclitic on the tensed auxiliary or verb.

⁵An alternative analysis for (8) would involve no movement of the verb, instead applying gapping (that is, deletion of an identical verb in the second conjunct of a coordinate structure). For arguments against this possibility, see Bailyn 1995b and Bowers 1993.

⁶Bailyn's (1995) paper takes the coordination to be at the VP level, but this is because the paper predates the adoption of vP in the functional layer of the clause. Following Svenonius 2004b, I assume tentatively that v hosts the verb's theme vowel, which determines numerous properties of the verb (among them argument structure, allomorphic selection, etc.). If this is the case, then coordination here takes place by hypothesis at the vP level.



The point for our current purposes is that this evidence points to movement having taken place to a position just below T. Given this state of affairs, a natural next step is to explore further what the mystery projection in the above structure could be. It so happens that the literature on prefixation provides us with an independently developed answer to this question.

1.2 Aspectual Prefixation

There is substantial evidence to suggest that Russian prefixes fall into two semantically and syntactically distinct, but homophonous subclasses: lexical (LP) and superlexical (SP) (Isačenko, 1960; Svenonius, 2004a, 2008; Babko-Malaya, 2003, *inter alia*). Though the focus of the present work is mainly on SP, the discussion depends on a basic understanding of the distinguishing characteristics of the two classes.⁷ The empirical basis for this subdivision is important because it leads to specific claims about the syntax of Russian clauses which I demonstrate are supported by the VVPE evidence presented in later sections.

Several notational conventions should be made clear before moving forward. I follow Svenonius (2004b) in implementing different glossing conventions for the two subclasses in example sentences. I gloss SP by using the small caps abbreviation of the temporal or adverbial meaning they contribute.⁸ LP are glossed using the prepositional counterpart. This is not intended to imply that this is what LP mean, since their meaning is computed always in combination with the verb stem, often in unpredictable ways.

Other than the two prefixal subgroups, a number of basic components of Russian verbal morphology deserve mention here. Breaking down the Russian verb from left to right, we might see:

1. One or more of the aforementioned prefixes.
2. The root: the core of the verb's meaning (assume this is hosted in V).

⁷What I present here is a summary of the properties I find to be most relevant to understanding the difference between the two classes for the purposes of the present discussion; the exposition is by no means exhaustive. I refer the reader to Isačenko 1960, Babko-Malaya 2003, Romanova 2006, Tatevosov 2007 and Svenonius 2004a, *inter alia*, for more detailed discussions.

⁸SP abbreviations found in the Russian glosses are as follows: ATTN Attenuative; CMLT Cumulative; DMLT Delimitative; DSTR Distributive; EXCS Excessive; INCP Inceptive; RPET Repetitive; TRMN Terminative.

3. The secondary imperfective suffix 2IMPF, which makes perfectives imperfective, or the suffix *nu*, which is perfectivizing (these are in complementary distribution.)
4. The conjugational, or theme, vowel (THEME). This is an umbrella term for the verbalizing suffix, which can be more complex than one vowel. This suffix determines the verb's argument structure and allomorphic selection. We assume, following Svenonius (2004b), that THEME is hosted in *v*.
5. Inflectional information, which is synthetic and encodes gender, person, and tense features.

Leaving some of the above verbal morphology for later discussion, we turn now to the empirical basis of the subdivision between SP and LP. Though members of each prefix group can be homophonous and all of the prefixes have the effect of rendering the verbal stem perfective, the two subgroups are distinct along a number of parameters. For example, SP are said to contribute predictable, adverbial or quantificational meanings (10), while LP contribute idiosyncratic meanings which can be spatial or resultative (11). The meaning of the perfective verb derived by the addition of a lexical prefix is sometimes only very weakly related to the meaning of the underived imperfective base stem.

- | | |
|---|---|
| (10) a. <i>perekidat'</i>
DSTR-throw.INF
'throw one by one'
b. <i>zaplavat'</i>
INCP-swim.INF
'begin swimming'
c. <i>nabrat'</i>
CMLT-take.INF
'take (enough of something)'
d. <i>otygrat'</i>
TRMN-play.INF
'play (to the end)' | (11) a. <i>peredat'</i>
<i>across-give</i> .INF
'pass (sth. to someone else)'
b. <i>zakusit'</i>
<i>behind-bite</i> .INF
'to snack after drinking'
c. <i>najti</i>
<i>on-go</i> .INF
'find'
d. <i>otpečatat'</i>
<i>away-type</i> .INF
'print' |
|---|---|

Another frequently cited differentiator between LP and SP is their (in-)compatibility with the secondary imperfective suffix (2IMPF) (frequently realized as [-*iva*-]), which turns perfective stems into imperfective stems. A sketch of 2IMPF formation is presented in (12); notice that adding 2IMPF to an imperfective stem (as in the ungrammatical example below) yields an unacceptable form — that is, only perfective forms can license 2IMPF.

- (12) *kolot'* (IMPF) → *nakolot'* (PFV) → *nakalyvat'* (IMPF)
 but: **kalyvat'*

Broadly, SP are incompatible with secondary imperfectivization, while LP are compatible with it.

- (13) a. On *nakolol* *orexov*.
 He CMLT-cracked.SG.M nuts.GEN
 'He cracked enough nuts.'

- b. *On nakalyval orexov.
He CMLT-cracked.2IMPF.SG.M nuts.GEN
- c. On nakalyval klientov.
He *on*-cracked.2IMPF.SG.M clients.ACC
'He was cheating the clients.' (idiomatic)
(Svenonius, 2004a)

2IMPF is compatible only with the instance of *na-* above that also yields an idiomatic reading of the verb (13c), indicating that LP license 2IMPF, but SP do not.

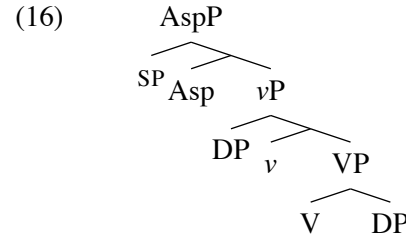
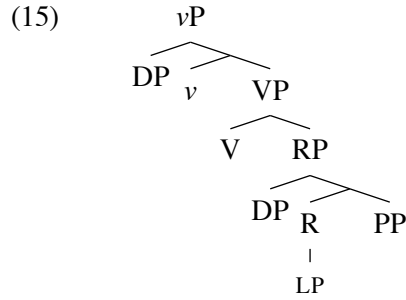
Where multiple prefixes attach to the verb stem, LP always occur closer to the stem than SP (14a). Different members of the SP class can co-occur, albeit with ordering restrictions (14b). Members of the LP class cannot co-occur under any circumstances (14c); they can occupy no more than one morphosyntactic 'slot' in the verbal complex.

- (14) a. Vasja na-za-bival / *za-na-bival gvozdej v stenu.
Vasja CMLT-*behind*-hit.2IMPF.SG.M / *behind*-CMLT-hit.2IMPF.SG.M nails.GEN in wall.ACC
'Vasja hammered a bunch of nails into the wall.'
- b. Vasja po-na-za-bival gvozdej v stenu.
Vasja DISTR-CMLT-*behind*-hit.2IMPF.SG.M nails.GEN in wall.ACC
'Vasja hammered a lot of nails into the wall here and there.'
- c. *Vasja za-v-bival gvozdi/gvozdej v stenu.
Vasja *behind-in*-hit.2IMPF.SG.M nails.ACC/nails.GEN in wall.ACC
(Tatevosov, 2007)

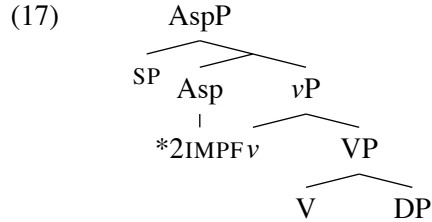
As I discuss below (§1.4), these empirical generalizations (and the many others not discussed here) are neither exceptionless nor flawless. They do, however, serve as a sufficient starting point for further exploration of these two putative subclasses and their place in the structure of the Russian clause.

1.3 Syntactic Structure and Composition

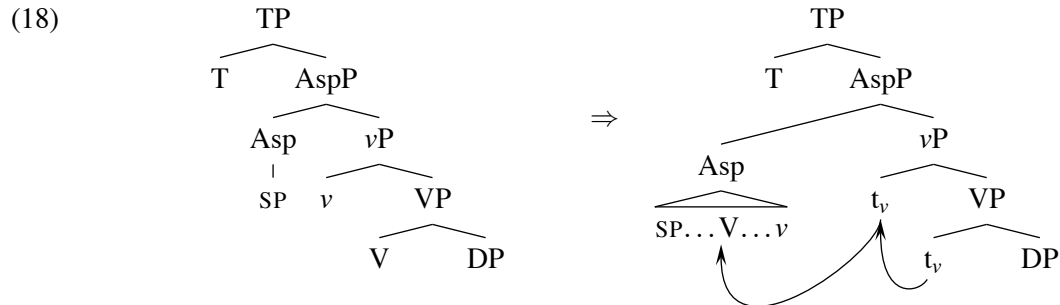
A prevalent approach to distinguishing between the two prefixal classes (Svenonius, 2004a,b, *et seq.*) accommodates their differing characteristics structurally. This family of analyses assumes a standard Minimalist conception of how verbal projections are composed, with a transparent correspondence between syntactic and morphological structure. The analysis of LP is more varied, though the consensus appears to be that they attach within vP. For the sake of concreteness I adopt a relatively early proposal, in which LP are R[esultative] heads of small clauses (15), parallel to proposals for the German verb-particle construction (Ramchand and Svenonius, 2002). SP attach above vP (16).



This structural distinction is meant to account for the varying properties of the two groups. For example, since idiomatic meanings are conjectured to arise within the vP domain (Marantz, 1984, 1997), non-compositional meanings of LP-verb combinations are accounted for by the structure in (15). If we assume, following Svenonius 2004a, that the imperfective suffix is realized in Asp, we can also account for the ban on secondary imperfectivization for SP. 2IMPF can attach only to a perfective stem, and SP merges too late in the derivation to be of help, as demonstrated in (17).



Throughout the development of this line of analysis, there have been various formulations of the morphosyntactic methods by which both SP and LP attain their final status as left-adjacent to the verbal root, and inseparable.⁹ A commonality to these approaches is that SP is externally merged into a projection Asp, between vP and T. The proposal I adopt here diverges slightly from that of Svenonius (2004a), in that it takes 2IMPF, LP and SP to be syntactic heads which attain their preverbal positions via head movement (Fowler, 1994; Babko-Malaya, 2003; Rojina, 2004; Dimitrova-Vulchanova, 1999); in a superlexically prefixed verb, this will result in a structure like (18).



⁹One possibility, illustrated in (16) and (17), takes prefixes to instantiate phrasal units, with a corresponding change in movement possibilities (i.e. phrasal movement) (Svenonius, 2008). I reject this proposal on the basis of the fact that, among other difficulties, a phrasal account would predict word-like or phrase-like phonology for prefixes. In fact, prefixes exhibit phonological characteristics of word-internal elements: for example, they are not subject to word-final devoicing. For more thorough argumentation in favor of the conclusion that the prefixes instantiate syntactic heads, see Tatevosov 2007.

As for the 2IMPF suffix, it can be accommodated by a distinct Asp head, merged directly below the head that hosts SP; this allows us to capture the fact that the two affixes generally do not co-occur, and provides a straightforward way of achieving morphophonological unity of the verbal complex.¹⁰

At this point we can notice the similarity of (18) to (9); on this view, the mystery projection to which “short verb movement” takes place is Asp, located between *v*P and T. Preliminarily, then, it appears that the research on SP is consistent with the conclusions independently reached by Bailyn’s (1995b) work.

1.4 The Need for a Syntactic Diagnostic

It should be noted that the putative subdivision between SP and LP has been subject to serious scrutiny. There are two broad problems with this subdivision, both relevant to the current discussion. First, the generalizations upon which this subdivision is based are not without exception. One such exception is that while most SP do not license 2IMPF formation, a few do: for example, repetitive (RPET) *pere-* has a temporal quantizing meaning (roughly equivalent to English *re-*), suggesting that it is SP. However, it still licenses 2IMPF in examples like *perepisyyvat*, ‘rewrite.IMPF’ (Svenonius, 2004b).¹¹ Similar objections have been raised for several of the relevant diagnostics (Biskup, 2007; Borik, 2009), leading a few researchers to conclude that the distinction does not hold up under scrutiny (Biskup, 2007). Indeed, the fact that prefixes are always pronounced as part of a word, and the fact that there might be one unit of sound that acts as both a SP and a LP, makes this distinction murkier than might be desired.

Relatedly, as noted by Borik (2009), the most convincing differences between the two classes are semantic, rather than syntactic. These semantic differences between the two classes are realized in the syntax under the assumption that the relation between the two modules is transparent. It is largely semantic evidence that leads to the hypothesis that SP should be introduced high in the functional structure of the clause, while LP should be introduced much lower, below *v*P. Obtaining more independent syntactic evidence of this high/low dichotomy, then, is crucial in supporting the overall proposal. In the following sections, I present evidence from VVPE which is intended to serve exactly this function, both for this particular set of data, and for other morphological parts of the Russian verbal complex.

2 V-Stranding VPE: Diagnosing Functional Structure

In this section, I develop an understanding of Russian VVPE which helps to independently verify the preliminary conclusions reached on the basis of the discussion in §1. While the investigation of VVPE is independently interesting and leads to research consequences for issues like argument drop and ellipsis licensing conditions, a broad goal in exploring this phenomenon is to be able to use it as a diagnostic for functional structure, both for Russian and other languages.

¹⁰As pointed out by Marcel den Dikken, 2IMPF and SP instantiate distinct types of aspect. 2IMPF contribute grammatical (perfective) aspect, while SP contribute adverbial meanings, and have been understood as potential contributors of *Aktionsart* (Isačenko, 1960). This difference in function supports the idea, promoted here (18), that the two affixes should be represented via distinct functional heads, rather than as a head (2IMPF) and a specifier (SP) of the same projection, as suggested by Svenonius (2004a) and illustrated in (16).

¹¹Though see Tatevosov 2007 for an explanation as to why such cases do not destroy the overall generalization.

VVPE has been analyzed as verb movement to T, followed by VP ellipsis (McCloskey, 1991; Goldberg, 2005a). Given the lack of verb movement to T in Russian, examples like (19) would seem to present a problem.¹²

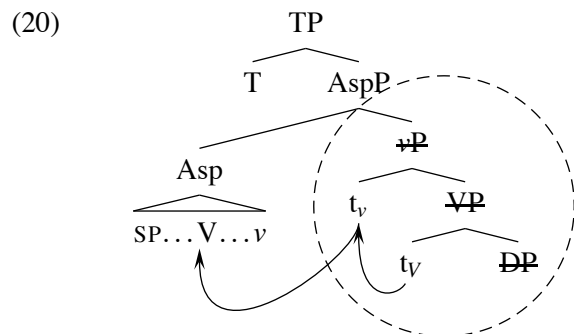
- (19) Ty poznamomil Mašu s Petej?
 You.NOM introduce.SG.M Maša.ACC with Peter.INSTR
 ‘Did you introduce Masha to Peter?’
- Konečno poznamomil!
 Of-course introduce.SG.M
 ‘Of course I introduced (Masha to Peter)!’

Evidence from §1.1 suggests that V does not move as far as T in Russian; but Russian also appears to exhibit behavior associated with V to T movement in other languages (VVPE). The existence of a projection between T and vP, independently required for the analysis of SP, resolves this apparent contradiction. If there is indeed an Asp projection to which the various components of the verbal complex move in Russian, we predict V-stranding to be possible, assuming that in such cases vP is the target of the ellipsis operation.

VVPE connects directly to our investigation of the functional structure of the verbal complex. If the conclusions reached so far are dependable, then we should be able to detect the presence of a constituent which is:

- maximal;
- the complement of Asp;
- contains the verbal root, the verbalizer and verbal arguments.

Since we might expect that phrasal complements of closed-class heads are subject to ellipsis, it is profitable to look for such an ellipsis process in Russian (elision of the vP complement of Asp).



¹²In (19) and many following examples, the reader will notice that the subject in the clause with the stranded verb is absent. Exploring this very interesting property further lies beyond the scope of the present paper. On the face of it, this effect seems to be discourse-conditioned, since the subject tends to be absent unless it differs from the antecedent subject (see McShane 2005 for a discussion of many of the relevant discourse conditions).

A central hypothesis of the present analysis is that what we call an inflected verb is syntactically complex, with different sub-parts distributed across different locations in syntactic space. Ellipsis of the circled constituent in (20) would result in the surface effect of all verbal arguments and adjuncts (everything that is merged in the domain of νP) being omitted; the inflected verb, however, should ‘survive’, having moved out of the ellipsis site.

Looking ahead a bit to the discussion in §2.2, we should find a verbal matching requirement in Russian instantiations of (20), following what we know from investigations of this construction in Irish and Hebrew (McCloskey, 1991, to appear; Goldberg, 2005a). If the root and verbalizer originate inside the ellipsis site, we expect that they would be relevant for the calculation of the relation of identity or given-ness relevant for the licensing of ellipsis.¹³ The details of this identity relation will depend on what exactly one assumes about the nature of head movement, the nature of verbal traces and how all of those interact with the licensing condition on ellipsis, but the basic expectation is clear enough. For example, if the condition(s) that license ellipsis can refer only to what is located within that ellipsis site, then only material merged inside the ellipsis site should be relevant; material merged outside the ellipsis site should not be relevant in the same way. There is good evidence (Rooth, 1992a; Merchant, 2001) that semantic identity for ellipsis is calculated modulo focus; in one implementation, the ordinary semantic value of the elided constituent must be a member of the focus value of the antecedent and vice versa. We therefore might expect that focusing the verb would have an effect on the matching requirement, though this question has thus far not been explored.

In what follows, I demonstrate that there are subtle differences between instances of VVPE and object drop in Russian (§2.1). Once this distinction is established, it also reveals a hitherto obscured subject-object asymmetry in Russian argument drop which has consequences for our understanding of the nature of different types of unpronounced material (2.1.3). I then explore the identity relation between the stranded and antecedent verb in VVPE (§2.2), using this relation to illuminate which components of the Russian verbal complex are in fact introduced outside the domain of ellipsis (that is, high in the clausal spine) (§2.3). It is this evidence that lends support to the syntactic distinction between SP and LP, and for the bigger idea that inflected verbs are in fact syntactically complex.

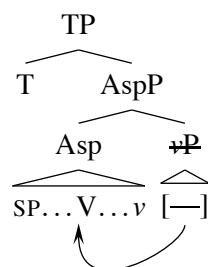
2.1 V-Stranding VPE vs. Argument Drop

We have been discussing the potential consequences of the construction in (19) as if it were clear that it is uncontroversially a case of VVPE. In fact, as was briefly mentioned in the introduction to this paper, there is another way of thinking about (19), namely as an instance of argument drop. In this case, (19) could be understood as involving the non-realization of a pronoun; the situation is further clouded by the fact that argument drop is clearly an operative phenomenon in the language under the right discourse conditions,¹⁴ independent of anything we might say about VVPE. In §0 I sketched an abstract version of these two possibilities, instantiated as (2)–(3). Below, I illustrate those same two analytical possibilities, but now with the details of the discussion in §1 reflected.

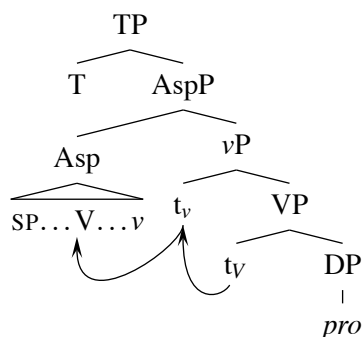
¹³See later sections (§2.2.2) for elaboration on the nature of this requirement.

¹⁴See Franks 1995 for more details.

(21) ELLIPSIS:



(22) ARGUMENT DROP:



Given the subtlety of the distinction, it is necessary to show that examples like (23–24) are not just instances of argument drop of internal arguments (object DPs, indirect object DPs, PPs). At this juncture it is worth pointing out the use of a notational convention in these and following examples. Where there is missing material, this is noted with an underline for every missing constituent, both in the Russian example and its gloss. This is meant to be an analysis-neutral convention, adopted only to make the parsing of these examples slightly easier for the reader.

(23) A novyj god dal'she prošel, v drugoj časovoj pojas.
'And the new year progressed further, into a different time zone.'

I nikto ničego ne počuvstvoval, prosto vse obmnimajutsja, smejujsja,
and no.one.NOM nothing.ACC NEG felt.SG just everyone hug.3PL laugh.3PL
a ne počuvstvovali ____.
CONJ NEG felt.3PL ____

'And no one felt anything, everyone was just hugging and laughing, but (they) didn't feel (anything).'

(Evgenij Griškovec, *OdnovrEmEnno* (2004)).

(24) Označacet li èto, čto...
means.3SG C_{+Q} this, that...
'Does this mean that...'

...kraeugol'nyj kamen' — èkonomičeskaja teorija — po prošestvii 150 let okazalsja iz''jat iz osnovanija marksizma, čto svelo na net naučnoe značenie vsego učenija? Možet byt', èto prozvučit rezko, no na takoj vopros sleduet dat' soveršenno opredelennyj otvet:

...the cornerstone — economic theory — after 150 years suddenly disappeared from the foundation of marxism, which nullified the scientific claims of the whole endeavor? Maybe this will sound harsh, but to such a question it follows that we should provide an absolutely definite answer:

da, označacet ____.
yes, means.3SG ____

'Yes, it means (that...).'

(Gleb Panov. "Proletarii, raz''edinajtes' ". *Kommersant*"-*Vlast* 7, 1998).

Both examples involve either a second conjunct (23) or a response (24) that is missing arguments; (23) is missing a direct object of the verb *čuvstvovat* ‘feel’, while (24) is missing the propositional complement of the verb *označat* ‘mean’.¹⁵

Distinguishing between the two analyses in (21)–(22) proves a challenging task, both for Russian and for other languages. For example, a parallel debate has been ongoing for analogous constructions in East Asian Languages (Saito, 1985; Kim, 1999; Otani and Whitman, 1991; Hoji, 1998). The problem in distinguishing alternative analyses of this construction is that it is difficult to show that any of the properties we know to be associated with ellipsis are not also associated with argument drop. For example, one could attempt to distinguish VVPE from argument drop via the availability of both strict and sloppy readings in these constructions. As explicated in Hoji 1998, however, what appear to be sloppy readings are not definitively characteristic of VPE in other languages. Another investigative tack, taken in Goldberg 2005a, is to leverage the fact that both DPs and PPs can be elided in these constructions. The fact that more than just the object can be missing is a useful distinguishing feature of Hebrew VVPE, because PPs and indirect objects are not subject to drop in the same way that direct objects are. In Russian, however, the picture is more complicated. Native Russian speakers appear to be nearly evenly split in judgments with respect to whether PPs can be omitted independently of omission of DPs, making it difficult to isolate object drop from elision of numerous constituents. From an acquisition standpoint, this is not entirely surprising: if the evidence is subtle, this might be leading individual speakers to different grammars, and thus different judgments. The result, then, is that any evidence we find to distinguish between ellipsis and argument drop will be very delicate. Despite these difficulties, it can be shown that subtle distinctions between argument drop and VVPE exist. Furthermore, as I demonstrate in later sections, the path we take to distinguishing the two analyses also opens doors to new topics for research, namely:

- VVPE can be used as a diagnostic to understand the position of parts of the Russian verbal complex.
- Once VVPE and argument drop are distinguished in Russian, a previously obscured asymmetry in the syntactic licensing of object *vs.* subject drop is revealed.
- Evidence from verb-matching (§2.2.1) has interesting consequences for our understanding of ellipsis licensing conditions.

2.1.1 Trademarks of Ellipsis

To begin the discussion, I demonstrate that a number of characteristics typically associated with English VPE also hold of the Russian construction under discussion here.

For example, in English VPE, the clause containing the elision can be embedded.

(25) Yesterday I didn’t introduce Masha to Sasha, but I think that tomorrow, I will [~~introduce Masha to Sasha~~].

Russian follows the pattern in (25), allowing embedding of the clause containing the elision.

¹⁵Note that *označat* ‘mean’, just like English *mean*, is not the type of verb that could normally host null complement anaphora.

- (26) Včera ja ne poznamčila Mašu s Sašej, no dumaju, što zavtra
 yesterday I NEG introduced.SG.F Maša.ACC with Saša.INSTR but think.1SG that tomorrow
 poznamčlju __ __.
 introduce.FUT.1SG __ __
 ‘Yesterday I didn’t introduce Masha to Sasha, but I think that tomorrow, I will (introduce Masha to Sasha).’

In English VPE, the elision site can be contained within an island which excludes the antecedent (27).

- (27) Q: Did Sadie put the jam on the table?
 A: Yes, and she left [after she did ~~[put the jam on the table]]].~~

The Russian examples in question allow for the same kind of elision within an island:

- (28) Včera ja ne poznamčila Mašu s Sašej, i poka ne
 yesterday I NEG introduced.1SG.F Maša.ACC with Saša.INSTR and until NEG
 poznamčlju __ __, ne uedu.
 introduce.1SG.FUT __ __ NEG leave.1SG.FUT
 ‘I didn’t introduce Masha to Sasha yesterday, and I won’t leave until I do (introduce Masha to Sasha).’

Finally, English VPE is notorious for the availability of both sloppy and strict identity readings.

- (29) Paul ran home to talk to his mom, and I did (run home to talk to his mom/run home to talk to my mom) too.

The Russian examples under discussion once again align with the English pattern; both strict and sloppy readings obtain.

- (30) Dina kupila svoej dočke škol’nye učebniki, a Paša ne
 Dina.NOM bought.SG.F self.DAT daughter.DAT school.ACC textbooks.ACC but Paša.NOM NEG
 kupil __ __.
 bought.SG.M __ __
 ‘Dina bought her daughter textbooks, but Paša didn’t (buy her/his daughter textbooks).’

The problem with using such properties as diagnostic of ellipsis is that they are not exclusive to ellipsis; that is, many or all of these properties may also hold of argument drop. For example, argument drop of subjects *also* occurs in embedded clauses, when the antecedent is in the matrix clause:

- (31) On načinaet dejstvovat’ otkryto..., podčerkivaja, što __ vystupaet...
 He begins.3SG act.INF openly..., underlining that __ stands-for...
 ‘He begins to act openly...underlining that (he) stands for...’
 (A. Saxarov v bor’be za mir, 1973 (via Gundel 1980))

Though we are concentrating primarily on cases in which internal arguments of the verb are absent, (31) shows that it is not just ellipsis that is licensed under embedding in Russian, but likewise subject drop. If subject drop is licensed under embedding, it is in theory possible that drop of objects and PP arguments is likewise permissible under embedding; thus, we cannot base our diagnosis of the constructions in question on their felicity in embedded contexts. That the examples under discussion here display the traditional characteristics associated with ellipsis is a necessary, but not sufficient, condition for the purpose of identifying such constructions as VVPE. §2.1.2 aims to provide novel evidence which can address this problem.

2.1.2 Linguistic Antecedents and Islands

Because the basic tests made available by previous research (Goldberg, 2005a) cannot reliably distinguish between the argument drop and VVPE analyses, here I will take a different approach. Since the work of Hankamer and Sag (1976), it has been established that one of the cornerstone properties of ellipsis as surface anaphora is that it is licensed only in case an overt linguistic antecedent is available. This property does not hold of other types of null anaphora, including argument drop. The content of such *pragmatically controlled anaphora* can be recoverable from context alone. Recall the original examples from Hankamer and Sag 1976:

- (32) a. DEEP ANAPHORA:
[Hankamer attempts to stuff a 9-inch ball through a 6-inch hoop]
Sag: I'm not sure you'll be able to do it.
Sag: #It's not clear that you'll be able to.
- b. SURFACE ANAPHORA:
Hankamer: I'm going to stuff this ball through this hoop.
Sag: It's not clear that you'll be able to.

I will assume that, if VVPE in Russian exists, it aligns with other known types of ellipsis in requiring a linguistic antecedent. On this view, (33) below would be an example of argument drop, rather than ellipsis. The “dropped” element is recoverable from the context, but does not have a linguistic antecedent.¹⁶

- (33) [Something falls; someone wants to get it.]
- Ne vstavaj, ja podnimu ____.
- NEG rise.2SG I.NOM *under*-hold.1SG.FUT ____
- ‘Don’t get up, I’ll pick (it) up.’
- (Gordishevsky and Avrutin, 2003, page 7)

With that in mind, let us consider the scenarios in (34–35) below, noting that in each of these cases, no overt linguistic antecedent exists, and the missing arguments are inside a relative clause island and a complex nominal island, respectively.

¹⁶Here and throughout the rest of the paper, examples relevant to establishing the difference between object drop and VVPE make use of obligatorily or strongly transitive verbs (either stranded or with a dropped object). This is to exclude the possibility that some examples with missing vP-internal material are acceptable just because the verb is optionally transitive, analogous to English *eat*. Looking forward, unacceptable examples like (34–35), in which neither an object drop nor a VVPE analysis can hold, demonstrate that the verbs involved cannot felicitously appear without a pronounced complement in the absence of object drop or VVPE.

- (34) [A young man with ripped jeans enters the room.]
 # Ne volnujsja, sečas pridët čelovek, kotoryj zaš"ët ____.
 NEG worry.2SG now come.3SG.FUT person who.NOM *behind*-sew.3SG.FUT ____
intended: 'Don't worry, soon someone who will sew (them) up will come.'
- (35) [Something falls; no one wants to get it.]
 # Tot fakt, čto nikto ne podnjal ____, menja očen' ogorčæet.
 the fact that no-one.NOM NEG *under*-hold.SG.M ____ me.ACC very upsets.3SG
intended: 'The fact that no one picked (it) up upsets me.'

Before we attempt to understand the source of the marked unacceptability of (34)–(35), by contrast with the acceptability of (33), it is worth making a note about the gradient judgments involved in this discussion. The degree to which speakers find examples like (34)–(35) unacceptable ranges from 'uncomfortable and barely acceptable in conversational speech' to 'completely unacceptable'. Whatever the factors that contribute to this range, the crucial point is that speakers consistently find that there is a significant contrast between examples like (34)–(35) and those like (39)–(42), which are always judged as acceptable.

To support this empirical finding, a web-based judgment task involving approximately 130 native Russian speakers was performed at the Polinsky Language Processing Lab at Harvard University.¹⁷ Speakers were asked to assess sentences on a scale of acceptability ranging from 1 (completely unacceptable) to 7 (completely acceptable). Each test sentence involved one of four strongly transitive verbs: *podnjal* 'pick up', *zašit* 'sew up', *počinit* 'fix', *počistit* 'clean'. Each sentence was presented in combination with a situational antecedent, and speakers were given explicit instructions to interpret the situational antecedent, set off in brackets, as non-linguistic. Object drop was tested with these four verbs in complex noun phrase islands and relative clause islands. To control for potential confounds, speakers were also asked to judge sentences involving wh-extraction out of these same islands, to ensure that there was the precondition of sensitivity to these islands.

The purpose of the judgment task was twofold. The first aim was to ensure that, provided only a contextual (and not linguistic) antecedent, object drop embedded inside islands is low on the scale of acceptability. A second goal was to ensure that, provided only a contextual antecedent, object drop not embedded inside islands is much higher on the scale of acceptability. Though the results for relative clause islands and complex noun phrase islands differ, both sets support the overall claim made here, which is that genuine object drop — involving no linguistic antecedent — inside of islands is strongly degraded. I discuss the results for complex noun phrases first, since they are more straightforward.

Taking up the first claim, object drop with a situational antecedent within a complex NP island was found to be low on the acceptability scale, across all four verbs (these are examples like (35), repeated below as (36)).

- (36) [Something falls; no one wants to get it.]
 # Tot fakt, čto nikto ne podnjal ____, menja očen' ogorčæet.
 the fact that no-one.NOM NEG *under*-hold.SG.M ____ me.ACC very upsets.3SG
intended: 'The fact that no one picked (it) up very much upsets me.' [AVERAGE: 2.9/7]

¹⁷I am very grateful to Maria Polinsky, Adam Milton Morgan, Ekaterina Kravtchenko, and Carlos Gómez Gallo for help in setting up and running this web survey.

Taking up the second claim, if no island is involved, object drop with a situational antecedent was confirmed to rate high on the acceptability scale, across all four verbs.

(37) [Something falls; no one wants to get it.]

Ne vstavaj. Sejčas pridët papa, poprosim ego podnjat' ____.
 NEG get-up.2SG now come.3SG.FUT dad ask.1PL.FUT him.ACC *under*-hold.INF ____
 'Don't get up. Soon dad will come, we'll ask him to pick (it) up.' [AVERAGE: 6.66/7]

Overall, then, the results of the judgment task confirm the point: embedding genuine object drop — with no linguistic antecedent — inside an island (above, a complex noun phrase island) contributes to marked unacceptability of the resulting utterance.

The results for relative clause islands are slightly less straightforward, though they still confirm the overall point. Here, the rating for object drop with no linguistic antecedent, when embedded inside a relative clause island, was less degraded than the rating for complex noun phrase islands, though still marked if compared to object drop with no island involved (as in (37)). Examples of the type in (34), repeated here as (38), got an unexpectedly higher average rating.

(38) [A young man with ripped jeans enters the room.]

#Ne volnujsja, sejčas pridët čelovek, kotoryj zaš"ët ____.
 NEG worry.2SG now come.3SG.FUT person who.NOM *behind*-sew.3SG.FUT ____
intended: 'Don't worry, soon someone who will sew (them) up will come.' [AVERAGE: 5/7]

It should be noted that the 5/7 rating for object drop inside relative clauses is still degraded as compared to object drop not embedded inside an island (6.66/7). Though it is widely known that islands are not entirely identical or unified with respect to their syntactic properties, the question of why object drop is less degraded inside relative clauses (5/7) than it is inside complex noun phrase islands (2.9/7) remains an open one.¹⁸

Returning now to the main point, to understand the marked unacceptability of (34)–(35), by contrast with the acceptability of (33), we must find legitimate reasons to reject both a VVPE and an object drop analysis of (34)–(35). We can exclude the possibility of VVPE, because (34)–(35) lack the linguistic antecedent that would be required for ellipsis. But why should an object drop analysis be untenable here? I would like to explore the possibility that argument drop is unacceptable in certain types of islands in Russian, following similar observations made by Raposo (1986) for European Portuguese, Huang (1984) for Chinese, and Campos (1986) for Spanish. Adopting this hypothesis gives us a way of understanding the unacceptability

¹⁸A possible explanation may come from observing the structure of the relative clauses used in this judgment task: all had a relativized subject, so that the object could undergo object drop. Looking slightly ahead, I propose in §2.1.3 that the degraded nature of object drop inside islands is linked to the prohibition on object extraction out of those islands. As Chung and McCloskey (1983) have noted, extraction out of a relative clause with a subject gap is observed to be much more acceptable; several such naturally occurring examples are cited in Chung and McCloskey 1983. If object extraction from a clause with a relativized subject is for whatever reason less degraded, then we expect object drop inside that same relative clause in Russian to be likewise less degraded, consistent with the results of this judgment task. Clearly, the status of this generalization will be better understood only in conjunction with much more serious further testing — a task which lies beyond the scope of the present paper.

of (34)–(35), since both involve missing objects inside islands — a situation which, if this hypothesis is correct, is unacceptable in Russian.

If this state of affairs holds, we expect that examples like (34)–(35) could be improved in one of two ways. First, since ellipsis is permitted inside islands, we can provide these utterances with a linguistic antecedent, which should make possible a VVPE analysis. Manipulating the unacceptable (34)–(35) in this way, we arrive at (39)–(40):

- (39) Menja volnuet, čto nikto ne zašil džinsy.
 me.ACC worries.3SG that no-one.NOM NEG *behind*-sew.SG.M jeans
 ‘It worries me that no one sewed up the jeans.’
- Ne volnujsja, sejčas pridët čelovek, kotoryj zaš”ët ____.
 NEG worry.2SG now come.3SG.FUT person who.NOM *behind*-sew.3SG.FUT ____
 ‘Don’t worry, soon someone who will sew (them) up will come.’
- (40) Kažetsja, čto nikto ne podnjaj tu vazu.
 seem.3SG.REFL that no-one.NOM NEG *under*-hold.SG.M that.ACC vase.ACC
 ‘It seems that no one picked up that vase.’
- Tot fakt, čto nikto ne podnjaj ____, menja očen’ ogorčæet.
 the fact that no-one.NOM NEG *under*-hold.SG.M ____ me.ACC very upsets.3SG
 ‘The fact that no one picked (it) up upsets me.’

The crucial point here is that the B responses in each of (39)–(40) are the same as the utterances in the unacceptable (34)–(35). What is responsible for the amelioration effect in (39)–(40) is that the utterances have been provided with a linguistic antecedent, enabling VVPE to obtain.

The second way in which we might expect to be able to improve (34)–(35) is by taking the dropped object out of the island construction which we hypothesize is responsible for its unacceptability. Manipulating (34)–(35) in this way, we arrive at (41)–(42):

- (41) [A young man with ripped jeans enters the room.]
- Ne volnujsja. Sejčas pridët mama, poprosim čtoby ona
 NEG worry.2SG now *at*-come.3SG.FUT mom ask.1PL.FUT that_{subj} she.NOM
 zašila ____.
behind-sew.SG.F ____
 ‘Don’t worry. Soon mom will come, we’ll ask that she sew (them) up.’

(42) [Something falls; no one wants to get it.]

Ne vstavaj. Sejčas pridēt papa, poprosim čtoby on podnjāl
 NEG get-up.2SG now at-come.3SG.FUT dad ask.1PL.FUT that_{subj} he.NOM under-hold.SG.M

—.

—

‘Don’t get up. Soon dad will come, we’ll ask that he pick (it) up.’

Again, the crucial difference between the unacceptable (34)–(35) and (41)–(42) just above is that the improved examples do not embed the missing object in an island, permitting an object drop analysis.

There is a further prediction made by this view of things that is specific to three-place predicates.¹⁹ In object drop, a predicate like *put* should be able to leave behind a pronounced indirect object. By contrast, an instance of VVPE with this same predicate should elide both the internal arguments. This contrast gives us a further way to probe the proposed distinction between object drop and VVPE. Specifically, though constructions in which only the indirect object and verb survive are acceptable under ordinary circumstances (43a),²⁰ we expect this to be unacceptable inside an island, because it would have to be an instance of object drop (43b).

(43) a. Ty uže položil knigi v korobku?

You.NOM already put.SG.M books.ACC in box.ACC

‘Did you already put the books in the box?’

Net, ne položil __ v korobku, potomu čto mesta ne bylo.

No, NEG put.SG.M __ in box.ACC because space.GEN NEG was

‘No, I didn’t put (them) in the box, because there wasn’t any space.’

b. Ty uže položil knigi v korobku?

You.NOM already put.SG.M books.ACC in box.ACC

‘Did you already put the books in the box?’

#Ja, net. No tot čelovek, kotoryj položil __ v korobku, zabył dobavit’

Me, no. But that person who.NOM put.SG.M __ in box.ACC forgot.SG.M add.INF

igruški.

toys

intended: ‘Me, no. But the person who put (them) in the box forgot to add the toys.’

Alternatively, if just the verb is pronounced inside an island and its internal arguments are not, we predict this to be acceptable if a linguistic antecedent is present (44a), but unacceptable if there is only a situational context (44b).

¹⁹Thanks to an anonymous *NLLT* reviewer for pointing out this prediction as a further piece of evidence in favor of this contrast.

²⁰(43a) is best when there is some special intonation on *v korobku* in the response. I take this to be a fact related to the information structural constraints on VVPE and ellipsis more generally.

- (44) a. Ty už položil knigi v korobku?
 You.NOM already put.SG.M books.ACC in box.ACC
 ‘Did you already put the books in the box?’
 Ja, net. No tot čelovek, kotoryj položil ____, zabył dobavit’ igruški.
 Me, no. But that person who.NOM put.SG.M ____ forgot.SG.M add.INF toys
 ‘Me, no. But the person who put (them in the box) forgot to add the toys.’
 b. [Someone waves some books in the air demonstratively, and points to the open box.]
 # Oj, tot čelovek, kotoryj dolžen byl položit’ ____, sovsem ob ètom
 Oh that person who.NOM supposed.SG.M was put.INF ____ completely about it
 zabył.
 forgot.SG.M
intended: ‘Oh, the person who was supposed to put (them in the box) completely forgot about it.’

Armed with such evidence, we arrive at a picture in which instances of ‘missing’ arguments in Russian are, in most cases, consistent with either an argument drop or a VVPE analysis. The exception is that only VVPE occurs inside islands, because Russian object drop is by hypothesis forbidden in these structural configurations.

2.1.3 Object Drop, Subject Drop, and Island Sensitivity

One may wonder what the source of the contrast between island and non-island contexts is for the purpose of argument drop in Russian. While argument drop is known to be conditioned by discourse factors, it is not readily apparent why the same process should be sensitive to a *syntactic* boundary. Various proposals in the mid-1980s (Huang, 1984; Campos, 1986; Raposo, 1986, *inter alia*) explored the idea that null objects are variables that must be A-bar bound by a null topic operator. Another, perhaps more modern, way of viewing this restriction is that object *pro* enters the derivation with a unique licensing requirement, namely that it establish an A-bar relation with a topic in the matrix clause. Sensitivity to the presence of islands arises on this view as a result of a movement operation that crosses island boundaries.

It is worth pointing out that there is a subject-object asymmetry when it comes to argument drop in Russian, in that, while object drop is prohibited in islands, subject drop occurs freely, independent of ellipsis of the complement of Asp.

- (45) ...i on, daže esli __ zaxočet, ne smožet ...
 ...and he even if __ want.FUT.3SG NEG able.FUT.3SG ...
 ‘...and he, even if (he) wants, won’t be able to ...’
 (Ol’ga Zueva. “Skaži čto ja tebe nužna.” *Daša 10*, 2004.)

- (46) Ja stala zadumyvāt’sja, a možet,
 ‘I started thinking, maybe...’

ja prosto bojalas' priznat'sja v tom, čto ...__ poljubila muščinu, dlja ktorogo __
 I.NOM just feared.SG.F admit.INF in that that ...__ loved.SG.F man.ACC for who.GEN __
 ničego ne značila?
 nothing.ACC NEG meant.SG.F

'I was just afraid to admit the fact that ... (I) had fallen in love with a man for whom (I) meant nothing?'

(Ol'ga Zueva. "Skaži čto ja tebe nužna." *Daša 10*, 2004.)

- (47) Ja ezdila tuda ne tol'ko v te dni, kogda __ tancevala.
 I.NOM rode.SG.F there NEG only in those days when __ danced.SG.F
 'I rode there not only on the days when (I) danced.' (Timberlake, 2004, 225)

- (48) [A pair of parents is observing their baby, who is learning to walk and has just recently resumed walking after falling over]

Ty ne boiš'sja, posle togo kak __ upala?
 You.DAT NEG scare.2SG after that how __ fell.SG.F

'You're not worried, after (she) fell?'

All of the above examples involve subject drop inside some sort of island: in (46), for example, the subject is omitted inside a complex DP island and inside of a relative clause island. Such data suggest that some difference in the syntactic behavior of subjects and objects must be invoked to account for the availability of subject, but not object, drop inside islands. If the relevant idea is that objects establish a cross-clausal dependency with an element outside their own clause, it must be the case that the subject has no such requirement.

A plausible proposal is that null arguments can have different licensing conditions, in a single language:

- null subjects of the sort typically claimed for the absent subjects of many Romance languages (Rizzi, 1986), or
- null objects of the sort claimed to be in operator-variable structures (Huang, 1984).

On this view, Russian null subjects are instances of null pronouns, while null objects are instances of operator-variable structures. Since only the latter involves a long-distance dependency, only the latter is predicted to be sensitive to island boundaries.

- (49) a. Subject Drop: [...[*pro* V O]]
 b. Object Drop: [*Op_i*...[S V ___i]]

To sketch how this could be implemented, we could imagine that each type of null element will enter a derivation with its own licensing conditions. Licensing of *pro* in null subject position can follow the general

outlines of a Rizzi-style (1986) account, invoking the *Identification Hypothesis*. Key for our purposes is the formal licensing of subject *pro*, in the case of Russian involving a local relationship with a licensing head, probably T.²¹ This view requires that subject *pro* enter the derivation with unvalued ϕ -features, and must enter into an AGREE relation with T in order to value those features. The null object's licensing conditions must be different, since it will never be in the right structural relation with T: it must enter into a long-distance A-bar dependency, yielding the associated island effects.

If such a formalization holds, we arrive at the following state of affairs. Once we distinguish between genuine VVPE and argument drop, an asymmetry between object and subject drop emerges which was previously obscured. This asymmetry can be understood by appealing to distinct licensing conditions for subject and object drop in Russian: only object licensing involves a long-distance relation with a topic operator in a matrix clause. A consequence of these licensing requirements is that the possibility of wh-extraction should parallel the possibility of object drop, while a prohibition on wh-extraction should parallel the impossibility of object drop.

As it turns out, there is an empirical link between the possibility of extraction and the possibility of object drop. Viewing the subject *vs.* object drop asymmetry in terms of these licensing conditions provides us with a way to explain a previously mysterious contrast in Russian indicative subordinate clauses, first noted in Avrutin and Babyonyshev 1997. Subject drop inside these embedded clauses is licit (51a), while genuine object drop (i.e. when there is no VP-sized linguistic antecedent, precluding VVPE) is illicit (51b, 52).²²

- (51) a. Volodja skazal, čto (on) kupit zelenuju lampu.
 Volodja said.SG.M that (he) buy.3SG.FUT green.ACC lamp.ACC
 'Volodja said that (he) will buy a green lamp.'
- b. Volodja skazal, čto Nadja ljubit *(ego).
 Volodja said.SG.M that Nadja loves.3SG *(him)
 'Volodja said that Nadja loves him.' (Avrutin and Babyonyshev, 1997, 248)

²¹It is well-known that Russian subject drop is not of the sort found in canonically pro-drop languages like Italian (Franks, 1995). Under the view pursued here, the more restricted nature of Russian subject drop may be understood as the result of further constraints on discourse and/or recoverability (McShane, 2005).

²²Examples like (51a) may appear on the surface to be compatible with a finite control analysis of embedded null subjects, well-established for Japanese (Uchibori, 2000), Hebrew (Landau, 2004), Persian (Hashemipour, 1988, 1989; Ghomeshi, 2001), and the Balkan languages (Terzi, 1997; Landau, 2004), among others. However, the Russian cases are not likely to fit this mold. A characteristic of control is that the matrix clause restricts the temporal interpretation of the embedded clause (Bresnan, 1982, *inter alia*). This is true too in instances of finite control, as in Hebrew, where the embedded verb must bear infinitival, future or subjunctive morphology (Landau, 2004). Genuine control structures in Russian follow this pattern, in that the verb is always in its infinitive form (50).

- (50) Kostja obeščal ___ priiti v gosti.
 Kotsja promised.SG.M ___ come.INF in guests
 'Kostja promised to come for a visit.'

But as we have seen, the verb in indicative embedding is canonically marked with person and tense (as in (51), (53), (54), for example), and there is no temporal dependency between the matrix and the embedded predicates. Given this preliminary evidence, I conclude here that the examples we are discussing in this section are not in fact instances of finite control, but instead are exemplary of genuine subject drop.

(52) [Something is lying on the floor.]

Ja byl uveren, što kto-to uže podnjaj ____.
 I was sure.SG.M that someone.NOM already *under*-hold.SG.M ____

intended: ‘I was sure that someone already picked (it) up.’

While object drop is clearly unacceptable under indicative embedding, absent subjects under embedding are fully acceptable; naturally occurring examples like the ones below are plentiful.

(53) Ja počuvstvovala, što ____ zavladela moskovskoj publikoj.
 I felt.SG.F that ____ conquered.SG.F muscovite.INSTR public.INSTR
 ‘I felt that (I) had conquered the Moscow audience.’ (Timberlake, 2004, 225)

(54) On načinaet dejstvovat’ otkryto..., podčerkivaja, što ____ vystupaet...
 He begins.3SG act.INF openly..., underlining that ____ stands-for...
 ‘He begins to act openly...underlining that (he) stands for...’
 (A. Saxarov v bor’be za mir, 1973 (via Gundel 1980))

To understand this pattern, we need to understand the properties of indicative embedding in Russian and its movement restrictions. The approach to licensing object drop under investigation links the availability of wh-extraction directly to the availability of object drop. Russian indicative embedded clauses, headed by the complementizer *što*, have the peculiar property of being islands for wh-extraction. That is, extraction out of an indicative subordinate clause is generally illicit in Russian (Comrie, 1973; Pesetsky, 1982; Bailyn, 1995b). This holds for both object and subject wh-extraction.

(55) a. SUBJECT RELATIVIZATION:

*Ona ljubit togo človeka, kotoryj_i ona uvidela što _____i ubil
 She love.3SG that.ACC person.ACC who.NOM_i she saw that _____i killed.SG.M
 Onegina na dueli.
 Onegin.ACC on duel.PREP

intended: ‘She loves the person who she saw that killed Onegin in a duel.’

b. OBJECT RELATIVIZATION:

*Ona ljubit togo človeka, kotorogo_i ona uvidela što Onegin ubil _____i na
 She love.3SG that.ACC person.ACC whom.ACC_i she saw that Onegin killedSG.M _____i in
 dueli.
 duel.PREP

intended: ‘She loves the person whom she saw that Onegin killed in a duel.’

- (56) a. OBJECT WH-MOVEMENT:
 *Kakuju knigu_i ty ne uveren, čto Petja pročital ___i?
 which.ACC book.ACC_i you NEG sure that Petja read.SG.M ___i
intended: ‘Which book are you not sure that Peter read?’
- b. SUBJECT WH-MOVEMENT:
 *Kto_i ty ne uveren, čto ___i pročital ètu knigu?
 who.NOM_i you NEG sure that ___i read.SG.M this.ACC book.ACC
intended: ‘Who are you not sure (that) read this book?’

The fact that Russian embedded clauses are islands for wh-extraction, combined with a theory of Russian object and subject drop in which the null objects involve a long-distance dependency while null subjects do not, provides a principled explanation for the contrast in (51). If null subjects are licensed via a local relation with T, they do not need to establish any sort of long-distance connection with matrix elements. This yields the grammaticality of examples like (51a). On the other hand, null objects must be licensed by a relation with a Topic element in the matrix clause, but cannot do so because of the special island status of embedded indicative clauses in Russian. This yields the ungrammaticality of examples like (51b).

Discussions of the Russian indicative embedding facts are usually partnered with data about subjunctive embedding, which is notably different in its extraction behavior. Wh-extraction out of subjunctive clauses is markedly better than from indicative embedded clauses (with a preference for object extraction for many speakers, potentially related to the *that*-trace effect (Bailyn, 1995b; Pesetsky, 1982)).

- (57) a. OBJECT WH-MOVEMENT:
 Kakuju knigu_i ty xotel, čtoby Petja pročital ___i?
 which.ACC book.ACC_i you want that_{subj} Petja read.SG.M ___i
 ‘Which book did you want Peter to read?’
- b. SUBJECT WH-MOVEMENT:
 ?/*Kto_i ty xotel, čtoby ___i pročital ètu knigu?
 who.NOM_i you want that_{subj} ___i read.SG.M this.ACC book.ACC
 ‘Who did you want to read this book?’

The line of argumentation being pursued here would predict that the grammaticality of object drop should co-vary with the grammaticality of object extraction. We have established that when object extraction is ungrammatical, so is object drop (as in indicative embedded clauses). The inverse is also true: when object extraction is permitted, so is object drop (58–59).

- (58) [Something falls and someone goes to pick it up, though it’s prohibited.]
- Ej, Vas prosili, čtoby __ ne podnimali __!
 Hey you.ACC asked.PL that_{subj} __ NEG under-hold.PL __
 ‘Hey, you were asked not to pick up (the fallen object)!’

- (59) __ Udrala tuda special’no, čtoby Lidiya Timofeevna ne našla __.
 __ fled.SG.F there especially that_{subj} Lidiya Timofeevna NEG find.SG.F __
 ‘(She) fled there especially so that Lydia Timofeevna wouldn’t find (her).’
 (Andrej Gerasimov. *Foks Malder poxož na svin’ju*. 2001)

From previous discussion of the verb *podnjat* ‘pick up’, we know that it is obligatorily transitive (in (58)). This is true, too, of the verb used in the corpus example (59): it is a lexically prefixed perfective verb, and these tend generally to require a pronounced object. We can confirm the point by using same test we used before: embedded inside an island with no linguistic antecedent, *najti* ‘find’ with no overt complement is significantly degraded.

- (60) [Someone finds a long lost book under a couch cushion:]
 #Oj, kak menja raduet otkrytie, čto ty našel __!
 Oh, how me.ACC gladdens discovery that you found.SG.M __
 intended: ‘Oh, how I’m made happy by the discovery that you found (it)!’

Returning to the main point, the co-variation of object drop with the possibility of object extraction in subjunctive embedded clauses further supports the notion that an A-bar dependency is relevant for object drop. The fact that the availability of subject drop does not co-vary with the availability of subject extraction in these examples supports the notion that no A-bar dependency is relevant for subject drop.

To summarize, a broader consequence of this exploration is that we have revealed a previously obscured asymmetry between the syntactic behaviors of subject and object drop in Russian: only subject drop occurs inside islands. The proposal pursued here is that this behavior is due to the different syntactic licensing conditions of the two kinds of argument drop, and this is supported with evidence that establishes a connection between the availability of extraction out of a constituent and the availability of object drop in that same constituent. No such connection can be claimed for subject drop, whose syntactic licensing appears to be independent of whether it appears inside an island.

2.2 Verbal Identity and Ellipsis Licensing

2.2.1 Verbal Identity

§2.1.2 presented evidence in favor of the idea that VVPE can be distinguished from object drop in Russian on the basis of the availability of VVPE — but crucially not object drop — inside islands. Having established that both phenomena take place in Russian, we can ask the question we set out to ask in the beginning of §2, namely: is there a matching requirement on the stranded verb that can tell us something about which components of the Russian verbal complex originate outside the VVPE ellipsis site?

We already know that in certain languages (e.g., Hebrew (Goldberg, 2005a)), the stranded verb in VVPE must match in some of its morphological parts to the verb of the antecedent VP. The parts of the verbal complex that are relevant for this matching requirement are exactly the parts that originate in the domain of the

ellipsis. In such languages, tense, modality, and aspectual morphology are under no identity requirement, presumably because they do not originate within the domain of ellipsis. Here I explore the degree to which this generalization can be said to be true of Russian, with the goal of understanding both the empirical facts and their relevance to the overall question of the nature of identity requirements in ellipsis.

To begin, we can surmise that any instance of object drop should involve no matching requirement, and in fact, mismatch in non-islands is routine.

- (61) Sledovatel'no, brosaja kamen', mal'čik ne uveličil ego kinetičeskuju energiju, a
 Therefore throwing stone boy NEG increased.SG.M its kinetic energy CONJ
 umen'sil ____.
 decreased.SG.M ____
 'Therefore, in throwing the stone the boy didn't increase its kinetic energy, but decreased (it).'

(Vladimir Lukašik, Elena Ivanova. *Sbornik zadač po fizike*, 7-9 kl., 2003)

- (62) Tam znali, čto Krymov ne vinovat, a posadili ____.
 There knew.PL that Krymov NEG guilty.M CONJ sat.PL ____
 'They knew that Krymov was innocent, but they imprisoned (him) anyway.'

(Vasilij Grossman. *Žizn' i sud'ba, čast' 3*, 1960)

To ensure that we are probing matching requirements for VVPE, we will check only inside islands, where it has been established that object drop cannot take place. We know from (1) that the verb *can* match (however, notice that the person marking features there do not match). Preliminarily, it appears that this is more than an option, but an actual requirement.²³

- (63) Kto-to uronil ètu vazu.
 Someone dropped.SG.M this.ACC vase.ACC
 'Someone dropped this vase.'
- Tot fakt, čto nikto ne podnjaj #(eë), menja očen' ogorčaeť.
 the fact that no-one NEG under-hold.SG.M #(it.ACC) me.ACC very upsets.3SG
 'The fact that no one picked #(it) up upsets me.'

- (64) Menja volnuet tot fakt, čto kto-to razorval èti džinsy.
 me.ACC worries.3SG that fact that someone apart-ripped.SG.M these.ACC jeans.ACC
 'The fact that someone tore up these jeans worries me.'
- Ne volnujsja, sejčas pridët čelovek, kotoryj #(ix) zaš"ët.
 NEG worry.2SG now come.SG.FUT person who.NOM #(them.ACC) behind-sew.3SG.FUT
 'Don't worry, soon someone who will sew #(them) up will come.'

²³Furthermore, my extensive corpus digging unearthed no convincing examples of verb-stem mismatch in adjunct or relative clause islands.

The unacceptability of the omitted pronoun in (63) and (64) indicates that VVPE cannot take place if the stems of the antecedent and stranded verbs are mismatched (whereas if they are matched, as in the previous examples we have seen, VVPE is licensed). From such data, we might conclude that Russian aligns with what we know of Hebrew (Goldberg, 2005a) and Irish (McCloskey, 1991, to appear) in requiring the verb stem of the stranded verb to match the verb stem of the antecedent verb. Complicating the picture is the fact that word order and intonation manipulations ameliorate *some* speaker judgments. Below, the examples from (63)–(64) have been manipulated to show contrastive focus on the verb; verbs are clause-final and bolded to reflect a special contrastive intonation.²⁴

- (65) Kto-to ètu vazu **uronil**, i tot fakt, što nikto (eě) ne
 someone this.ACC vase.ACC dropped.SG.M, and the fact that no-one (it.ACC) NEG
podnjal, menja ogorčael.
 under-hold.SG.M me.ACC upsets.3SG
 ‘Someone **dropped** this vase, and the fact that no one **picked** (it) **up** upsets me.’
- (66) Kto-to eti džinsy **razorval**, no sejčas pridët čelovek, kotoryj
 someone these jeans apart-tore.SG.M but now come.3SG.FUT person who.NOM
 (ix) **zaš”ët**.
 (them.ACC) behind-sew.3SG.FUT
 ‘Someone **ripped** these jeans, but soon a person will come who will **sew** them **up**.’

To start, notice that the preferred word order in the antecedent involves verb-finality (and I assume the verb-stranding ellipsis is structurally parallel). One way to understand the pattern in (65–66) is that the verb in these examples has undergone focus driven movement. Mechanically, this can be achieved in one of two ways:

- Right-adjunction of the verb.
- Focus-driven leftward movement, followed by remnant movement of the partially vacated vP.

There are good reasons to think that focus-driven movement of the verb is involved here. First, the verb is always final in the antecedent clause of these constructions, and I assume a parallel structure for the ellipsis cases. On an approach in which the verb does not move, all other material will have to move leftward (arguments, PP-adjuncts, etc.); this seems less than ideal. Cartographic approaches to discourse-driven movement (e.g. Rizzi (1997)) frequently assume, if not always explicitly, a connection between movement and discourse markedness. On this view it would seem natural for the verb to move. Second, contrastive intonation on the verb is unusual here, in that the unmarked emphasis in intonation in SOV orders would fall on the object (Padučeva, 1985).

- (67) Čto novogo?
 What new.GEN
 ‘What’s new?’

²⁴Thanks to Jeroen van Craenenbroeck and especially Anna Szabolcsi for bringing these issues to my attention. The empirical and theoretical progress made here is in large part the result of those helpful discussions.

Maša **knigu** kupila. / #Maša knigu **kupila**.
 Masha.NOM **book**.ACC bought.SG.F / #Masha.NOM book.ACC **bought**.SG.F

‘Masha bought a book.’

Thus, the contrastive intonation on the verb in the constructions in (65–66) indicates that it is discourse-marked (i.e., contrastively focused), and therefore more likely to have undergone discourse-motivated displacement.

Though this pattern is not very well understood at this point, we can draw the empirical conclusion that, although the default pattern seems to be that no mismatch of stems is allowed in VVPE, contrastive focus of the verb (which corresponds to word order and/or intonation manipulations) licenses mismatch for a subset of speakers under VVPE inside islands.²⁵

2.2.2 Ellipsis Licensing and Head Movement

The subtle verb-matching pattern we have found in Russian VVPE is interesting to consider in terms of its consequences for our understanding of ellipsis licensing. In broad terms, it is clear that ellipsis is licensed if the elided constituent has an antecedent that is, in a difficult-to-define sense, identical to it. This identity may involve primarily semantic conditions (Dalrymple et al. , 1991; Hardt, 1993; Prüst et al. , 1994; Ginzburg and Sag, 2000; Merchant, 2001; Culicover and Jackendoff, 2005; Potsdam, 2007, *inter alia*), and some theories additionally invoke a condition that requires either structural or lexical identity between the elided constituent and its antecedent (Sag, 1976; Kitagawa, 1991; Fiengo and May, 1994; Chung et al. , 1995; Fox, 2000; Chung, 2006; Merchant, 2007, 2008, *inter alia*). Of particular relevance to us is the question of the lexical requirement, stated recently by Chung (2006) as the *No New Morphemes* requirement (this version taken from Merchant 2010):

- (68) Any non-trace morpheme *m* that occurs in an elided phrase must have an equivalent overt correlate *m'* in the elided phrases’s antecedent.

The status of this requirement with respect to items that are head-moved out of an ellipsis domain will depend largely on our view of the derivational ordering of ellipsis with respect to head movement. If ellipsis licensing derivationally precedes head-movement — and this is certainly possible if we follow Chomsky (2000) in considering head-movement to be a post-syntactic operation — then we might expect *No New Morphemes* to apply to the V-*v* complex, since it will be *in situ* when ellipsis is licensed. Alternatively, if head-movement derivationally precedes ellipsis licensing, it should follow that the stranded, head-moved V-*v* complex need not match its antecedent, provided it meets the other conditions for ellipsis licensing. The Russian facts are consistent with the view that head-movement derivationally precedes ellipsis: the V-*v*

²⁵ An alternative analytical possibility, which I do not address here, is that the contrastive focussing of verbs has the effect of making available an object drop analysis, despite the embedding of the gap in an island. In the discussion that follows I make the assumption that the syntactic licensing condition on object drop discussed in §2.1.3 should hold regardless of the effects of discourse.

complex must be outside the ellipsis domain at the time ellipsis licensing applies in order for the possibility of mismatch — for those speakers that accept it, given the correct discourse conditions — to ever arise.²⁶

Another way of thinking about this set of issues is by analogy with the interaction of phrasal movement and ellipsis licensing. We know that phrasal constituents originating in the ellipsis site do not need to be lexically identical to the antecedent:

(71) Max has five dogs, but I don't know [how many cats] [~~he has~~—].

Examples like (71) can be understood if the trace of the phrasally moved constituent is a variable. Distinct variables are not considered distinct for any isomorphism requirement (Rooth, 1992b; Heim, 1997; Merchant, 2001, *inter alia*). Is the trace of a head moved item also a variable, and subject to the same sorts of licensing conditions?

As we know from §2.2.1, mismatch between the antecedent and stranded verb-stems in Russian can take place only under a specific set of discourse circumstances (and even under those circumstances, for a limited subset of speakers). Verb-stem mismatch is constrained in Russian, and co-varies with certain contrastive focus possibilities. We can generalize that the elided XP need not be lexically identical to the antecedent XP if the mismatched material is both outside the ellipsis site (that is, pronounced), and crucially, focused. These facts lead us to conclude that the trace of a head-moved item is also a variable, and subject to the same sorts of licensing conditions as phrasally moved elements — a view that is further supported by argumentation found in Hartman 2011, where traces of head movement must count as variables for the purposes of the correct calculation of ellipsis parallelism domains.

The discourse-constrained availability of verbal mismatch in Russian VVPE presents a new, difficult and open analytical puzzle. It may be tempting to attribute morphological matching in ellipsis to lexical identity

²⁶These facts also present a puzzle when considered in the context of Hebrew VVPE, for which it has been claimed that not even contrastive focus of the verbs can license mismatch of the Hebrew verb parts that originate inside the ellipsis domain (Goldberg, 2005b).

(69) Dov hizmin ota la-mesiba šelo?
 Dov invite.3SG.PST ACC.you to.the-party of.him
 'Did Dov invite you to his party?'
 *Ken, ve-hu **hisi'a** gam (ken).
 yes and-he drove also yes
intended: 'Yes, and he also **drove** (me to his party).'

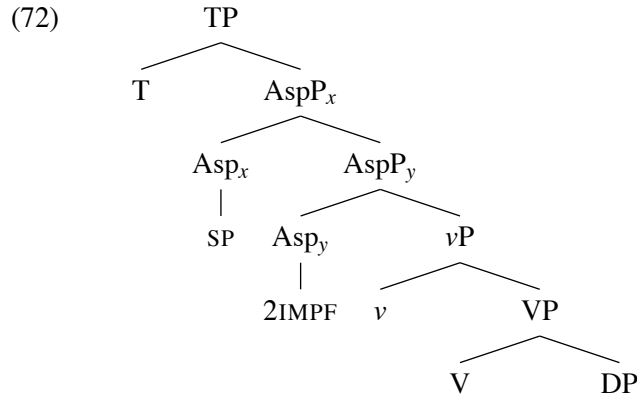
(70) Yicxak **nišek** et Aviva?
 Yitzhak kiss.3SG.PST ACC Aviva
 'Did Yitzhak **kiss** Aviva?'
 *(Lo), hu **xibek**.
 no he embrace.3SG.PST
intended: 'No, he **hugged** (Aviva).'

The examples in (69) and (70), if directly translated into Russian, would of course be licensed; because there is no embedding inside an island here, there is a possibility that the Russian versions of (69) and (70) could be instances of argument drop. Goldberg (2005a) develops Hebrew-specific controls to help rule out object drop, ensuring that (69) and (70) are in fact Hebrew VVPE. The point is that Hebrew VVPE seems to prohibit verb stem mismatch under any circumstances, while Russian VVPE seems to license it, though in a limited subset of speakers and under particular discourse conditions.

requirements, as has been done for Hebrew by Goldberg (2005a, 2005b). By contrast, the data presented here indicate that identity may just as well be enforceable (modulo focus) by semantic licensing conditions. This complicates the picture somewhat, since we must be careful in our attribution of morphological identity to specific licensing requirements. Still, the emergent picture is more nuanced and more careful about the role of discourse in ellipsis licensing — a result which can be understood as a type of progress.

2.3 V-Stranding VPE: Diagnosing Functional Structure

Let us return now to the initial question posed in this paper, namely the question of the functional structure of the Russian verbal complex. We have good reason at this point to believe that the pieces of the Russian verb are spread across syntactic space, as in (72):



We also have good reason to believe that verb stem matching is obligatory for VVPE (as long as no contrastive focus of the verbs is involved). A final question we now can ask, having discussed extensively the verb-matching properties of Russian VVPE in §2.2.1, is: what part of the verb must match, when matching is required? From the examples in (73) and (74), we can see that SP can be mismatched. In the acceptable (73), the SP *pere* is present in the stranded verb but not the antecedent verb.

- (73) Kažetsja, čto nikto ne podnjal vazu, kotoraja uže ne pervyj
 seem.3SG.REFL that no-one NEG *under*-hold.SG.M vase.ACC which.NOM already NEG first
 raz padaet.
 time falls.3SG

‘It seems that no one picked up the vase, which fell not for the first time.’

Naoborot, uže prišel čelovek, kotoryj perepodnjal ____.
 On-contrary already came.SG.M person who.NOM RPET-*under*-hold.SG.M ____

‘On the contrary, a person who picked (it) up again already came.’

(74) illustrates the same point: SPs *do* and *pere* are mismatched in the antecedent and stranded verbs.

- (74) Vera uže dozašila porvannuju bluzku?
 Vera already CMPL-*behind*-sew.SG.F ripped.ACC blouse.ACC
 ‘Did Vera already completely sew up the ripped blouse?’

Da. Voobšče, tot fakt što ona perezašivala __ uže tak mnogo raz,
 Yes. In-general the fact that she RPET-*behind*-sew.2IMPF.SG.F __ already so many times
 označavaet, što ona ne očēn’ xorošo umeet šit’.
 means that she not very well able.3SG sew.INF

‘Yes. In general, the fact that she has re-sewed (it) up so many times means that she is not able to sew very well.’

Additionally, while the antecedent verb in (74) is perfective, the stranded verb has been rendered imperfective via the addition of a 2IMPF suffix. Note that the stranded verb is inside a complex NP island, so we can be sure we are looking at VVPE, as opposed to argument drop. Based on these examples, we can conclude that when matching is necessary, the parts of the verbal complex that originate outside the ellipsis domain are not subject to this matching requirement. This result is consistent with the proposed position of both SP and 2IMPF, external to the ellipsis site.

Using this same diagnostic approach, we can also probe the status of lexical prefixes (LP). Recall that Russian prefixes are hypothesized to fall into at least two different classes, but that these classes are difficult to distinguish because of numerous factors, not least of which is large-scale homophony. VVPE, then, can act as an additional piece of evidence in this ongoing debate. Note that here, too, I use strongly transitive verbs to ensure that the result is not the effect of an optionally transitive construction.²⁷

- (75) a. [Someone sees a vendor giving out fruit on the street.]
 # Okazyvaetsja, sluxi što on razdaet __, absoljutno opravdanny.
 turns-out.3SG rumors that he *out*-give.3SG.M __ absolutely justified.PL
intended: ‘It turns out that the rumors that he is giving out (fruit on the street) are completely justified.’
 b. [Someone sees a vendor selling a rare kind of fruit on the street.]
 # Okazyvaetsja, sluxi što on prodaet __, absoljutno opravdanny.
 turns-out.3SG rumors that he *through*-give.3SG.M __ absolutely justified.PL
intended: ‘It turns out that the rumors that he is selling (fruit on the street) are completely justified.’

That argument drop with *prodav’* ‘sell’ and *razdat’* ‘give out’ is unacceptable with no linguistic antecedent and inside an island suggests that this verb is strongly transitive – that is, its internal argument(s) can go missing only via argument drop or VVPE. Having established this, we can attempt to mismatch LPs in the stranded and antecedent verbs in VVPE:

²⁷The choice of verbs is very limited here, because LP frequently change the argument structure and selectional requirements of the verb to which they attach. This creates an additional difficulty, since the structure of the elided constituent would not be identical in cases where the verbs’ selectional requirements are different (thus rendering the ellipsis potentially unacceptable for independent reasons). I attempt to avoid this problem by employing verbs with the same number and type of internal arguments, but this limits the range of possibilities significantly.

- (76) Nepravitel'stvennye organizacii dolžny byli razdavat' butylki
 Nongovernmental organizations supposed.PL were.PL *out-give*.2IMPF.INF bottles.ACC
 vody bežencam na Gaiti.
 water.GEN refugees.DAT on Haiti

'NGOs were supposed to be giving out bottled water to refugees in Haiti.'

#Nas očen' volnujut sluxi, čto oni prodavali ——.
 us.ACC very worry.3PL rumors that they.NOM *through-give*.2IMPF.PL ——

intended: 'The rumors that they were selling (bottled water to refugees in Haiti) really worry us.'

As can be seen from the example above, mismatching lexical prefixes, which by hypothesis originate inside of the ellipsis domain (vP), is not possible (barring, as always, strong contrastive focussing of the verbs in question). By way of comparison, keeping the LP in the stranded and antecedent verb identical ameliorates these examples (77).

- (77) Nepravitel'stvennye organizacii dolžny byli razdavat' butylki
 Nongovernmental organizations supposed.PL were.PL *out-give*.2IMPF.INF bottles.ACC
 vody bežencam na Gaiti.
 water.GEN refugees.DAT on Haiti

'NGOs were supposed to be giving out bottled water to refugees in Haiti.'

Nas očen' volnujut sluxi, čto oni ne razdavali ——.
 us.ACC very worry.3PL rumors that they.NOM NEG *out-give*.2IMPF.PL ——

'The rumors that they were not giving out (bottled water to refugees in Haiti) really worry us.'

These examples stay acceptable even if we force a mismatch in perfective vs. imperfective in the prefixed verb by adding the 2IMPF suffix to the stranded verb (78). This is consistent with the claim that 2IMPF is merged above the domain of ellipsis, in Asp.

- (78) Nepravitel'stvennye organizacii dolžny byli razdat' butylki vody
 Nongovernmental organizations supposed.PL were.PL *out-give*.INF bottles.ACC water.GEN
 bežencam na Gaiti.
 refugees.DAT on Haiti

'NGOs were supposed to give out bottled water to refugees in Haiti.'

Nas očen' volnujut sluxi, čto oni ne razdavali ——.
 us.ACC very worry.3PL rumors that they.NOM NEG *out-give*.2IMPF.PL ——

'The rumors that they were not giving out (bottled water to refugees in Haiti) really worry us.'

Taken together, these results provide support for a structural distinction between SP and LP, thereby providing useful evidence in the difficult and complicated debate described in §1.4. Within Russian, the next step is to extend this diagnostic to other parts of the verbal complex; §3 is dedicated to this task. Beyond Russian, the next step is to understand whether, given careful examination and example construction, VVPE can be used as a diagnostic for the locus of certain parts of the verbal complex across other languages that make use of VVPE as a syntactic strategy.

2.4 Interim Summary

This section explored the phenomenon of Russian VVPE in order to understand how it can be effectively used to diagnose functional structure in the Russian clause, especially functional structure having to do with the verbal domain. The need for, and interest in, such a diagnostic is confirmed by the numerous works on the syntax of Russian verbs, many of which disagree about the way in which the morphological parts of the verb are distributed and composed (Bailyn, 1995b; Fowler, 1994; Babko-Malaya, 2003; Svenonius, 2004a, *inter alia*). On the basis of this diagnostic and of previous research on verb movement and prefixation, we arrived at the conclusion that there is at least one functional Asp projection, hosting SP, between T and vP, and that the verbal complex undergoes head movement in the narrow syntax to that Asp position for morphophonological convergence. A further conclusion is that, modulo the effects of contrastive focus, certain verbal morphology — for example, the verbal stem and LP— may not be mismatched in VVPE; this result provides further evidence for a structural distinction between SP, which are merged outside the domain of ellipsis, and LP, which are apparently merged within the domain of ellipsis (within vP).

To arrive at this conclusion, it was necessary to discuss in some detail the empirical details of VVPE, with the beneficial result that we have arrived at empirical and theoretical discoveries in two areas. First, I have provided evidence that object drop is distinct from VVPE in requiring only a situational, rather than a linguistic, antecedent, and that object drop is unacceptable inside islands, unlike VVPE and unlike subject drop. The difference between subject and object drop behavior inside islands is attributed to the different syntactic conditions of these null elements: only object drop enters into an A-bar dependency with a topic operator outside its own clause, thereby yielding the associated island sensitivity.

Second, the Russian data presented here yield a new typological observation — that mismatch of verbal stems is possible, given the right discourse conditions, in VVPE. The analytical consequence of this observation is that the trace of head movement in Russian should be understood as a variable, subject to re-binding under the right circumstances. The challenge, then, is to understand these conclusions in the broader context of languages like Hebrew, in which this same sort of mismatch is prohibited under VVPE, even when the verbs are contrastively focussed.

3 Aspectual Suffixation

One of the goals of this paper was to develop a way to diagnose functional morphology in complex words (such as the Russian verbal complex). In previous sections (§2) of this paper, I claimed that VVPE was such a diagnostic, and illustrated that matching requirements for parts of Russian verbs, under the right conditions, could help illuminate whether certain pieces of a given verb were merged above or below the domain to which VVPE applies.

In this section I apply this diagnostic to two pieces of functional morphology: the Semelfactive Suffix (*nu*) and the Secondary Imperfective suffix (2IMPF). Since numerous hypotheses have been put forward about the nature and syntactic position of these suffixes (some of which I describe below), the hope is that we can use the VVPE diagnostic to help distinguish between the different approaches that are currently in circulation.

3.1 Two Approaches to Aspectual Suffixation

Here I explore two approaches to both kinds of suffixation; one approach views *nu* and 2IMPF as occupying two different positions in the functional structure of the clause (Svenonius, 2004a,b), while the other analyzes both pieces as different instantiations of the same head (Markman, 2008, under review). Furthermore, these two approaches differ with respect to their claims about where these suffixes are housed: for Svenonius 2004a,b, *nu* is housed in *v* and 2IMPF is housed in a higher Asp projection, while for Markman 2008, under review, both are instantiations of a single light verb *v*, just above the VP domain. I present both sets of arguments for these approaches below.

Nu is a regular suffix, and induces what has been described as an ‘instantaneous’ or ‘punctual’ reading of the verb.²⁸

- (79) Dima tolknul Mašu.
 Dima.NOM push.NU.SG.M Masha.ACC
 ‘Dima pushed Masha.’

As noted by Markman (under review, 2008), this suffix is related to 2IMPF in an interesting way: namely, in the relevant contexts they appear to be in complementary distribution, and they have several similar properties, despite their obvious differences (*nu* is perfective, 2IMPF is imperfective).

For example, both 2IMPF and *nu* are licensed in conjunction with LP; for *nu* this is particularly odd because both LP and *nu* are perfectivizing, which suggests some amount of redundancy.

- (80) a. Dima vytolknul Mašu iz mašiny.
 Dima.NOM out-push.NU.SG.M Masha.ACC from car.GEN
 ‘Dima pushed Masha out of the car.’
 b. Dima vstalkival Mašu iz mašiny.
 Dima.NOM out-push.2IMPF.SG.M Masha.ACC from car.GEN
 ‘Dima was pushing Masha out of the car.’

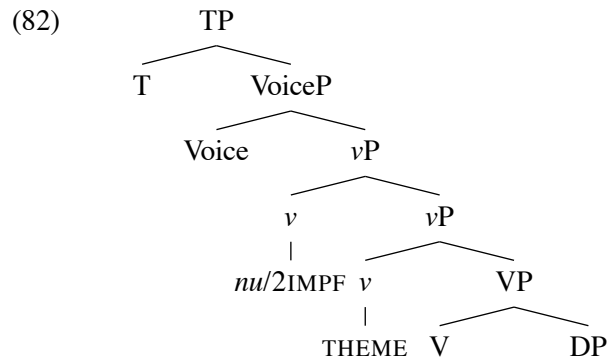
And although 2IMPF can appear with LPs and is therefore licensed in perfective contexts, it is clearly forbidden in conjunction with *nu*.

- (81) a. *Dima vstalkivnul Mašu iz mašiny.
 Dima.NOM out-push.2IMPF.NU.SG.M Masha.ACC from car.GEN
 b. *Dima vytolknuval Mašu iz mašiny.
 Dima.NOM out-push.NU.2IMPF.SG.M Masha.ACC from car.GEN

²⁸The semelfactive *nu* has a homophonous but distinct partner, the inchoative suffix, which appears in Russian verbs like *merznut* ‘freeze’. As Markman 2008 notes, such verbs do not get an instantaneous or punctual interpretation and are not relevant for the purposes of the present discussion. Furthermore, there are clear morphological differences between the two (stress placement, and truncation in the past tense).

It appears that there is only one ‘slot’ for an aspectual suffix in the Russian verbal complex, and a choice must be made between *nu* and 2IMPF.

These patterns led Markman to propose a unified account of the two suffixes, in which they instantiate the same light verb head, *v*, merged just above VP. In her view, the light verb *v* is not the same as the external argument-introducing head Voice, which is merged just above *v*P; neither is it the verbalizing conjugation vowel, which she considers to be a low *v* head. For Markman, then, the verbal complex is spread across a number of projections in a manner that is just a bit different from the structure discussed in §1.3.



Recall that Russian verbs contain a thematic vowel (THEME), which is understood to be a verbalizer, because it is the addition of this vowel that makes a root into a verb stem. For example, the root *-tolk-* is related to the concept of pushing. In its nominal form, it is rendered with a nominalizing suffix *-ok*, as *tolčok* ‘a little push’.²⁹ To make this root into a verb, the addition of inflection and the theme vowel is required:

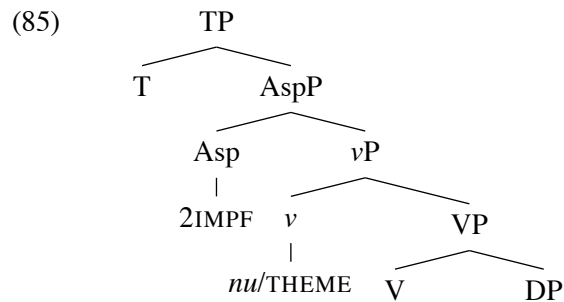
- (83)
- | |
|------------------|
| tolk-a-l |
| push-THEME-SG.M |
| ‘he was pushing’ |

Markman’s approach predicts the co-occurrence of THEME and either *nu* or 2IMPF. However, in some verbal formations *nu* cannot co-occur with the thematic conjugation vowel of the verb (84).

- (84)
- | | | | |
|----|-----------------|----------------|-----------------------|
| a. | kidat’ | / kinut | / *kidanut |
| | throw.THEME.INF | / throw.NU.INF | / *throw.THEME.NU.INF |
| b. | kusat’ | / kusnut’ | / *kusanut’ |
| | bite.THEME.INF | / bite.NU.INF | / *bite.THEME.NU.INF |

This is the piece of evidence that led Svenonius (2004a,b) to arrive at a slightly different hypothesis. For him, despite the complementary distribution of *nu* and 2IMPF, the incompatibility of THEME and *nu* is a convincing argument for the idea that these are both instances of the verbalizer *v*. As we have discussed before in §1, Svenonius’ proposal is that 2IMPF instantiates an Asp head above *v*P.

²⁹For our purposes, the affix-induced root-final consonant mutation is irrelevant



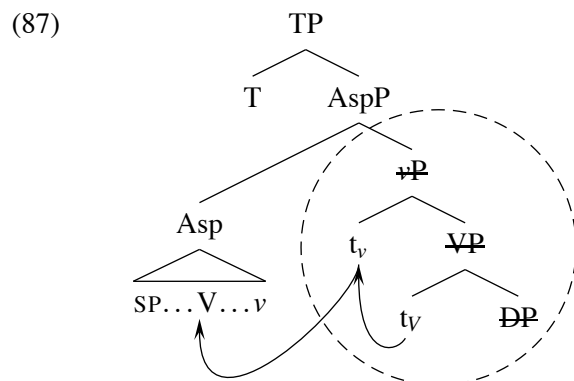
On the other hand, Markman points out that *nu* and THEME are not always in complementary distribution; a number of forms allow their co-occurrence (Švedova, 1982).

- (86)
- a. švyrjat' / švyrnut' / švyranut'
 hurl.THEME.INF / hurl.NU.INF / hurl.THEME.NU.INF
 - b. tolkat' / tolknut' / tolkanut'
 push.THEME.INF / push.NU.INF / push.THEME.NU.INF
 - c. trjasti / trjaxnut' / trjaxanut'
 shake.THEME.INF / shake.NU.INF / shake.THEME.NU.INF

Svenonius (2004b) concludes, on the basis of examples like (84a), that *nu* and the theme vowel occupy the same syntactic slot; but clearly, given (86), the situation is more complicated than this. In the following section, I will apply the VVPE diagnostic to probe competing hypotheses about these pieces of syntax.

3.2 Diagnosing the Status of the Semelfactive and Secondary Imperfective

Recall that, given the discussion thus far, it is hypothesized that Russian VVPE elides everything in the domain of *vP* after the movement of the verb outside that domain.



By extending the use we have made so far of this hypothesis as a diagnostic for structure, we can probe which parts of the stranded verb are not subject to identity requirements inside islands. We can hypothesize that if Markman's approach is correct, the verbalizer will never vary, while *nu* and 2IMPF, both light verbs with the same status, will be able to vary. The conclusion we can draw from such a result is that *v* hosts only THEME and not *nu*. On the other hand, if we find that only 2IMPF is subject to variation, while THEME and *nu* are subject to identity requirements, this result would lend support to Svenonius' approach, in which *nu* and THEME share the *v* head.

As I will demonstrate below, neither *nu* nor 2IMPF are subject to identity restrictions in VVPE. To accurately test this claim, a verb is required that is both demonstrably strongly transitive and makes available the possibility of *nu* and 2IMPF suffixation. One such verb is *vpixnut' / vpixivat'*, which is the verb 'to stuff (something into something)' in its perfective (*nu*) and imperfective (2IMPF) forms respectively. That this verb is strongly transitive can be demonstrated by the unacceptability of examples like (88), where neither VVPE nor object drop are licensed. Given just a situational antecedent, either form of this verb is unacceptable inside an island if its internal arguments go missing (88).

- (88) a. [A lone piece of clothing lies beside a completely full suitcase.]
 #Menja sil'no razdražet to obstojatel'stvo, što ty ne smog vpixnut' ____
 Me.ACC strongly annoys.3SG that circumstance that you NEG able in-shove.NU.INF ____
 ____.

intended: 'The circumstance that you weren't able to shove (that piece of clothing into that suitcase) really annoys me.'
- b. [A lone piece of clothing lies beside a completely full suitcase.]
 #Menja sil'no razdražet to obstojatel'stvo, što ty ne zaxotel
 Me.ACC strongly annoys.3SG that circumstance that you NEG wanted.SG.M
 vpixivat' ____ ____.
 in-shove.2IMPF.INF ____ ____
intended: 'The circumstance that you didn't want to shove (that piece of clothing into that suitcase) really annoys me.'

Such unacceptable cases indicate that, unless object drop or VVPE can apply, this verb requires its internal arguments to be overtly realized.

Now we are in a position to check whether the 2IMPF and *nu* suffixes can be mismatched in the stranded and antecedent verbs in VVPE. As with previous tests for morphological mismatch in the verbal complex, we can be sure we are dealing with VVPE here because the gap is embedded inside an island, and a linguistic antecedent is provided.

- (89) Ja dolgo vpixival ètu kurtku v čemodan, no v itoge ne
 I long-time in-shove.2IMPF.SG.M that.ACC jacket.ACC in suitcase but in end NEG
 polučilos'.
 come-about.3SG.N
 'I was shoving that coat into the suitcase for a while, but in the end it didn't work out.'

Da, menja sil'no razdražet to obstožatel'stvo, što ty ne smog vpixnut' —
 Yes me.ACC strongly annoys.3SG that circumstance that you NEG able in-shove.NU.INF —
 —.
 —

‘Yes, the circumstance that you weren’t able to shove (that piece of clothing into that suitcase) really annoys me.’

- (90) Ja v itoge smog vpixnut' ètu kurtku v čemodan.
 I in end able in-shove.NU.INF that.ACC jacket.ACC in suitcase
 ‘I was finally able to shove that jacket into the suitcase.’

Da, no my sil'no opozdali iz-za togo obstožatel'stva, što ty tak dolgo
 Yes but we strongly late.PL from-behind that.GEN circumstance.GEN that you so long
 vpixival — —.
 in-shove.2IMPF.SG.M — —

‘Yes, but now we’re late because of the circumstance that you were shoving (the jacket into the suitcase) for so long.’

From examples like (89) and (90), it is clear that 2IMPF and *nu* are interchangeable in the stranded and antecedent verbs. Since it does not appear that *nu* or 2IMPF are relevant for the calculation of verbal identity in VVPE, this suggests that both suffixes are merged above the ellipsis domain. If our hypothesis — namely, that *vP* is the relevant domain for ellipsis — is correct, then this evidence suggests that neither 2IMPF nor *nu* is hosted in *v*.

A natural next step in this investigation would be to check whether the verbalizing theme vowel is also irrelevant in this way. Unfortunately, several circumstances conspire to make this impossible, or at least not useful, to check. This is because in the vast majority of cases, for every root there is typically exactly one verbalizing suffix. For the limited number of cases in which one root can take more than one suffix, it is not always clear whether this suffix is truly a verbalizer in the traditional sense. There are two subgroups here: a first subgroup involves suffixes which control the resulting argument structure of the complex (91).

- | | <i>ej</i> -stem | <i>i</i> -stem |
|---------|--------------------------|-------------------------------|
| (91) a. | op"janet' ‘become drunk’ | op"janit' ‘make (as) drunk’ |
| b. | staret' ‘grow old’ | starit' ‘make (appear) older’ |
| c. | bogatet' ‘get rich’ | obogatit' ‘make rich’ |
- (Svenonius, 2004b, 181)

In the case of this first subgroup, it is nonsensical to use VVPE as a probe for functional structure and possible mismatch. This is because the vowels in question reflect changes in valence which would disrupt the VVPE parallelism requirement that the antecedent and stranding verb have the same argument structure.

A second subgroup involves alternating suffixes which control the resulting aspectual marking of the verb. While the vast majority of Russian verb stems are imperfective and combine with only one verbalizing

suffix, there is a class of exceptions in which the root-adjacent vowel may change, changing with it the aspectual features of the resulting complex (92).

(92) (adapted from Townsend 1975, 114)

	IMPF	PFV	GLOSS
a.	brosat'	brosit'	throw.INF
b.	končat'	končit'	finish.INF
c.	pokupat'	kupit'	buy.INF
d.	lišat'	lišit'	deprive.INF
e.	puskat'	pustit'	let.INF
f.	rešat'	rešit'	decide.INF
g.	xvatat'	xvatit'	grab.INF; suffice.INF

Because the root-attaching vowels in question here do not change the valence of the resulting complex, they might seem at first to be good candidates for testing via VVPE. However, these suffixes are in fact such that the result of testing via VVPE would not be informative. There is a genuine *-i-* verbalizing suffix which is productive, appears in a large class of Russian verbs, and is not associated with perfectivity. Verbs with this genuine *-i-* are unified as a class in that they undergo consonant mutation under certain conditions, as in (93).

(93) (adapted from Townsend 1975, 135)

	PFV	2IMPF	GLOSS
a.	ostavit'	ostavljat'	leave.INF
b.	sprosit'	sprašivat'	ask.INF
c.	udivit'	udivljat'	amaze.INF
d.	dobavit'	dobavljat'	add.INF

Many verbs with the perfective *-i-* fail to undergo this consonant mutation (94).

(94)

	PFV	2IMPF	GLOSS
a.	sbrosit'	sbrasyvat'	throw/drop off.INF
b.	sxvatit'	sxvatyvat'	grasp.INF

This pattern indicates that the perfectivizing vowel in verbs like those in (92) and (94) may not be of the same status as genuine verbalizing suffixes. For this reason, though we can attempt to test mismatch in VVPE in the cases in (92), it is not entirely clear what the results would mean, since we cannot test mismatch for the genuine cases (because in those cases there is no alternation).³⁰

³⁰We can still run the test, of course, though it's not clear what the results actually indicate. The preliminary conclusion seems to be that mismatch of the aspect-controlling vowel is available in the verbs of (92).

(95) Igraja v karty, Vasja dumal, prikupit' sledujuščuju kartu, ili net. Nakonec on prišel k rešeniju, playing at cards Vasja consider.SG.M at-buy.PFV.INF next card or not. Finally he came.SG.M to decision što ne budet prikupat' _____.
that NEG will at-buy.IMPF.INF ____
'While playing cards, Vasja considered whether to draw the next card or not. Finally, he came to the decision that (he) won't draw (one).'

Despite this inconvenience, attempting to mismatch parts of the verbal complex in VVPE does provide us with valuable information about the status of SP, LP, 2IMPF and *nu* with respect to their site of origination within the clausal structure of Russian. That this diagnostic is not a catch-all is, if anything, a testament to the complexity of these data and to the need for different kinds of (morpho-)syntactic diagnostics in their investigation.

4 Conclusion

This discussion began with the question: how do we establish and support a theory of the functional structure of clauses in a particular language? For Russian, this question has of course been of fundamental interest to syntacticians for quite some time (King, 1995; Bailyn, 1995a,b; Sekerina, 1997; Bailyn, 2004, *inter alia*); yet numerous aspects of Russian clausal structure are still very much in question. It is no doubt valuable that independently developed strands of research exist, with consequences for this question; but here we also attempted to draw on independent diagnostics that can help identify and verify the proposed syntactic position of various types of functional material.

I have attempted to defend the position that certain parts of the verbal complex are, despite their status as morphological parts of an inseparable word, independent syntactic units. This claim is supported by evidence from VVPE, which illustrates that identity conditions on the stranded and antecedent verbs, or lack thereof, can be used to ascertain the original merger site of a particular part of a complex verb (either above or below the ellipsis domain). To pursue the above goals, the empirical details of VVPE had to be worked out in some detail, with the interesting consequence that we also have unearthed related issues in two distinct areas of research.

One such area is the issue of argument drop. Given the exploration here, it is clear that Russian argument drop is subject to certain syntactic restrictions — it cannot occur inside syntactic islands — but there are many remaining questions about this pattern. First, the results of the judgment task reported in this paper make clear that not all islands are identical, with respect to how unacceptable object drop is inside of them. The approach developed in this paper makes the clear prediction that the relative (un)acceptability of extraction out of an island should correspond to the relative (un)acceptability of object drop inside that same kind of island; this claim is certainly interesting enough to merit further investigation. Second, the pattern found for Russian object drop apparently does not hold cross-linguistically, for example in languages like Chamorro (Chung, 1984), Imbabura Quechua, Korean, Thai (Cole, 1987), and Brazilian Portuguese (Farrell, 1990). This raises the important question of how we might account for the source of island sensitivity for languages in which it obtains. Finally, the issue of argument drop also connects to debates about whether surface strings that might be interpreted either as VVPE or argument drop can be convincingly argued to be one but not the other.

A second area is that of ellipsis licensing conditions. While it is clear that certain pieces of the stranded verb must match the antecedent verb in particular contexts, it is not yet apparent how to formally characterize the semantic requirement so that verbs can be mismatched only under contrastive focus in Russian (though preliminarily, the Russian facts point to the conclusion that traces of head movement, like traces of phrasal movement, must be understood as variables). A further conundrum concerns the question of why verbal mismatch in analogous Hebrew constructions is impossible, even under contrastive focussing of the relevant verbs.

Both argument drop and ellipsis licensing are, in this paper, explored on the way to developing VVPE as a tool to identify the position of various parts of the functional structure of the Russian verbal complex. To the extent that this endeavor has been successful, the hope is that we can apply this diagnostic to other languages in which complex verbal morphology is morphophonologically inseparable but syntactically independent.

References

- Avrutin, Sergey, and Maria Babyonyshev. 1997. Obviation in subjunctive clauses and Agr: Evidence from Russian. *Natural Language and Linguistic Theory* 15(2):229–262.
- Babko-Malaya, Olga. 2003. Perfectivity and prefixation in Russian. *Journal of Slavic Linguistics* 11(1):5–36.
- Bailyn, John Frederick. 1995a. *A Configurational Approach to Russian ‘Free’ Word Order*. PhD thesis, Cornell University.
- Bailyn, John Frederick. 1995b. Underlying phrase structure and ‘short’ verb movement in Russian. *Journal of Slavic Linguistics* 3(1):13–58.
- Bailyn, John Frederick. 2004. Generalized inversion. *Natural Language and Linguistic Theory* 22:1–49.
- Biskup, Petr. 2007. Ps, Lexical Ps, and Superlexical Ps. In *Proceedings of Grammar and Corpora 2007*, Czech Republic. The Czech Language Institute.
- Borik, Olga. 2009. Morphology-semantics interface: Dealing with aspect. In A. Galani, D. Redinger, and N. Yeo (Eds.), *York Papers in Linguistics Series 2*, 22–45.
- Bowers, John. 1993. The syntax of predication. *Linguistic Inquiry* 24(4):591–656.
- Bresnan, Joan. 1982. Control and complementation. *Linguistic Inquiry* 13:343–434.
- Campos, Héctor. 1986. Indefinite object drop. *Linguistic Inquiry* 17(2):354–359.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In R. Martin, D. Michaels, and J. Uriagereka (Eds.), *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*. Cambridge, MA: MIT Press.
- Chung, Sandra. 1984. Identifiability and null objects in Chamorro. In *Proceedings of the Tenth Annual Meeting of the Berkeley Linguistics Society*, 116–130, University of California, Berkeley.
- Chung, Sandra. 2006. Sluicing and the lexicon: The point of no return. In R. T. Cover and Y. Kim (Eds.), *Proceedings of the Annual Meeting of the Berkeley Linguistics Society 31*, 73–91, Berkeley, CA. Berkeley Linguistics Society.
- Chung, Sandra, Bill Ladusaw, and James McCloskey. 1995. Sluicing and logical form. *Natural Language and Linguistic Theory* 3:239–282.
- Chung, Sandra, and James McCloskey. 1983. On the interpretation of certain island facts in GPSG. *Linguistic Inquiry* 14(4):704–713.
- Cole, Peter. 1987. Null objects in Universal Grammar. *Linguistic Inquiry* 18:597–612.
- Comrie, Bernard. 1973. Clause structure and movement constraints in Russian. In *Papers from the Ninth Regional Meeting, Chicago Linguistic Society*, 291–304, University of Chicago.
- Culicover, Peter W., and Ray Jackendoff. 2005. *Simpler Syntax*. Oxford: Oxford University Press.
- Dalrymple, Mary, Stuart Shieber, and Fernando Pereira. 1991. Ellipsis and higher-order unification. *Linguistics and Philosophy* 14:399–452.
- Dimitrova-Vulchanova, Mila. 1999. *Verb Semantics, Diathesis and Aspect*. Munich: Lincom Europa.
- Doron, Edit. 1991. V-movement and VP ellipsis. Unpublished ms.
- Doron, Edit. 1999. V-Movement and VP ellipsis. In S. Lappin and E. Benmamoun (Eds.), *Fragments: Studies in Ellipsis and Gapping*, 124–140. New York and Oxford: Oxford University Press.

- Farrell, Patrick. 1990. Null objects in Brazilian Portuguese. *Natural Language and Linguistic Theory* 8(3):325–346.
- Fiengo, Robert, and Robert May. 1994. *Indices and Identity*. Cambridge, MA: MIT Press.
- Fowler, George. 1994. Verbal prefixes as functional heads. *Studies in the Linguistic Sciences* 24(1).
- Fox, Danny. 2000. *Economy and Semantic Interpretation*. Cambridge: MIT Press.
- Franks, Steven. 1995. *Parameters of Slavic Morphosyntax*. Oxford: Oxford University Press.
- Ghomeshi, Lila. 2001. Control and thematic agreement. *Canadian Journal of Linguistics* 46:9–40.
- Ginzburg, Jonathan, and Ivan Sag. 2000. *Interrogative Investigations*. Stanford, CA: CSLI Publications.
- Goldberg, Lotus. 2002. An elucidation of null direct object structures in Modern Hebrew. In L. Mikkelsen and C. Potts (Eds.), *WCCFL 21*, 99–112. Cascadilla Press.
- Goldberg, Lotus. 2005a. *Verb-Stranding VP Ellipsis: A Cross-Linguistic Study*. PhD thesis, McGill University.
- Goldberg, Lotus. 2005b. On the verbal identity requirement in VP ellipsis. Unpublished ms., Presented at the *Identity in Ellipsis* workshop at UC Berkeley.
- Gordishevsky, Galina, and Sergey Avrutin. 2003. Subject and object omissions in child Russian. In *Israeli Association for Theoretical Linguistics Conference 19*, Ben Gurion University of the Negev, Israel.
- Gundel, Jeanette K. 1980. Zero NP-anaphora in Russian: a case of topic-prominence. In *Chicago Linguistics Society 16. Papers from the Parasession on Anaphora*, 139–146.
- Hankamer, Jorge, and Ivan A. Sag. 1976. Deep and surface anaphora. *Linguistic Inquiry* 7:391–426.
- Hardt, Daniel. 1993. *Verb phrase ellipsis: Form, meaning, and processing*. PhD thesis, University of Pennsylvania, Philadelphia. Distributed as IRCS report 93-23.
- Hartman, Jeremy. 2011. The semantic uniformity of traces: Evidence from ellipsis parallelism. *Linguistic Inquiry* 42.
- Hashemipour, Peggy. 1988. Finite control in Modern Persian. In H. Borer (Ed.), *Proceedings of the seventh West Coast Conference on Formal Linguistics*, Stanford. CSLI.
- Hashemipour, Peggy. 1989. *Pronominalization and control in Modern Persian*. PhD thesis, University of California, San Diego.
- Heim, Irene. 1997. Predicates or formulas? Evidence from ellipsis. In A. Lawson (Ed.), *Proceedings from Semantics and Linguistic Theory VII*, 197–221, Cornell, Ithaca. CLC Publications.
- Hoji, Hajime. 1998. Null objects and sloppy identity in Japanese. *Linguistic Inquiry* 28:127–152.
- Huang, C.-T. James. 1984. On the distribution and reference of empty pronouns. *Linguistic Inquiry* 15(3):531–574.
- Isačenko, Aleksandr V. 1960. *Grammatičeskij Stroj Russkogo Jazyka. Morfologija. Čast' Vtoraja*. Bratislava: Vydavatel'stvo Slovenskej Akademie.
- Jakobson, Roman. 1948. Russian conjugation. *Word* 4:155–167.
- Kim, Soowon. 1999. Sloppy/strict identity, empty objects, and NP ellipsis. *Journal of East Asian Linguistics* 8:255–284.
- King, Tracy Holloway. 1995. *Configuring Topic and Focus in Russian*. Stanford: CSLI Publications.
- Kitagawa, Yoshihisa. 1991. Copying identity. *Natural Language and Linguistic Theory* 9:497–536.
- Landau, Idan. 2004. The scale of finiteness and the calculus of control. *Natural Language and Linguistic Theory* 22:811–877.
- Marantz, Alec. 1984. *On the Nature of Grammatical Relations*. Vol. 10 of *Linguistic Inquiry Monographs*. Cambridge: MIT Press.
- Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. In A. Dimitriadis, L. Siegel, C. Surek-Clark, and A. Williams (Eds.), *Proceedings of the 21st Penn Linguistics Colloquium*, Philadelphia. UPenn Working Papers in Linguistics.
- Markman, Vita. 2008. On Slavic semelfactives and secondary imperfectives: Implications for the split

- ‘AspP’. In *Proceedings of the 31st Annual Penn Linguistics Colloquium*, Vol. 14, Frankfurt. University of Pennsylvania Working Papers in Linguistics.
- Markman, Vita. under review. Slavic semelfactives, secondary imperfectives, and the cartography of the Aspectual Phrase. Unpublished ms., Paper submitted to *Studia Linguistica*.
- Martins, Ana-Maria. 1994. Enclisis, VP-deletion and the nature of Sigma. *Probus* 6:173–205.
- Martins, Ana-Maria. 2000. A minimalist approach to clitic climbing. In J. ao Costa (Ed.), *Portuguese Syntax, New Comparative Studies*, 169–190. Oxford University Press.
- McCloskey, James. 1991. Clause structure, ellipsis and proper government in Irish. *Lingua* 85:259–302.
- McCloskey, James. to appear. The shape of Irish clauses. In A. Carnie (Ed.), *Proceedings of Formal Approaches to Celtic Linguistics*. Cambridge Scholars Publishing. Available at <http://ohlonline.ucsc.edu/~jim>.
- McShane, Marjorie. 2005. *A Theory of Ellipsis*. Oxford: Oxford University Press.
- Merchant, Jason. 2001. *The Syntax of Silence: Sluicing, Islands and the Theory of Ellipsis*. Oxford: Oxford University Press.
- Merchant, Jason. 2007. Voice and ellipsis. Unpublished ms.
- Merchant, Jason. 2008. An asymmetry in voice mismatches in VP-ellipsis and pseudogapping. *Linguistic Inquiry* 39(1):169–179.
- Merchant, Jason. 2010. Three kinds of ellipsis: Syntactic, semantic, pragmatic? In F. Recanati, I. Stojanovic, and N. Villanueva (Eds.), *Context-Dependence, Perspective, and Relativity*, 141–192. Berlin: Walter de Gruyter.
- Ngonyani, Deo. 1996. VP ellipsis in Ndendeule and Swahili applicatives. In E. Garrett and F. Lee (Eds.), *Syntax at Sunset, UCLA Working Papers in Syntax and Semantics, Number 1*, 109–128. Department of Linguistics, UCLA.
- Otani, Kazuyo, and John Whitman. 1991. V-raising and VP-ellipsis. *Linguistic Inquiry* 22:345–358.
- Padučeva, Elena V. 1985. *Vyskazyvanie i ego sootvetstvennost’ s dejstvitel’nost’ju: referencial’nye aspekty semantiki mestoimenii*. Moscow: Nauka.
- Pesetsky, David. 1982. *Paths and Categories*. PhD thesis, MIT.
- Pollock, Jean-Yves. 1989. Verb movement, universal grammar, and the structure of IP. *Linguistic Inquiry* 20:365–424.
- Potsdam, Eric. 2007. Malagasy sluicing and its consequences for the identity requirement on ellipsis. *Natural Language and Linguistic Theory* 25:577–613.
- Prüst, Hub, Martin van den Berg, and Remko Scha. 1994. Ellipsis and higher-order unification. *Linguistics and Philosophy* 17:261–327.
- Ramchand, Gillian, and Peter Svenonius. 2002. The lexical syntax and lexical semantics of the verb-particle construction. In L. Mikkelsen and C. Potts (Eds.), *Proceedings of WCCFL 21*, 387–400, Somerville, MA. Cascadilla Press.
- Raposo, Eduardo. 1986. On the null object in European Portuguese. In O. Jaeggli and C. Silva-Corvalán (Eds.), *Studies in Romance Linguistics*, 373–390. Dordrecht and Cinnaminson: Foris Publications.
- Rizzi, Luigi. 1986. Null objects in Italian and the theory of *pro*. *Linguistic Inquiry* 17:501–557.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In L. Haegeman (Ed.), *Elements of Grammar*, 281–337. Dordrecht: Kluwer Academic Publishers.
- Rojina, Nina. 2004. English particles, Russian prefixes, and prepositional phrases. Master’s thesis, University of Tromsø.
- Romanova, Eugenia. 2006. *Constructing Perfectivity in Russian*. PhD thesis, University of Tromsø.
- Rooth, Mats. 1992a. Ellipsis redundancy and reduction redundancy. In S. Berman and A. Hestvik (Eds.), *Proceedings from the Stuttgart Ellipsis Workshop*. Arbeitspapiere des Sonderforschungsbereichs 340, No. 29.
- Rooth, Mats. 1992b. A theory of focus interpretation. *Natural Language Semantics* 1:75–116.

- Ross, John Robert. 1969. Auxiliaries as main verbs. *Studies in Philosophical Linguistics* 1:77–102.
- Sag, Ivan. 1976. *Deletion and Logical Form*. PhD thesis, MIT. Published, New York: Garland (1979).
- Saito, Mamoru. 1985. *Some Asymmetries in Japanese and Their Theoretical Implications*. PhD thesis, MIT.
- Sekerina, Irina. 1997. *The Syntax and Processing of Split Scrambling Constructions in Russian*. PhD thesis, CUNY Graduate School.
- Sherman (Ussishkin), Adam. 1998. VP ellipsis and subject positions in Modern Hebrew. In A. Z. Wyne (Ed.), *Proceedings of the 13th Annual Meeting of the Israel Association of Theoretical Linguistics, Bar-Ilan University, Tel-Aviv, Israel*, 211–229. Jerusalem: Akademon.
- Švedova, Natalia Ju. (Ed.). 1982. *Russkaja Grammatika*. Moscow: Akademija Nauk.
- Svenonius, Peter. 2004a. Slavic prefixes inside and outside VP. *Nordlyd* 32(2):205–253.
- Svenonius, Peter. 2004b. Slavic prefixes and morphology: An introduction to the Nordlyd volume. *Nordlyd* 32(2):177–204.
- Svenonius, Peter. 2008. Slavic prefixes are phrasal. In G. Zybatow, L. Szucsich, U. Junghanns, and R. Meyer (Eds.), *Proceedings of Formal Descriptions of Slavic Languages 5*, 526–527, Frankfurt am Main. Peter Lang.
- Tatevosov, Sergei. 2007. Intermediate prefixes in Russian. In *Proceedings of the Annual Workshop on Formal Approaches to Slavic Linguistics 16*.
- Terzi, Arhonto. 1997. PRO and null case in finite clauses. *The Linguistic Review* 14:335–360.
- Timberlake, Alan. 2004. *A Reference Grammar of Russian*. Cambridge, UK: Cambridge University Press.
- Townsend, Charles E. 1975. *Russian Word Formation*. Slavica Publishers.
- Uchibori, Asako. 2000. *The Syntax of subjunctive complements: Evidence from Japanese*. PhD thesis, University of Connecticut, Storrs.

Vera Griбанова
 Department of Linguistics
 Stanford University
 Margaret Jacks Hall, Building 460
 Stanford, CA 94305-2150
 griбанov@stanford.edu
<http://stanford.edu/~griбанov>