

Completeness and Russian Aspect

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1. Introduction

Janda (2007a) introduced the term “Completeness” as a parameter relevant to the Russian aspect system. Though the term has been used in numerous subsequent publications (Janda 2007b, 2008a, 2008c, forthcoming a, forthcoming b, Janda and Korba 2008), it has not been adequately defined or investigated. The purpose of this article is to revisit the concept of Completeness, explore the range of linguistic phenomena associated with Completeness, and address the larger theoretical implications of this parameter. This article presents several types of evidence for Completeness that have not been previously identified, in addition to summarizing findings from a number of sources.¹

2. What is Completeness?

We commence with a brief definition (1), illustrated with an example (2).

(1) A Completable situation prototypically leads to a result.

(2) *Professor pišet stat'ju.* ‘The professor is writing an article.’

Since Completeness contrasts with Non-Completeness, it is best to define (3) and illustrate (4) Non-Completeness as well.

(3) A Non-Completable situation prototypically does not lead to a result.

(4) *Professor rabotaet v kabinete.* ‘The professor is working in the office.’

In the Completable situation, the professor begins writing an article on page 1, every bit of engagement brings the article further along on its trajectory, and if the professor continues working, s/he will get to the end of the article and have a result. The Completable situation in (2) is heterogeneous, with a beginning, middle, and end. In the Non-Completable situation (4), working in one’s office is interpreted as a homogeneous activity not entailing any trajectory or progress toward a result. Examples (2) and (4) use imperfective verbs, and both verbs can be perfectivized without changing the Completeness of the situations, as in (5) and (6):

(5) *Professor napisal stat'ju.* ‘The professor wrote an article.’

(6) *Professor porabotal v kabinete nekotoroje vremja, a zatem vyšel na progulku.* ‘The professor worked in the office for a while and then went for a walk.’

Although the tense and aspect are different, (5) describes the same Completable situation as (2), where the professor has worked and worked and then come to a conclusion and stopped. (6) is likewise parallel to (4) in terms of Non-Completeness: the professor worked for a while and then simply stopped, perhaps in order to do something else, but not because something was completed.

Strictly speaking, Completeness is a property of situations, not specific lexical items (verbs).

(7) *Professora pišut stat'i.* 'Professors write articles.'

Note that the lexical items used in (2) and (7) are the same, but they describe different situations. (2) is Completable, whereas (7) is Non-Completable, yielding a gnomic statement of a job description: writing articles is just something that professors do, akin to working in their offices. For convenience we will sometimes refer to verbs as being Completable or Non-Completable, but this is shorthand for saying that the given verbs are associated with Completable or Non-Completable situations.

All verbs have a profile of situations they are associated with. For some verbs, like *pisat'* 'write', *čitat'* 'read', this profile is rather broad, encompassing both Completable and Non-Completable situations. For other verbs this profile is very narrow, restricted only to one type of situation with regard to Completeness. Verbs like *krepnut'* 'get stronger' and *gibnut'* 'perish' are strongly associated with Completable situations: it is not possible to engage in the activities of getting stronger or perishing without achieving any result. Verbs like *stonat'* 'moan' and *prygat'* 'hop' are strongly associated with Non-Completable situations: no amount of moaning or hopping in and of itself will lead to a result. Some verbs have a primary association, but can be focused toward the other end of the Completeness spectrum. *Rabotat'* 'work', for example, is primarily Non-Completable, but the addition of a prefix can yield a verb associated with Completable situations, as in *pererabotat'* 'revise, edit'.

Russian aspectual morphology aligns with Completeness (additional evidence of this alignment is presented in 3.1). Base imperfective verbs may have a range of Completeness associations (cf. verbs cited in the previous paragraph), whereas all other types of verbs are much more restricted in the situations they describe. Base perfective verbs like *dat'* 'give' are strongly Completable. Prefixed perfective verbs are either strongly Completable (like *napisat'* 'write' and *perepisat'* 'revise, edit') or strongly Non-Completable (like *postonat'* 'moan for a while' or *zaprygat'* 'start hopping', which quantify some engagement in an action without implying any result).

Suffixed perfectives are strongly Non-Completable (like *prygnut'* 'hop once', which again quantizes engagement without result, since the agent winds up back in the same place at the end). Secondary Imperfectives tend to be Completable (cf. *perepisyvat'* 'revise, edit'), but can yield Non-Completable construals (licensing forms like *poperepisyvat'* 'spend some time revising', which do not entail progress toward a result, just quantized engagement, cf. Mehlig 1994, 1996, 1997).

Completeness is not a feature. Completeness is conceptually related to some features that have been proposed for Russian aspect, such as "totality" and "boundedness", but differs from these features in several ways. For one, features are usually used as synonyms for "perfective", such that perfective verbs "have" the feature, whereas imperfective verbs do not. Thus perfective verbs are labeled "+bounded/+totality", while imperfective verbs are labeled "-bounded/-totality". However, Completeness does not designate one aspect or the other; both perfective and imperfective verbs can be either Completable or Non-Completable, and imperfective verbs can in addition be ambiguous for Completeness. Secondly, Completeness is not reducible to "plus" vs. "minus" values. It is a scalar phenomenon, and many verbs are ambiguous or variable in their Completeness, while others show strong associations with one end of the continuum or the other. Thirdly, Completeness is conceptually more complex than a feature, for it combines a number of factors, among them an expected result that usually entails a change of state and a heterogeneous structure, with a beginning, middle (where progress is made) and end. All of these factors are present in prototypical examples of Completeness, but some may be attenuated. For example, verbs that have connative ("tying") interpretations, like *ugovarivat'* '(try to) convince', can describe situations that have a beginning, middle and end, but there is no guarantee of the outcome, and there may be no progress in the middle, since the agent may have little or no control over the patient. Still, this verb is primarily Completable, and behaves as such according to many measures (cf. section 3). Bundling of factors is typical of grammatical parameters that are metaphorically motivated (cf. the many properties of aspect motivated by properties of matter in Janda 2004). I argue in Section 4.2 (and elsewhere, cf. Janda 2008a, 2008c, forthcoming a, forthcoming b) that Completeness is metaphorically motivated by the physical experience of journeys, which have a beginning (departure point), middle (when progress is made along a trajectory) and an expected conclusion, namely arrival at the destination. Fourthly, Completeness is

subject to construal, which means that the “same” objective situation can be construed differently, depending upon what factors are most salient for the speaker. A speaker confronted with a professor hard at work could utter (2), (4), or even (7), depending upon whether the speaker wanted to emphasize progress toward a result or not. Finally, there are important theoretical differences between a parameter such as Completability and a +/- feature, and these are addressed in 4.2.

To summarize, Completability is a parameter of situations described by verbs. Completable situations are the metaphorical analogs of journeys in that progress is made toward an expected conclusion. Completability is a scalar phenomenon and can be influenced by construal. Base imperfective verbs can associate with either end of the scale or be ambiguous. Perfective verbs tend to be associated with one end of the scale.

This description of Completability is primarily conceptual. Just because a concept can be identified does not mean that it is grammatically relevant (cf. Talmy 2005 for examples of concepts that are not encoded in grammars). Section 3 presents a variety of evidence for the grammatical relevance of Completability in Russian and Section 4 presents practical and theoretical advantages of recognizing the role of Completability in Russian.

3. Evidence for Completability

If Completability is a valid parameter in Russian, it should align with observable phenomena in the language, such as morphological, syntactic, and semantic patterns. Indeed we find all three types of evidence for Completability, indicating that Completability is a systemic factor in the Russian verbal lexicon. Most of this evidence has surfaced since Completability was first proposed (Janda 2007a), indicating that Completability is significant beyond the domain where it was initially recognized. This section provides the first attempt at a comprehensive list of Completability phenomena in Russian.

3.1. Morphological evidence

As mentioned in Section 2, Completability is tangible in certain patterns of morphological marking. Indeed, it was the differentiation of various types of perfective verbs in Russian that led to identification of Completability in the first

place (3.1.1.). The observations of Completability in relation to morphological marking here are more complete than those found in previous works on the topic.

3.1.1. *Various types of perfectives*

Traditional analyses of Russian aspect yielded the “pair” model, which presumes that Russian verbs exist in aspectual pairs, each containing a single imperfective verb and a single perfective verb (cf. Vinogradov 1938, Šaxmatov 1941, Bondarko 1983, Čertkova 1996, Zaliznjak & Šmelev 2000). Janda 2007a presents the alternative “cluster” model, according to which Russian verbs exist in clusters that may contain from zero to four distinct types of perfectives. The cluster model elaborates on the pair model in that pairs, where they exist, are either a type of cluster structure, or, more frequently, pairs are embedded in larger cluster structures containing multiple types of perfectives. In addition, the cluster model allows for structures that do not contain pairs at all. Overall, the cluster model is more accurate than the pair model in that it provides a comprehensive account of the real complexity of the Russian aspect system.

Crucial to the cluster model is the recognition of four types of perfectives, based on their semantics and morphological behavior. The main division between the types of perfectives is motivated by Completability, since two types of perfectives are Completable and two are Non-Completable. The four types of perfectives are presented here, along with their Completability status and descriptions of the morphological behavior associated with each type:

Natural Perfectives like *napisat'* ‘write’ and *svjazat'* ‘tie’ generally correspond to the perfective partners of imperfective verbs according to the pair model and share the same lexical meaning as their imperfective correlates *pisat'* ‘write’ and *vjazat'* ‘tie’. Natural Perfectives are strongly Completable, since they refer to the natural conclusion of a goal-oriented situation. Most Natural Perfectives are formed via prefixation of base imperfective verbs, and such Natural Perfectives tend to resist the formation of secondary imperfectives. Natural Perfectives can be formed from imperfectives that are either strongly Completable themselves (cf. perfective *okrepnut'* from *krepnut'* ‘get stronger’) or are ambiguous as to Completability (cf. perfective *napisat'* from *pisat'* ‘write’). There are a few base perfective verbs, usually referring to punctual events such as *dat'* ‘give’ that serve as Natural Perfectives and derive the corresponding imperfective via suffixation, as in *davat'* ‘give’. In addition,

there are non-prototypical morphological relationships between Natural Perfectives and corresponding imperfectives, including homonymy (with bi-aspectual verbs like *likvidirovat'* 'liquidate', where one form is both perfective and imperfective), suppletion (e.g., *skazat'* 'say' perfective and *govorit'* 'say' imperfective), and semi-suppletion (e.g., *brosit'* 'throw' perfective and *brosat'* 'throw' imperfective).

Specialized Perfectives like *perepisat'* 'revise' and *razvjazat'* 'untie' are lexically distinct from their corresponding base verbs because the prefixes direct the action in a way not inherent in the base verb. Specialized Perfectives are strongly Completable, for they refer to situations that are goal-oriented and conclude with a result (a revised manuscript or an untied knot). Specialized Perfectives can be formed from all three types of imperfectives: Completable imperfectives (such as *blokirovat'* 'block' which forms *razblokirovat'* 'unblock'), ambiguous imperfectives (such as *pisat'* 'write', which forms *perepisat'* 'revise'), and Non-Completable imperfectives (such as *rabotat'*, which forms *pererabotat'* 'revise'). There are, however, some Non-Completable imperfectives that cannot form Specialized Perfectives (such as *stonat'* 'moan'). Unlike Natural Perfectives, Specialized Perfectives nearly always form secondary imperfectives (such as *perepisyvat'* 'revise' and *razvjazyvati'* 'untie'; but note that some verb stems resist the formation of any secondary imperfective, like *kipjati'* 'boil', which forms no secondary imperfective from Specialized Perfectives like *perekipjati'* 'overboil').

Complex Act Perfectives like *postonat'* 'moan for a while' or *zaprygat'* 'start hopping' quantize engagement in an action that lacks goal-directedness. Complex Act Perfectives focus on starting (ingressives) or stopping (terminatives) an activity or engaging in an activity for a while (delimitatives and perduratives). Since Complex Act Perfectives entail neither progress nor a result, they are strongly Non-Completable. Only imperfective base verbs that have a Non-Completable construal can form Complex Act Perfectives. Thus base verbs that are either Non-Completable (like *stonat'* 'moan') or ambiguous for Completeness (like *čitati'* 'read') can form Complex Act Perfectives (*postonat'* 'moan for a while' and *počitati'* 'read' for a while), whereas strongly Completable base imperfectives tend not to form Complex Act Perfectives (such perfectives are not formed from verbs like *krepnuti'* 'get stronger' and *likvidirovat'* 'liquidate'). Complex Act Perfectives are formed by means of prefixation (primarily *po-*, *pro-*, and *za-*, though other prefixes such as *ot-*, *raz-* and *na-* also appear), and strongly resist the formation of secondary imperfectives.

Single Act Perfectives like *prygnut* ‘hop once’ describe a single cycle of repeated events that take place without focus on a result. Like Complex Act Perfectives, Single Act Perfectives are formed from base imperfectives that have a Non-Completable construal and resist the formation of secondary imperfectives. Single Act Perfectives are formed primarily via *-nu* suffixation, though the prefix *s-* can also form such perfectives, particularly from indeterminate motion verbs (such as *xodit* ‘walk’, which forms the Single Act Perfective *sxodit* ‘walk someplace and come back once’).

Table 1 summarizes the relationship between Completeness and morphological markings in Russian aspect. Note that the table describes the most typical patterns (deviations are noted above), and that restrictions on the Completeness of the base imperfective verb do not exclude ambiguity (situations where a verb has both Completable and Non-Completable construals, as in *čitat* ‘read’).

Type of perfective	Completeness of perfective	Completeness of base imperfective	Most typical morphological marking	Presence of secondary imperfective
Natural Perfective	Completable	Must have Completable construal	Prefix	No
Specialized Perfective	Completable	No restriction	Prefix	Yes
Complex Act Perfective	Non-Completable	Must have Non-Completable construal	Prefix	No
Single Act Perfective	Non-Completable	Must have Non-Completable construal	Suffix	No

Table 1: The four types of perfectives in Russian

3.1.2. Motion verbs

The Russian verbs of motion give the most concrete evidence for Completeness, since this parameter is marked directly in their stems. Determinate stems, such as *idti* ‘walk’, describe Completable situations with goal-directed progress, namely proceeding along a path or toward a destination. Indeterminate stems, such as *xodit* ‘walk’, describe Non-Completable situations such as non-directed motion and ability to move. When indeterminate stems are used with destinations, as in *oni xodili v kino* ‘they went to the movies’, they refer to round-trips: achievement of the destination is annulled since the subject returns to the starting point. Often indeterminate stems refer

to a series of round-trips, as in *deti xodjat v školu* ‘the children go to school’. The marking of morphologically distinct determinate and indeterminate stems was considerably more widespread in Old Russian and Old Church Slavonic, and it is likely that this distinction played a crucial role in the development of Russian aspect (cf. Van Wijk 1929, Vaillant 1948, Mayo 1985, Bermel 1997, Andersen 2006, Dickey 2007). The presence of determinate (Completable) vs. indeterminate (Non-Completable) stems for a portion of the Old Russian verbal lexicon including non-motion verbs, such as *glasiti* vs. *glašati* ‘call’ and *mesiti* vs. *měšati* ‘mix’ points to a general cognitive strategy according to which many activities could be construed as engagement either in a goal-oriented or in a non-goal oriented (and often repetitive) fashion. Determined (a.k.a. Completable) stems refer to specific acts of delivering a message or getting a certain set of ingredients combined, whereas indeterminate (Non-Completable) stems refer to repeated acts with no focus on progress or result. In Janda 2008c I suggest that the grammaticalization of aspect in Russian led to the extension of determinacy to the entire verbal lexicon. In its extended use, determinacy developed into Completeness, and developed a new means of expression, namely in terms of the types of perfectives that could be formed (Natural and Specialized Perfectives being Completable, and Complex and Single Act Perfectives being Non-Completable). When prefixation took over as the primary means for expressing Completeness, the former means of expression, via distinct determinate and indeterminate stems, could contract, and now it is restricted only to a handful of motion verbs.

Completeness is especially tangible in the clusters of the modern Russian verbs of motion (Janda forthcoming). Compare this pattern with that found in Table 1. Natural Perfectives such as *pojti* ‘walk’ are formed from the determinate (Completable) stem *idti* ‘walk’. Specialized Perfectives, such as *prijti* ‘arrive’ and *iznosit’* ‘wear out’ are formed from both determinate (Completable) stems like *idti* ‘walk’ and indeterminate (Non-Completable) stems like *nosit’* ‘carry’. Complex Act Perfectives such as *poxodit’* ‘walk for a while’ and Single Act Perfectives such as *sxodit’* ‘walk someplace and come back once’ are formed only from indeterminate (Non-Completable) stems like *xodit’* ‘walk’. This pattern of formations is entirely parallel with that found in the rest of the verbal lexicon, with the difference that Completeness is unambiguous for motion verbs, since each verb is marked for only one end of the continuum or the other.

3.1.3. *Bi-aspectual verbs*

Completeness yields a prediction for bi-aspectual verbs that is confirmed by empirical study. Bi-aspectual verbs express both the Natural Perfective and the corresponding imperfective with the same form, as we see in *likvidirovat'* 'liquidate'. In order for a verb to function as a Natural Perfective without the support of a prefix, it must be strongly associated with Completable situations. Note that although many borrowed verbs are bi-aspectual in Russian, about 40% of foreign verbs enter the language as ordinary imperfective base verbs and use prefixes to form their Natural Perfectives, as we see in *fil'trovat'* 'filter', which has *profil'trovat'* as its Natural Perfective (contra claims by some scholars that all foreign verbs are bi-aspectual; see Janda 2007b). In other words, the criteria for bi-aspectuality are semantic: only verbs that are strongly Completable are bi-aspectual. Since we know that bi-aspectual verbs are strongly Completable, we should expect them to strongly resist the formation of Complex Act Perfectives, since these perfectives require the presence of a Non-Completable construal. A statistical analysis of 555 foreign verbs in Russian shows that there is indeed a strong correlation between bi-aspectuality and resistance to formation of Complex Act Perfectives (see Janda 2007b for data and full discussion).

3.1.4. *Summary of morphological evidence*

Completeness yields a major division among types of perfective verbs that can be formed, with Natural and Specialized Perfectives associated with Completable situations on the one hand, and Complex Act and Single Act Perfectives associated with Non-Completeness on the other hand. Completeness is directly marked in the determinate vs. indeterminate stems of motion verbs and accurately predicts what types of perfectives are formed from which motion verb stems. Finally, we see that Completeness leads to a correct prediction concerning bi-aspectual verbs and the formation of Complex Act Perfectives.

3.2. *Syntactic evidence*

Whereas the morphological evidence for Completeness presented in 3.1 is motivated by the framework of cognitive linguistics, one can also find syntactic evidence for Completeness motivated by the work of other scholars, mainly in the framework of generative linguistics. These parallels have not been drawn before. The scholars cited

in this section have identified patterns in relation to limited subsets of verbs, concentrating only on the behaviors of Specialized Perfectives and Complex Act Perfectives. I add to these observations a) the claim that the syntactic patterns are part of the overall phenomenon of Completability, b) corpus evidence that confirms their observations (which were based on speaker intuitions), and c) additional corpus evidence that extends these observations to the remaining types of verbs, namely Natural Perfectives and Single Act Perfectives. This research is based on data from the Russian National Corpus (www.ruscorpora.ru; RNC; all examples from this section are culled from this source)

3.2.1. *Passivization*

Baydimirova (2009) and Bondarko and Bulanin (1967: 158-163) point out that certain types of Russian verbs do not passivize despite the fact that they are transitive, among them delimitatives prefixed in *po-* and ingressives prefixed in *za-*.² Both types of verbs are Complex Act Perfectives, representing Non-Completable situations. This observation is confirmed by data in the RNC. Examples (8) and (9) illustrate the use of both types of verbs in transitive active constructions:

- (8) *Smex pomog mne, ja razogrel sup, vynučil uroki, počital knigu, starajas' otgonjat' mysli o Mirone.*

‘Laughter helped me, I warmed up the soup, studied my lessons, and read the book for a while, trying to ward off thoughts of Miron.’ [Al’bert Lixanov. Kikimora (1983)]

- (9) *A potom, oborvav sebja na poluslove, zapel pesnju tex samyx pampasov ili, mozet byt', prerij i prinjalsja izobražat' kovboja verxom na lošadi.*

‘And then, interrupting himself in the middle of a word, he started singing a song of those very pampases, or perhaps prairies, and began to portray a cowboy mounted on a horse.’ [Irina Medvedeva, Tat’jana Šiškova. Diktatura bezumija (2004) // “Naš sovremennik”, 2004.02.15]

However, there are no examples of passivization of such phrases in the RNC: one cannot say **pesnja byla zapeta* ‘the song was started singing’ or **kniga byla počitana* ‘the book was read for a while’. Furthermore, it seems that this generalization holds for all types of Non-Completable perfectives, though it is harder to find good examples of transitive uses for most of them. Perduratives prefixed in *pro-* can have accusative objects, although these are limited to time expressions and thus not prototypical direct

objects, as in (10). Single Act Perfectives are largely intransitive (*prygnut* ‘hop once’) or govern objects in the instrumental (*kivnut* ‘nod one’s head once’) or genitive case (*xlebnut* ‘supa’ ‘take one gulp of soup’), but there are a few examples of transitives with accusative objects, as in (11).

- (10) *Odnaždy muž ne vzjal pevicu na rybalku (nemudreno: ona dolžna byla vot-vot rodit’), i ta ves’ den’ proplakala.*

‘Once the husband did not take the songstress with him to go fishing (it wasn’t a good idea: she was just about to give birth), and she cried the whole day. [Natal’ja Skljarova. *Esli by u medvedja bylo ruž’e* (2002) // “Večernjaja Moskva”, 2002.02.07]

- (11) *Nu, ja kusnul jabloko.*

‘Well, I bit the apple once.’ [Vasilij Šukšin. *Pečki-lavočki* (1970-1972)]

These transitives do not passivize either: there are no examples of the type **ves’ den’ byl proplakan* ‘the whole day was cried through’ or **jabloko bylo kusnuto* ‘the apple was bitten once’. We can conclude that Completability plays a role in Russian passivization, namely that Non-Completable perfectives do not passivize, even if they are transitive.

3.2.2. *VP internal vs. VP external*

Svenonius (2004a, 2004b, forthcoming) and Ramchand (2004) describe a series of differences between the syntactic behavior of “lexical” prefixes (cf. also Spencer & Zaretskaya 1998) and “superlexical” prefixes. Lexical prefixes are present in the formation of perfective verbs that are semantically distinct from their base imperfectives, as for example the use of *za-* and *o-* to form *zapit* ‘wash down’ from *pit* ‘drink’ or *zapisat* ‘record, enroll’ and *opisat* ‘describe’ from *pisat* ‘write’. Superlexical prefixes are present in the formation of perfective verbs that quantize an action, as for example the use of *po-* to form *popit* ‘drink for a while’ from *pit* ‘drink’ or *popisat* ‘write for a while’ from *pisat* ‘write’. Mutatis mutandis, lexical prefixes are present in Specialized Perfectives, whereas superlexical prefixes characterize Complex Act Perfectives. Since Specialized Perfectives are Completable and Complex Act Perfectives are Non-Completable, I argue that the pattern of syntactic differences described by Svenonius and Ramchand is also indicative of differences in Completability. In addition, I present additional evidence that the same

syntactic differences are also relevant for the other types of perfectives in Russian, namely Natural Perfectives and Single Act Perfectives.

Svenonius and Ramchand demonstrate that lexical prefixes are low in the derivational tree, VP internal, and can be idiomatic (i.e., the meaning of the perfective verb is not strictly predictable from the prefix, as we see in *zapit'* 'wash down', *zapisat'* 'record, enroll' and *opisat'* 'describe'). I concur with these claims based on the Specialized Perfectives and suggest that the same observations hold also for the other group of Completable perfectives, namely Natural Perfectives such as *vypit'* 'drink' and *napisat'* 'write'. Indeed, according to some accounts, the relationship between a Natural Perfective and its imperfective correlate is so close that they can be considered inflectional forms of a single paradigm (cf. discussion in Janda 2007c). Furthermore, it is the case that many imperfectives have more than one Natural Perfective, and generally there is no straightforward way to predict which of the meanings of the imperfective is focused in each Natural Perfective. The imperfective *est'* has three meanings, with three corresponding Natural Perfectives, *poest'* 'get something to eat', *s'est'* 'eat up', and *raz'est'* 'corrode', but there is no apriori way to know which prefix should go with which meaning.

Superlexical prefixes are located high in the derivational tree, VP external (serving like adverbs) and highly predictable in their meanings (i.e., a verb prefixed with superlexical *po-* will always mean 'do X for a while'). Again I concur with these observations for Complex Act Perfectives and suggest that they are also valid for the other group of Non-Completable perfectives, namely the Single Act Perfectives, such as *prygnut'* 'hop once' and *kusnut'* 'bite once', since these perfectives always quantize an action by selecting a single cycle of a repeatable behavior.

Svenonius (2004b) further suggests two symptoms that correlate with the different positions of lexical and superlexical prefixes, involving nominalization and ordering of prefixes. Verbs with lexical prefixes can nominalize, whereas verbs with superlexical prefixes as a rule resist nominalization. I concur with this observation, since a Specialized Perfective like *opisat'* 'describe' can have a nominalization such as *opisanie* 'description', whereas Complex Act Perfectives lack such nominalizations: **popisanie* 'writing for a while' is not attested in the RNC. Furthermore, this observation can be extended to the remaining groups of perfectives. Natural Perfectives, which are Completable (like Specialized Perfectives), can be nominalized, as we see in *napisanie* 'writing', but Single Act Perfectives, which are

Non-Completable (like Complex Act Perfectives) resist nominalization: **kusnutie* ‘biting once’ and **prygnutie* ‘hopping once’ are not attested.

When prefixes are stacked, the derivational position of the superlexical prefix dictates that it appears outside the lexical prefix, as we see in *pozapisyvat* ‘record for a while’, where the superlexical *po-* is outside the lexical *za-*. This observation is valid, but cannot be extended to the other types of perfectives due to morphological restrictions.³

3.2.3. Predicational structure

Both Svenonius and Ramchand identify a set of differences in argument structure associated with lexical vs. superlexical prefixes. These differences include transitivity and the type of objects allowed as well as added elements of argument structure. Lexical prefixes tend to add transitivity: base verbs that are either intransitive or of variable transitivity can become transitive. Thus imperfective intransitive *dumat* ‘think’ is transitivized in a Specialized Perfective like *pidumat* ‘think up, invent’. This observation also holds for Natural Perfectives: imperfective *pisat* ‘write’ can be either transitive or intransitive, but perfective *napisat* ‘write’ is transitive. Superlexical prefixes do not increase transitivity: *popisat* ‘write for a while’ and *popit* ‘drink for a while’ are not more transitive than their corresponding imperfectives. Again, this observation can be extended to Single Act Perfectives, which are strongly intransitive.

In terms of argument structure, lexical prefixes can change the type of objects that appear and can add elements of structure, whereas superlexical prefixes cannot effect such changes. As a base imperfective, *pit* ‘drink’ can take an accusative (12) direct object that refers to a beverage, but cannot govern this object in the instrumental case, so it is not possible to say **on pil vodoj* ‘he drank by means of water’. But the Specialized Perfective *zapit* ‘wash down’ takes an accusative direct object that refers to a non-beverage (food or medicine) and has an additional object in the instrumental case that does refer to a beverage (13). The Complex Act Perfective *popit* ‘drink for a while’ has the same argument structure (14) as the imperfective (12).

(12) *Ničego ne el, tol’ko pil vodu iz grafina.*

‘He didn’t eat anything, just drank water from the carafe.’ [Fridrix Gorenštejn Kuča (1982) // “Oktjabr”, № 1, 1996]

- (13) — *My umoljaem tebjja: uspokojjsja! — vtalkivaja mne v rot piljuju i zastavljaja zapit' ee vodoj, pričitala mama. — Vyxod, bessporno, est'.*
 ‘— We beg you: Calm down! — stuffing a pill in my mouth and forcing me to wash it down with water, mom wailed. — Surely there is a solution.’ [Anatolij Aleksin. Razdel imuščestva (1979)]
- (14) *A my by prosto popili s toboj čaj i legli spat'.*
 ‘We would just spend some time drinking tea with you and then go to bed.’ [Sergej Kozlov. Pravda, my budem vseгда? (1969-1981)]
- Similarly, imperfective *pisat'* ‘write’ has an optional accusative direct object that refers to a document (15), whereas the Specialized Perfective *zapisat'* ‘record, enroll’ can have an accusative direct object that refers to a person plus an additional argument consisting of a directional phrase, such as *v školu*, literally ‘into the school’ (16), but this structure is not possible for the base imperfective. The Complex Act Perfective reflects the same argument structure (17) as the imperfective (15).
- (15) *Ja soznatel'no pisal roman, no roman osobogo roda — sociologičeskij.*
 ‘I wrote a novel intentionally, but it was special kind of novel — a sociological one.’ [Aleksandr Zinov'ev. Russkaja sud'ba, ispoved' otščepenca (1988-1998)]
- (16) *God nazad zapisala ego v školu iskusstv.*
 ‘A year ago I enrolled him in art school.’ [Pomogite, požalujsta! (2002) // “Domovoj”, 2002.09.04]
- (17) *Nu, čast' vremeni ja potraču na uničtoženie nedopisannyx stixov; nemnožko ešče popišu prozu.*
 ‘Well, I will spend some of the time destroying unfinished poems; in addition I will spend some time writing prose.’ [Julij Daniël'. Pis'ma iz zaključenija (1966-1970)]

Data from the RNC support Svenonius' and Ramchand's division between lexical and superlexical prefixes based on syntactic behavior. Whereas Natural Perfectives do not change the argument structure (18-19) of the imperfective base, they do tend to narrow down the options (largely in the direction of transitivization), but this identity with the imperfective is likely motivated by the special status of the Natural Perfective (approximating an inflectional form, see above). Single Act Perfectives, like the similarly Non-Completable Complex Act Perfectives, do not augment the argument structure: (20) shows the same structure for the imperfective base *kusat'* ‘bite’ as we see for the Single Act Perfective *kusnut'* ‘bite once’ in (11).

- (18) *Kogda bokal kosnulsja gub Vojcika, on žadno pril'nul gubami k krasnovatomu steklu i vypil vodu.*
 ‘When the chalice touched Vojcik’s lips, he greedily clutched the reddish glass with his lips and drank up the water.’ [Ju. O. Dombrovskij. Obez’jana prixodit za svoim čerepom, čast’ 2 (1943-1958)]
- (19) *Podobno bol’šinstvu žurnalistov, ja mečtal napisat’ roman.*
 ‘Like most journalists, I dreamed of writing a novel.’ [Sergej Dovlatov. Čemodan (1986)]
- (20) *Namin melanxolično ogljadyvalsja, tumanno ulybalsja, kuril kal’jan, sonno lil na šal’vary čto nalili v bokal, kusal jabloko i v diskussijax učastija ne prinimal, ne mešaja devuškam obščat’sja.*
 ‘Namin looked around sadly, smiled in a hazy way, smoked a hookah, sleepily poured onto the shalwars what had been poured in the chalice, bit an apple and did not participate in the discussions, not interfering with the girls’ socializing.’ [Nikolaj Klimintovič. La vie de jour (1996) // “Kommersant”-Daily”, 1996.01.27]

3.2.4. Summary of syntactic evidence

Table 2 gathers the evidence presented in this section. “Pass.” refers to capacity for passivization, and “Nomin.” refers to capacity for nominalization. “Int. order” represents internal order in the stacking of prefixes, according to which lexical prefixes are internal (+), while superlexical prefixes are external (-). “↑ trans.” compares perfectives that increase transitivity (with respect to the base imperfectives) with those that do not. “Δ arg.” compares perfectives that change the argument structure of the base imperfective with those that do not. “NA” signals “not applicable” where relevant observations are not available.

Status	Type	Pass.	Nomin.	Int. order	↑ trans.	Δ arg.
Completable	Nat Perf	+	+	NA	+	NA
	Spec Perf (lexical)	+	+	+	+	+
Non-Completable	Comp Act Perf (superlexical)	-	-	-	-	-
	Sing Act Perf	-	-	NA	-	-

Table 2: Summary of syntactic evidence for Completeness

Table 2 is presented as a means of visualizing the pervasive divide between Completable and Non-Completable status of types of perfectives, but it suppresses some of the detail presented in this section. It should be taken as a generalization over typical examples, where “+” and “-” represent trends rather than absolute feature values.

Overall we see that the observations suggested by Svenonius and Ramchand for Specialized Perfectives vs. Complex Act Perfectives (here additionally supported by usage-based corpus data) hold also for Natural Perfectives and Single Act Perfectives, confirming Completeness as an endemic parameter in Russian grammar.

3.3. Semantic evidence

Here I offer two kinds of semantic evidence for Completeness, one involving the metonymical relationships between imperfective and perfective verbs, and the other involving the structure of semantic networks of verbs and prefixes. Though both phenomena have been described in earlier works, in neither case has the connection with Completeness been explored before. For the first time here I demonstrate the parallels between these two phenomena and Completeness.

3.3.1. Metonymic relationships between imperfective and perfective verbs

Peirsman and Geeraerts (2006) describe metonymy in terms of a radial category based on a prototypical core of spatial part-whole relationships such as *Where's the redhead?* where a part (red hair) refers to an entire individual. The primary dimension structuring the category of metonymy is contiguity, which is a scale of strength of contact. The contiguity scale has four points, ranging from the strongest and most prototypical part-whole relationship to the weakest and most peripheral relationship of adjacency. Here are brief descriptions of the four points with examples cited by Peirsman and Geeraerts (2006):

- Part-whole (cf. *grading papers* where an entire process is named only by one part of the process, the actual recording of the grades)
- Containment (cf. German *Frauenzimmer* ‘woman’, where a word that once meant ‘womanhood’ now denotes a single individual from that collection)
- Contact (cf. cause & effect metonymy of French *lumière* where ‘light’ stands for ‘lamp’, and the lamp as a cause is in contact with the light it produces)

- Adjacency. (cf. German *Tafelrunde* ‘roundtable’ where the table stands for the people at it).

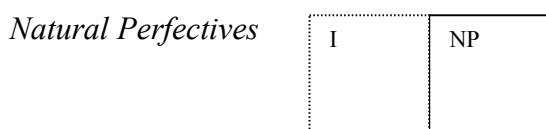
Whereas Peirsman and Geeraerts (2006), like nearly all work on metonymy (cf. Kövecses and Radden 1998, Panther and Radden 1999, Dirven and Pörings 2002), focuses on lexical metonymy, recent work (Janda forthcoming c, Nessel forthcoming) has begun to explore the role of metonymy in grammar. Also in this vein, Janda 2008b analyzes the four types of Russian perfectives in terms of the contiguity scale suggested by Peirsman and Geeraerts (2006). Metonymy is an appropriate model for understanding the types of Russian perfectives because perfectivization always involves a narrowing of the range of meanings available in the imperfective. Here is a brief inventory that demonstrates the parallels between the points on the contiguity scale and the types of perfectives, illustrated with diagrams derived from Peirsman and Geeraerts (2006). Note that perfectives are symbolized by a solid line (since they are bounded), and imperfectives are symbolized by a dashed line (since they are unbounded):



Part-whole: A Complex Act Perfective (CAP) such as *postonat'* ‘moan for a while’ or *zaprygat'* ‘start hopping’ quantifies a portion of an unbounded imperfective activity (I) such as *stonat'* ‘moan’ or *prygat'* ‘hop’, usually the beginning, ending, or another period of time.

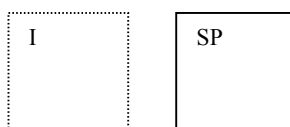


Containment: The relationship here is between an imperfective (I) like *prygat'* ‘hop’ that describes an unbounded series of repetitions and a Single Act Perfective (SAP) that describes only one item contained the series *prygnut'* ‘hop once’.



Contact: A Natural Perfective (NP) like *napisat* ‘write’ describes the natural culmination of the Imperfective (I) activity *pisat* ‘write’. The contiguity is clear in that the two verbs have the same meaning, but differ only in aspect. There is contact in the temporal domain because the activity shares a temporal boundary with the result it produces. The Natural Perfective denotes an immediate consequence of the corresponding imperfective situation.

Specialized Perfectives



Adjacency: In relation to an unprefixated imperfective (I), a Specialized Perfective (SP) like *perepisat* ‘revise’ and *razyjazat* ‘untie’ represents a related action that is more specific in its focus. The actions are not the same; there is some semantic difference here that corresponds to distance, and this distance is captured by the adjacency relationship.

The results of this analysis are summarized in Table 3, which additionally indicates the prototypicality of the metonymy and the Completability status.

Status	Type	Contiguity point	Prototypicality
Non-Completable	Complex Act Perf	part-whole	most prototypical
	Single Act Perf	containment	prototypical
Completable	Natural Perf	contact	peripheral
	Specialized Perf	adjacency	most peripheral

Table 3: Distribution of types of perfectives along contiguity scale

In Table 3, as in Table 2, “Status” shows whether the type of perfective is Completable or Non-Completable, and “Type” names the four types of perfectives. “Contiguity point” shows the alignment of the types of perfectives with the four points on the contiguity scale of metonymy, and “Prototypicality” identifies where each point on the contiguity scale lies in the radial network of metonymy. We see a clear pattern here: Non-Completable perfectives reflect prototypical instances of metonymy, whereas Completable perfectives reflect weaker, more peripheral instances of metonymy. We thus observe a parallel between Completability and the prototypicality of the metonymy that motivates the perfective.

3.3.2. Semantic networks

Janda and Nessel (forthcoming) present a semantic network for the Russian prefix *raz-* (Figure 1). When analyzed from the perspective of Completeness, we find yet another parallel.

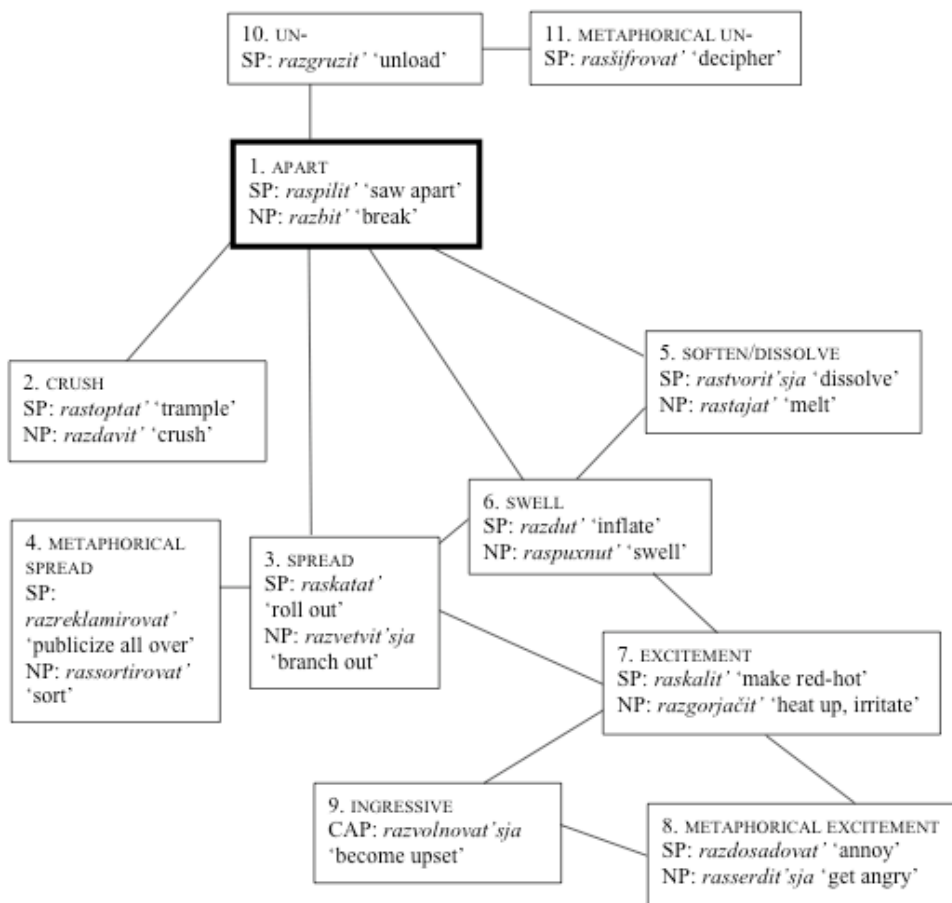


Figure 1: Semantic network of the Russian prefix *raz-*

Figure 1 presents in condensed form the results of a study of approximately 1,000 perfectives prefixed in *raz-*. The prefix *raz-* forms three types of perfectives: Natural Perfectives (NP), Specialized Perfectives (SP), and Complex Act Perfectives (CAP). Figure 1 shows that the two Completable types of perfectives, the Natural Perfectives and Specialized Perfectives, occupy overlapping portions of the network, namely in submeanings 1-8. In these submeanings, the meanings that the prefix *raz-* adds to the base verb in the Specialized Perfective parallel the meanings of the base verbs that form their Natural Perfectives with *raz-*. The examples cited in Figure 1 illustrate this (here we take only three sets of examples, but for a full discussion see Janda and

Neset forthcoming): *pilit* ‘saw’, *toptat* ‘stamp one’s feet’, and *katat* ‘roll’ receive additional meanings corresponding to *apart* in *raspilit* ‘saw apart’, *crush* in *rastoptat* ‘trample’, and *spread* in *raskatat* ‘roll out (dough)’. The corresponding meanings are already present in the base verbs that form Natural Perfectives: *bit* ‘break’ presumes *apart*, *davit* means ‘crush’, and *vetvit’sja* ‘branch out’ presumes *spread*. There is one place in the network where Natural Perfectives and Specialized Perfectives do not overlap, but this involves meanings of “undoing” (10-11 in Figure 1) that are incompatible with the formation of Natural Perfectives (if the base verb and the perfective have the same lexical meaning, the relationship between them cannot be “undo”), and does not detract from the otherwise complete overlap. The Complex Act Perfectives (cf. 9 in Figure 1) like *razvolnovat’sja* ‘become upset, start fussing’ (an ingressive), on the contrary, do not overlap with either the Natural Perfectives or the Specialized Perfectives; they occupy their own part of the network. We thus see a division that parallels Completeness: perfectives of similar Completeness (Natural Perfectives and Specialized Perfectives) can have overlapping meanings, whereas perfectives of dissimilar Completeness (Complex Act Perfectives in opposition to the other two) do not have overlapping meanings.

3.3.3. Summary of semantic evidence

Both the semantic mechanism of metonymy and the semantic networks of prefixes give evidence for parallels to Completeness. Though all types of perfective formations involve a narrowing of meaning and thus a metonymical relationship, the types of metonymies invoked parallel the Completeness status of the resulting perfective verbs: prototypical metonymies produce Non-Completable perfectives, whereas non-prototypical metonymies produce Completable perfectives. In the semantic network of a prefix, Completable perfectives can have overlapping meanings, but the meanings of Completable perfectives do not overlap with the meanings of Non-Completable perfectives. In other words, for both phenomena we see that perfectives of like Completeness pattern together, but perfectives of unlike Completeness pattern separately. These patterns are not random and further confirm the prominence of Completeness in the Russian aspect system.

4. Advantages of Completeness

The evidence for Completability presented in Section 3 suffices to demonstrate the pervasiveness of Completability in Russian aspect. But aside from uniting these various parallels under one conceptual umbrella, what advantage is there to recognizing Completability? I argue that Completability presents practical advantages for linguistic analysis and pedagogical application, as well as theoretical advantages in terms of the elegance and sophistication.

4.1. *Practical advantages*

Completability forms the backbone for the cluster model of Russian aspect, which provides a more comprehensive and accurate description of the Russian aspect system than the traditional pair model. In addition to recognizing the four types of perfectives, the cluster model accommodates additional formations, such as Specialized Single Act Perfectives like *zaxlopnut'* 'slam shut once', which is a Specialized Perfective formed via prefixation of the Single Act Perfective *xlopnut'* 'slam once', itself formed via suffixation of the imperfective *xlopat'* 'slam' (for a discussion of this type of perfective, see Makarova and Janda forthcoming). Also accommodated in the cluster model are instances of "prefix stacking": such forms occur when a Complex Act Perfective such as *pozapisyvat'* 'record for a while' is formed from the secondary imperfective (in this case *zapisyvat'* 'record') of a Specialized Perfective (*zapisat'* 'record'), which is in turn derived from a base imperfective (*pisat'* 'write'; for more discussion see Janda 2007a). As argued by Janda and Korba (2008), the descriptive gains achieved by this model can be applied to language instruction, helping learners to achieve a more native-like grasp of Russian aspect.

4.2. *Theoretical advantages*

Theoretically Completability represents an advance over feature-based analysis. Completability also integrates both Aktionsart and the verbs of motion into a comprehensive account of aspect instead of setting them aside as "exceptions".

Traditional "pair model" descriptions of Russian aspect are typically built on the structuralist assumption of semantic features such as "boundedness" (cf. Bondarko 1971, Jakobson 1971[1957], Avilova 1976, Padučeva 1996, Talmy 2000) or "totality" (cf. Maslov 1965, Bondarko 1971, Vinogradov 1972, Comrie 1976, Smith 1991, Durst-Andersen 1992, Dickey 2000,) with absolute +/- values. Despite the fact that

most linguists have moved on from structuralism, it has been harder to shed the habit of feature assignment. A scalar parameter such as Completeness that admits manipulation via construal is more compatible with the contemporary usage-based approach of cognitive linguistics. Corpus data reveals that few, if any, linguistic relationships involve absolute binary values; most phenomena are more complex and scalar (Newman 2008).

Aktionsart (a.k.a. actionality) phenomena such as delimitatives, ingressesives and semelfactives fall outside the pair model because such verbs are “unpaired” for aspect and thus exceptional. The pair approach ignores the important role such verbs play in shaping the Russian aspect system. The problem is that the pair model focuses exclusively on relationships that are Completable, overlooking relationships that describe Non-Completable situations. When we recognize that many base imperfective verbs admit a variety of Completeness construals, it is possible to connect the both types of relationships in a single model. More concretely, the pair model limits our view of aspectual relationships to pairs with a base verb and a Natural Perfective such as *pisat’/napisat’* ‘write’, plus pairs with a Specialized Perfective and a secondary imperfective such as *razdut’/razduvat’* ‘inflate’ (cf. imperfective *duvat’* ‘blow’). However, in reality there are more aspectual relationships involved, such as the relationship of base verbs to Complex Act Perfectives like *popisat’* ‘write for a while’ and *zadut’* ‘begin to blow’, and the relationship of base verbs to Single Act Perfectives such as *dunut’* ‘blow once’.

Another type of “exception” from the point of view of the pair model is the class of motion verbs. However, as argued above (Section 3.1.2), motion verbs are not only accommodated, but indeed central to a model based on Completeness. Motion verbs serve as the metaphorical source domain for the concept of Completeness, with movement through space toward a destination mapping onto progress through an event toward a result. Motion verbs also display the maximal structure of an aspectual cluster since they have all four types of perfectives (cf. examples in 3.1.2).

5. Conclusion

I bring together a lot of loose ends in this article. I offer a comprehensive definition of Completeness. I gather up morphological evidence for Completeness from scattered sources, and add syntactic and semantic evidence that has not been previously connected to Completeness. I argue that Completeness yields a more thorough and

precise account of the Russian aspect system than has been possible before, and that this account comports well with contemporary theory and practice in cognitive linguistics.

Notes

¹ The author wishes to thank her employer, the University of Tromsø. Thanks are also due to Anna Baydimirova, who checked all the Russian examples for accuracy. All remaining errors can be attributed to the author.

² There are in addition some isolated examples of verbs that do not passivize, such as *minovat* 'pass' (which is bi-aspectual, and thus a Natural Perfective when used perfectly), however, these are exceptions rather than broad classes like the delimitatives and ingressesives.

³ Natural Perfectives resist both secondary imperfectivization and further prefixation, and since Single Act Perfectives are typically marked with a suffix, it would not be possible to say whether the suffix or the prefix is more "external" in examples like *zaxlopnut* 'slam shut once'.

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