

Aspect Lost, Aspect Regained: Restructuring of aspectual marking in American Russian *

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1. Introduction

This paper investigates the aspectual marking system in American Russian.¹ It has been proposed that the differences in aspectual marking between American Russian and Standard Russian reduce to differences in semantic notions encoded by verbal aspectual marking in the two varieties: while verbal aspectual morphology in Standard Russian encodes grammatical aspect, the same morphology in American Russian is said to encode lexical aspect instead. In other words, it can be said that in American Russian grammatical aspect is lost, and lexical aspect is regained (hence the title). This idea has been first put forward by Polinsky (1994, 1997, to appear); Pereltsvaig (to appear) incorporates this proposal into a larger hypothesis that American Russian marks only interpretable instantiations of features.

In this paper, the proposal that American Russian encodes lexical rather than grammatical aspect will be developed in two ways. First, I will investigate the exact nature of the semantic distinction encoded by aspectual marking in American Russian. Second, I will address the question of why marking for the lexical aspect is regained, while marking for the grammatical aspect is lost. This question is particularly poignant since (as is shown in this paper) categories both above and below the grammatical aspect (notably, tense and lexical aspect) are realized correctly. To answer this question, I draw a distinction between lexical and grammatical aspect in the following way: only lexical aspect encodes “the internal temporal constituency of a situation” (as proposed by Comrie 1976:3 for **all** aspectual distinctions); in contrast, grammatical aspect is like tense in that it encodes the location of the situation on the timeline. This analysis is a further development of earlier work on tense and aspect by Demirdache and Uribe-Etxebarria (2000), Julien (2001) and others.

Moreover, I will provide further support for the hypothesis that American Russian uses verbal aspectual marking to encode lexical rather than grammatical aspect by showing that the relevant data cannot be accounted for by alternative hypotheses, such as the Statistical Frequency Hypothesis and the L2-Transfer Hypothesis. Finally, I will also consider the relation between L1 attrition and L1 acquisition of aspect.

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¹ American Russian is the language of second-generation Russian-speaking emigrants in the USA (see also section 2 below). American Russian is compared to Standard Russian (‘Full Russian’ in Polinsky’s terminology). The language of many first-generation emigrants (Émigré Russian) diverges from Standard Russian in some respects, but for the purposes of this paper I will assume that it is non-distinct from Standard Russian with respect to statistical frequency patterns. For a more detailed discussion of linguistic and socio-linguistic aspects of emigrant varieties of Russian, the reader is referred to Polinsky (1997, 1998, to appear) and Zemskaya et al. (2001).

This paper is organized as follows: in the next section, I give a brief description of the corpus used and the main patterns found in the data. In section 3, I describe the Lexical Aspect Hypothesis and show how it accounts for the American Russian data. In the same section, I also describe the facts concerning tense marking in American Russian and develop a theory of tense and aspect that accounts for the relevant facts in both Standard and American Russian. In section 4, I show that the Lexical Aspect Hypothesis developed in section 3 is superior to alternative hypotheses proposed in the literature for various language attrition phenomena (such as the Statistical Frequency Hypothesis and the L2-Transfer Hypothesis), which are shown to make wrong predictions with respect to aspectual marking in American Russian. In section 5, I summarize previous research on L1 acquisition of aspect and tense in Russian and compare L1 attrition and L1 acquisition of these phenomena. Here, I conclude that L1 attrition cannot be characterized as “frozen” or “incomplete” acquisition (contra Polinsky 1997, to appear). Section 6 summarizes the paper. The Appendix provides a more detailed outline of the formal theory of tense and aspect assumed in this paper.

2. Data and methodology

The data used in this study (unless indicated otherwise) come from recordings and notes collected by Maria Polinsky (University of California San Diego) during her field work with speakers of American Russian. The latter is a variety of Russian spoken by second-generation emigrants, namely, those who were brought to the USA as children (before puberty) or were born in the USA to emigrant parents.² Regardless of their place of birth, these speakers become English-dominant very early (some of them as early as the age of 3). Moreover, it should be noted that these speakers have been studied as adults, which implies a rather lengthy period of disuse of Russian as their primary language (anywhere between 10 and 30 years).³ For these American Russian speakers, Russian is the **first** but **secondary** language: they have little or no schooling in Russian, most of them cannot read or write Russian, and have little or no exposure to Standard Russian (but only to *Émigré* Russian). Importantly, American Russian speakers rarely use the language, except when speaking to people presumed not to speak English (such as their grandparents or visitors from Russia). Hence, American Russian speakers do not speak in Russian among themselves; therefore, American Russian is different from pidgins and creoles, to which it is often compared, in that there is no language community as such. The speakers’ primary, or **dominant**, language is English (it is also their L2).

For the present study, a randomly selected portion of Maria Polinsky’s recordings and notes have been transcribed, tagged (for aspect, tense, mood, and agreement) and analyzed. The total number of verb forms analyzed in this study is 150. A preliminary look at these data shows a mixed pattern: in some cases aspectual marking is correct, while in other cases it is not.⁴ The example in (1) exemplifies correct aspectual marking, while the example in (2) exemplifies

² Not all researchers classify the two groups under the same heading; e.g., Zenskaya et al. (2001) group children-emigrants together with their parents as first-generation emigrants, whereas children born already in emigration are classified as second-generation. However, we find little difference between the language of the two groups as far as aspect is concerned.

³ On attrition of Russian among children, see Turian and Altenberg (1991) and Schmitt (2000).

⁴ Here and throughout the paper, I use the terms “correct”, “incorrect” and “mistake” only in a descriptive sense (as compared to Standard Russian), and not in any judgmental sense. What is or is not appropriate in Standard Russian has been determined by the investigators (Maria Polinsky and the author of this article); in problematic cases, monolingual Russian speakers were consulted. The larger contexts necessary for determining the appropriateness of certain forms have been omitted; instead, the corresponding Standard Russian sentences are given for each American Russian example used.

incorrect aspectual marking. Throughout the examples in this paper italics marks code-mixing; the forms under discussion are marked with boldface.

- (1) a. American Russian
 ja **pridu** s moj *boyfriend*
 I will-come with my boyfriend
- b. Standard Russian
 ja **pridu** s moim drugom
 I will-come with [my boyfriend].INSTR
 ‘I will-come with my boyfriend.’
- (2) a. American Russian (context: describing a short visit to Princeton)
 mne **nravilos’** v *Princeton*...
 me.DAT liked.IMPF in Princeton
- b. Standard Russian
 mne **ponravilos’** v Prinstone...
 me.DAT liked.PERF in Princeton
 ‘I liked it in Princeton ...’

In the present (admittedly somewhat small) corpus the total number of correct aspectual forms is 112 (75%) and the number of mistaken aspectual forms is 38 (25%). In this paper, I will argue that these 38 “mistakes” are not random, but rather represent the American Russian grammatical system. Even though the proportion of incorrect aspectual forms is not very large, those mistakes will be given special attention in this paper, as they present the clearest window into American Russian aspectual system, uncontaminated by possible access to Standard Russian grammar through memorization (cf. Polinsky to appear, Pereltsvaig 2002) or by distributional bias whereby lexical and grammatical aspects in Standard Russian tend to correlate (cf. Forsyth 1970, Andersen and Shirai 1996).⁵

So what is American Russian aspectual system like? First of all, one notices that there is no clear preference for either perfective or imperfective aspect.⁶ However, the most striking pattern emerges if the data are considered on a verb-by-verb basis. Here, one cannot help but notice that most of the verbs that are found in the corpus more than once are always found in the same aspectual form (see Table 1 below).

⁵ I thank Peter Svenonius and Tarald Taraldsen for discussing this point with me.

⁶ About 2/3 of the forms are imperfective, both in the larger corpus and among mistakes (whether counted as tokens or types/lemmas). Yet, it is hard to draw any conclusions from this fact, since (as has been noted by Comrie 1976:117) the overall frequency of perfective vs. imperfective warrants conclusions only about the statistical frequency of the meanings expressed by those aspects.

Table 1. Multiple tokens of the same verb in the same aspect

verbs found only in the IMPF			verbs found only in the PERF		
verb	translation	number of tokens	verb	translation	number of tokens
<i>ljubit'</i>	like/love	8	<i>kupit'</i>	buy	5
<i>govorit'</i>	speak/talk	8	<i>priglasit'</i>	invite	3
<i>imet'</i>	have	4	<i>skazat'</i>	say/tell	3
<i>žit'</i>	live	4	<i>otdat'</i>	give back	2
<i>učit'(sja)</i> ⁷	study/go to school	4	<i>ubit'</i>	kill	2
<i>dumat'</i>	think	3	<i>vstretit'</i>	meet	2
<i>bojat'sja</i>	be-afraid	2	<i>pozvonit'</i>	phone	2
<i>znat'</i>	know	2			
<i>pomnit'</i>	remember	2			
<i>ždat'</i>	wait	2			

Furthermore, even verbs that are found both in the perfective and the imperfective variants show a pattern: if the verb is used in the form inappropriate in a given context in Standard Russian, such mistakes only go one way. For example, the verb meaning 'read' is found 3 times in the imperfective *čitat'* (all appropriate in Standard Russian) and 3 times in the perfective *pročitat'* (all mistakes). Other verbs that show a similar pattern are *videt'/uvidet'* 'see' and *pokazat'/pokazyvat'* 'show'. Thus, we can hypothesize that aspectual marking in American Russian encodes some lexical semantic property of the verb rather than its grammatical aspect. This is formulated below as the Lexical Aspect Hypothesis (to be made more precise below).

(3) LEXICAL ASPECT HYPOTHESIS:

Aspectual marking in American Russian encodes a lexical semantic property of the verb.

In the next section, I will provide further evidence for this hypothesis and will develop an analysis to account for these facts. In section 4, I will show that this hypothesis is superior to other initially plausible alternatives.

3. Lexical Aspect Hypothesis

In the previous section, I have concluded that the aspectual marking in American Russian encodes some lexical semantic property of the verb rather than its grammatical aspect. In this section, I will elaborate on this hypothesis (section 3.2). But first I will describe my assumptions about the aspectual system in Standard Russian (section 3.1). Before the analysis is presented (in section 3.4), it will also be necessary to describe the facts concerning tense and subject-verb agreement in American Russian (section 3.3). Finally, I will briefly discuss other language varieties where the relevant lexical aspectual notion appear to be marked by verbal morphology (section 3.5).

⁷ The intransitivizing morpheme *-sja* is frequently omitted. It is never found with this verb. The use vs. omission of *-sja* is a topic for future research (and a different paper).

3.1. Aspect in Standard Russian

One cannot deny that the aspectual systems of Slavic languages are extremely complex; much ink has been spilt trying to describe them and account for them. So much so, that the whole enterprise sometimes seems futile; Forsyth (1970:2) expresses this feeling very well: “verbal aspect is a mystery which no non-Slav can hope to master”. In this paper, I maintain that Russian aspectual system can be fitted into the general picture of tense and aspect systems, and that American Russian provides us with a way to see how it can be done. But before we embark on an exploration of American Russian aspect, a few words must be said about aspect in Standard Russian. The general purpose of this section is to familiarize the reader with some of the basics of Russian aspect necessary to understand the American Russian facts to follow; therefore, many notions and phenomena that are irrelevant for our study of American Russian will be ignored.

As is well-known, Standard Russian distinguishes two morphological aspects: imperfective and perfective. This formal contrast appears in all finite forms and in many nonfinite forms, such as imperatives, infinitives, and certain participial forms. In addition to speakers intuitions, one can rely on a battery of tests that distinguish the two aspects (see Smith 1991:338-340). The morphological patterns relating perfective and imperfective verbs are quite complex: there are simple imperfectives and simple perfectives; perfectives can be formed from imperfectives by prefixation, suffixation, stress shift, and suppletion (with various morpho-phonological complications involved); imperfectives can be formed from perfectives and imperfectives (usually) by suffixation.⁸ From this wealth of aspectual forms we will ignore the following four types (they are highly infrequent in Standard Russian and therefore fall far beyond what is likely to be found in American Russian):

- (i) frequentatives, i.e., imperfective verbs formed from simple imperfectives by adding the so-called secondary imperfective suffix *-yv(a)/-iv(a)*: e.g., *čityvat* ‘read’ from *čitat* ‘read’ (cf. Forsyth 1970:28);
- (ii) semelfactives, i.e., perfective verbs formed from simple imperfective by adding the suffix *-nu* and denoting one single action of short duration: e.g., *čixnut* ‘sneeze’ from *čixat* ‘sneeze’ (cf. Forsyth 1970:26-27);
- (iii) ‘resultatives’, i.e., perfective verbs formed from imperfectives by simultaneously adding a perfectivizing prefix and the suffix *-sja* and denoting an action performed to an utmost degree: e.g., *naest’sja* from *est* ‘eat’ (cf. Forsyth 1970:23);
- (iv) bi-aspectual verbs, i.e., verbs that have the same form for both perfective and imperfective aspect: e.g., *kaznit* ‘execute’, *amputirovat* ‘amputate’, etc. (see Forsyth 1970:32, Arefiev 1999:10-11).

Most verbs are said to form the so-called aspectual pairs, that is pairs of verbs synonymous in all respects other than their morphological/grammatical aspect. In practice, however, it is not always easy to determine which verbs are semantically identical except for aspect. Therefore, many researchers have abandoned the idea of pairing perfective and imperfective verbs either altogether, or as far as most verbs are concerned (most notably Maslov 1948, Isačenko 1960, and the compilers of the Academy Dictionary of Russian reject the idea that prefixed perfective

⁸ For a more detailed discussion of Russian aspectual morphology, the reader is referred to Spagis (1961), Forsyth (1970:17-31), Babko-Malaya (1999) and the references cited therein.

verbs form aspectual pairs with their unprefixated imperfective counterparts).⁹ Even those who accept aspectual pairs as a general concept, disagree as to which verbs do or do not form an aspectual pair (for an overview of the discussion, see Forsyth 1970:32-46). In this paper, I will rely crucially on the notion of aspectual pairs. In order to foil potential criticisms, I will limit my definition of aspectual pair to the following three types of pairs:

- (i) bare perfectives and their corresponding imperfectives, and suppletive pairs: e.g., *dat'* (P) vs. *davat'* (I) 'give', *rešit'* (P) vs. *rešat'* (I) 'permit', *kupit'* (P) vs. *pokupat'* (I) 'buy'¹⁰; *vzjat'* (P) vs. *brat'* (I) 'take';¹¹
- (ii) bare imperfectives and prefixed perfectives formed by adding non-meaning-changing prefixes: e.g., *čitat'* (I) vs. *pročitat'* (P) 'read', *pisat'* (I) vs. *napisat'* (P) 'write', *bolet'* (I) vs. *zabolet'* 'be/become sick';
- (iii) prefixed perfectives formed by adding a meaning-changing prefix and secondary imperfectives formed from perfectives by adding the suffix *-yv(a)/-iv(a)*: e.g., *ubit'* (P) vs. *ubivat'* (I) 'kill', *rasskazat'* (P) vs. *rasskazivat'* (I) 'tell (a story, etc.)', *dočitat'* (P) vs. *dočityvat'* (I) 'read to the end'.

The distinction between meaning-changing and non-meaning-changing prefixes is based largely on the three-way distinction made by Babko-Malaya (1999:50-52) between pure-perfectivizing, resultative and superlexical prefixes. Pure-perfectivizing prefixes (such as *pro-* in *pročitat'* vs. *čitat'* 'read') are non-meaning-changing (hence, Babko-Malaya's term). Resultative (or 'lexical') prefixes, which denote the result state of the object (as in *vykopat'* 'dig out' vs. *kopat'* 'dig'), are meaning-changing. Superlexical prefixes (also called 'Aktionsart' prefixes in many traditional grammars, and 'procedural' prefixes in Forsyth 1970) are more problematic. I will distinguish between the inceptive procedural prefixes (such as *za-* in *zabolet'* 'get sick' vs. *bolet'* 'be sick', as well as some uses of *po-*, *u-*, and *voz-*) and other procedural prefixes that denote the extent to which the action has been performed: the former are non-meaning-changing, whereas the latter are meaning-changing.¹²

Furthermore, I will follow Babko-Malaya (1999) in making the following two assumptions. First, I will assume that verbal roots/simple stems are associated with inherent aspectual properties (Babko-Malaya 1999:30-31, Smith 1991:299; contra Dowty 1979, for whom only stative roots exist). Babko-Malaya shows that these inherent aspectual properties play a role in determining case-assigning properties of verbs formed from those roots (see also Blauvelt 1980). In this paper, I will argue that a (somewhat different) inherent aspectual property of verbs determine their aspectual form in American Russian. Second, I will follow Babko-Malaya (1999:52-56) in divorcing perfectivizing prefixes from aspectual heads. Thus, I will assume that aspectual heads can be phonetically null in Russian, whereas perfectivizing prefixes can be adjoined either to these null aspectual heads (in the case of non-meaning-changing prefixes) or

⁹ These researchers believe that aspect in Russian is a lexical rather than grammatical category, a claim I will challenge below.

¹⁰ Even though the verb *pokupat'* 'buy (I)' seems to involve prefixation, I will consider it as the first type of aspectual pair (there are no forms like **pokupit'* or **kupat'* in the relevant sense). Note that this complication leads one to find forms like *pokupit'* in American Russian.

¹¹ Verbs in this group are all telic (cf. Smith 1991:315).

¹² This division between meaning-changing and non-meaning-changing prefixes is supported by language attrition data presented in Zemskaia et al. (2001:253). It appears that non-meaning-changing prefixes are retained better under attrition, whereas meaning-changing (lexical) prefixes are lost earlier.

to the verbal root (in the case of meaning-changing prefixes). Thus, the distinction drawn above between those prefixes that are meaning-changing and those that are not is structural. With these assumptions in mind we can now return to the American Russian aspectual system.

3.2. Aspect in American Russian

According to the Lexical Aspect Hypothesis, as stated in (3) above, aspectual marking in American Russian encodes a lexical semantic property of the verb. However, up to this point it has been left imprecise what this lexical semantic property is. Here, I would like to propose that the relevant semantic property is the presence or absence of an inherent end-point after which the event as such can no longer continue (where the term ‘event’ refers to both dynamic events and static situations). For ease of exposition, I will call this property TELICITY, though I realize that this term has been used in other ways as well in the literature.¹³ Thus, verbs that in their canonical use imply an inherent end-point will be called TELIC, whereas verbs that in their canonical use do not imply an inherent end-point will be called ATELIC. This distinction between telic and atelic verbs generally correlates with their classification into Vendlerian classes: activity and stative verbs are atelic, whereas accomplishment and achievement verbs are telic.¹⁴

One good test for telicity (as defined here) is the compatibility of past perfective verb with a continuation containing present imperfective form of the same verb. Only with atelic verbs such combinations are possible; with telic verbs they are contradictory (marked here with “#”).

(4) **ATELIC**

- a. Kogda ja v pervye priexala v Tromsø, mne tam očen' **ponravilos'**,
 when I first-time came to Tromsø to-me there very pleased.PERF
 i vsë eščë **nravit'sja**.
 and all still pleases.IMPF

‘When I first came to Tromsø, I liked it there very much and I still like it.’

¹³ The term “telicity” has been originally introduced by Garey (1957) with respect to events/situations. However, the terms “telicity”, “boundedness” and even “perfectivity” are often used interchangeably in the literature. Traditional Russian literature of verbal aspect uses the term *predel'nyj* (‘bounded’) for what I term here ‘telic’, but the same Russian term is used also to describe the function of the perfective (grammatical) aspect. Mehlig (1996) uses the term “transformative” in a way similar to my use of ‘telic’ (but see fn. 15 below). I will continue to use the term “telicity” in the way defined here (and distinct from “boundedness” at the VP level) for the lack of better, less confounded terminology. I thank Lisa Travis for her suggestions on this matter.

¹⁴ An unrelated phenomenon that appears to be sensitive to presence vs. absence of an inherent end-point is the possibility of VS(O) order with an imperfective verb in Modern Greek (cf. Alexiadou 1996:42):

- (i) a. * epeze o Janis.
 played.IMPF.3S the-John.NOM
 intended: ‘John was playing.’
 b. erhotan o Janis.
 arrived.IMPF.3S the-John.NOM
 ‘John was arriving (here).’

- b. Moi kaktusy **vyrasli** do neverojatnyx razmerov, i vsë eščë **rastut**.
 my cactuses grew.PERF to implausible sizes and all still grow.IMPF
 ‘My cactuses grew incredibly and are still growing.’
TELIC
- c. # Pëtr **napisal** novuju statju, i vsë eščë **pišet** ejë.
 Peter wrote.PERF new article and all still writes.IMPF her
 ‘# Peter wrote a new article and is still writing it.’
- d. # Pëtr **vzjal** den’gi v banke, i vsë eščë **berët** ix.
 Peter took.PERF money in bank and all still takes.IMPF them
 ‘# Peter took the money from the bank and is still taking it.’

Note that the presence or absence of an inherent end-point need not correlate with the presence or absence of an Incremental Theme (cf. Krifka 1992). In fact, only accomplishments can have an Incremental Theme, whereas achievements cannot. Yet, both accomplishments and achievements imply an inherent end-point and both classes of verbs behave in the same way in American Russian.

While achievement and stative verbs are the easiest to classify, a possible confusion arises regarding activity vs. accomplishment verbs; the issue concerns the role of verbal complements (and adjuncts) in determining the classification of a given verb. Thus, it is commonly assumed that many verbs alternate between activity and accomplishment classes. For example, *dance* is said to be an activity, whereas *dance onto the stage* – an accomplishment. Similarly, while *read romantic novels* is said to be an activity, *read Chomsky’s latest manuscript* is an accomplishment. While I will not dispute the well-established data, I will maintain that one of the readings is more basic or canonical than the other. In particular, if a given verb selects for an argument that serves to delimit or to measure out the event (cf. Tenny 1987, Dowty 1991, Borer 1996, Pereltsvaig 2000, Svenonius 2001), the verb is telic. On the other hand, if a given verb does not select for such an argument, it is atelic.

Going back to the above examples, *dance* is an atelic verb and the PP *onto the stage* is not a selected argument but rather an adjunct; this adjunct can change the interpretation of the VP from unbounded to bounded. In contrast, *read* is a telic verb which selects for a direct object; if this direct object is of the appropriate semantic type, it serves to measure out the event (as in *read Chomsky’s latest manuscript*). If, however, the direct object cannot measure out the event (as in *read romantic novels*), the VP as a whole receives an unbounded interpretation; hence, the following grammaticality pattern:¹⁵

- (5) a. Peter read romantic novels for one whole day / * in one whole day.
 b. Peter read Chomsky’s latest manuscript in one day / * for one day.

Another test that supports the distinction between verbs of the ‘dance’-type (such as *run*) and verbs of the ‘read’-type (such as *eat*) has to do with negation. For example, *He ran nowhere* does not entail *He didn’t run* (he could have run in the same spot or run around in circles); in contrast, *He ate nothing* entails *He didn’t eat*. Thus, verbs of the ‘dance’-type are classified

¹⁵ Note that I take the *for/in*-adverbial test to be a diagnostic of boundedness at the VP level, not of telicity as defined here.

differently from verbs of the ‘read’-type; indeed, in American Russian, these two types of verbs pattern differently, as will be shown below.

A third test distinguishing the two types of verbs above is the compatibility with *končit’* / *zakončit’* ‘finish’: only verbs that imply an inherent end-point can be used as complements to ‘finish’, which in itself implies reaching that inherent end-point (cf. Smith 1991:317). Verbs that do not imply an inherent end-point are compatible only with *perestat’* ‘stop’, which does not imply reaching an inherent end-point. Note that both *končit’* ‘finish’ and *perestat’* ‘stop’ (as well as other phasal verbs; cf. Forsyth 1970:229-231, Smith 1991:338-339, and below) take exclusively imperfective complements in Russian.¹⁶

- (6) a. Pëtr zakončil est’ (sup).
Peter finish to-eat soup
‘Peter finished eating (some/the soup).’
- b. * Pëtr zakončil plavat’.
Peter finish to-swim
‘Peter finished swimming.’
- c. Pëtr perestal plavat’.
Peter stopped to-swim
‘Peter stopped swimming.’

Going back to American Russian, the Lexical Aspect Hypothesis can be restated more precisely as follows:

- (7) LEXICAL ASPECT HYPOTHESIS (revised):

Aspectual marking in American Russian encodes the presence vs. absence of an inherent end-point associated with the verbal root: verbs that imply an inherent end-point are marked with the so-called PERFECTIVE morphology, whereas verbs that do not imply an inherent end-point are marked with the so-called IMPERFECTIVE morphology.

It might be more reasonable to gloss perfective/imperfective morphology as telic/atelic markers; however, I will continue glossing it as PERF/IMPF in order to show that these are the same morphemes that encode grammatical aspect in American Russian.

The correspondence between Vendlerian classes, telicity, and aspectual marking in American Russian is schematized below:

- | | | | |
|-----|----------------|----------|--------|
| (8) | Activity | ⇔ ATELIC | ⇒ IMPF |
| | Stative | ⇔ ATELIC | ⇒ IMPF |
| | Accomplishment | ⇔ TELIC | ⇒ PERF |
| | Achievement | ⇔ TELIC | ⇒ PERF |

¹⁶ Examples like (6b) are acceptable on the coerced ‘task’-reading in which an end-point is contextually supplied.

Let me illustrate this correspondence with some examples. Consider activity verbs such as *rasti* / *vyrastiti* ‘grow’.¹⁷ This verb is atelic since there is no inherent end-point to a growing event: this verb denotes an event of becoming bigger, which is potentially unbounded (hence the ungrammaticality of **Cvety zakončili rasti* ‘The flowers finished to grow’). In accordance with the Lexical Aspect Hypothesis above, the verb is retained in the imperfective (even when the context requires the perfective form in Standard Russian).

(9) a. American Russian

esli ty use natural fertilizers, i u tebjà èti cvety **rastet**
if you use natural fertilizers and by you these flowers grow.IMPF

b. Standard Russian

... èti cvety **vyrastut**
... these flowers grow.PERF

‘If you use natural fertilizers, these flowers will grow.’

Other activity verbs found in the corpus are *pokazyvat* ‘show’, *govorit* ‘speak’, *exat* ‘drive’, *bežat* ‘run’, *idti* ‘walk/go’. They too are found in the imperfective even where in Standard Russian the perfective counterpart would be expected.

Now consider stative verbs like *nravit’sja* / *ponravit’sja* ‘please’. This verb is also atelic since there is no inherent end-point to a liking event; hence, the verb is found only in the imperfective (again, even if Standard Russian would require the perfective form in the given context).

(10) a. American Russian (context: describing a short visit to Princeton) (= (2) above)

mne **nraviles’** v Princeton...
me.DAT liked.IMPF in Princeton

b. Standard Russian

mne **ponraviles’** v Prinstone...
me.DAT liked.PERF in Princeton

‘I liked it in Princeton ...’

Perfective forms of stative verbs (and also some activity verbs) are interpreted as inceptives, for example, *zabolet* ‘get sick’, *poljubiti* ‘fall in love’. The only way to express inceptive meaning in American Russian is by analytic means: a combination of a phasal verb like *načat* ‘begin’ and the infinitive of the stative verb.^{18,19}

¹⁷ Mehlig (1996:92) classifies verbs like *rasti* ‘grow’, *xudet* ‘lose weight’, *tolstet* ‘gain weight’, *mutnet* ‘get cloudy (about water)’, etc. as RELATIVE TRANSFORMATIVES since they denote a transition from one state to another. However, these verbs are ATELIC in my terminology because “the state of affairs may be continued even after having reached a subsequent state” (Mehlig 1996:92). These verbs are classified as *nepredel’nyj* (‘unbounded’) by Glovinskaja (1982:86) and Padučeva (1990:9), both cited in Mehlig (1996:92).

¹⁸ The only inceptive perfective form found in the corpus is (one token of) *zaxotet* ‘begin to want’, but it is used with no inceptive reading intended. This example cannot be accounted for by the Lexical Aspect Hypothesis, and it is discussed in more detail in section 4.1 below.

(11) a. American Russian

v *Cleveland* moja mama **načala bolet'** i ona pošla v *hospital*
 in Cleveland my mom began.PERF to-be-sick.IMPF and she went/walked in hospital

b. Standard Russian

v klivlende moja mama **zabolela** i legla v bol'nicu
 in Cleveland.PREP my mom INC-was-sick.PERF and lay in hospital.ACC

'In Cleveland, my mother got sick and went to hospital.'

Similarly, verbs *viset'* 'be attached in a vertical position without support', *ljubit'* 'like/love', *verit'* 'believe', *prjatat'sja* 'be concealed' are found in the imperfective form even where Standard Russian would have their perfective counterpart.²⁰

Let us now consider verbs that imply an inherent end-point. Take an accomplishment verb such as *pisat'* / *napisat'* 'write'. This verb implies an inherent end-point: the temporal completion of the event coincides with the completeness of the measuring-out argument selected by the verb. Note that the verb remains telic even if the measuring-out argument is not present syntactically, as in the unergative use of the verb, since telicity is defined here as a property of the verb itself. Note also that this verb is perfectly compatible with *končit'* 'finish', hence the grammaticality of *Pëtr končil pisat'* 'Peter finished writing.' Since the verb is telic, in American Russian it appears in the perfective (even if the contexts requires imperfective in Standard Russian).

(12) a. American Russian

ona naučila menja **napisat'**
 she taught.PERF me to-write.PERF

b. Standard Russian

ona naučila menja **pisat'**
 she taught.PERF me to-write.IMPF

'She taught me how to write.'

Another example of an accomplishment verb is *čitat'* / *pročitat'* 'read'. Once again, it is compatible with *končit'* 'finish', hence the grammaticality of *Pëtr končil čitat'* 'Peter finished reading.' This verb too is retained in the perfective form where Standard Russian requires imperfective, as in the presence of *nikogda* 'never'.

¹⁹ Stoll (2001:51) notes that analytic inceptive ('ingressives' in her terminology) are acquired by children earlier than synthetic inceptives.

²⁰ None of these verbs can appear as complements to *končit'* / *zakončit'* 'finish'.

- (13) a. American Russian
 ja nikogda ne **pročital** ta kniga
 I never not read.PERF that.NOM book.NOM
- b. Standard Russian
 ja nikogda ne **čital** tu knigu
 I never not read.IMPF that.ACC book.ACC
 ‘I have never read that book.’

Similarly to accomplishment verbs, achievement verbs, such as *brat’ / vzjat’* ‘take’, imply an inherent end-point (e.g., when the object is in full possession of the Goal). In American Russian, such verbs are retained in the perfective, regardless of which form would be used in the given context in Standard Russian.

- (14) a. American Russian
 ty ne **voz’mi** ètot *dish*
 you not take.PERF this dish
- b. Standard Russian
 ne **beri** èto bljudo
 not take.IMPF this dish
 ‘Don’t take this dish.’

Other achievement verbs in my corpus include: *otdat’* ‘give back/return’, *priexat’* ‘come/arrive (driving or riding)’, *priйти* ‘come/arrive (walking)’, *vstat’* ‘get up’.²¹

So far, we have seen that whenever American Russian speaker makes a “mistake” with the choice of the aspectual form of the verb, the form they do choose is the one that corresponds to telicity: verbs that imply an inherent end-point are used in the perfective and verbs that do not imply an inherent end-point are used in the imperfective. It is also interesting to note that the same type of mistake is found in the translation task (reported in Polinsky to appear). In this task the speakers are asked to translate frequent verbs from English back into Russian. Since no context is given, the speakers are expected to provide the default form, which in Standard Russian is the imperfective infinitive. The speakers usually provide the infinitive (sometimes, the masculine singular past tense form), but as far as the aspect is concerned, their choice of the citation form is not always the imperfective. In particular, early English-dominant speakers – who are known to deviate from Standard Russian speakers in the choice of citation forms for various lexical categories (Polinsky p.c.) – often give perfective forms, but **only** for telic verbs (e.g., *sdelat’* ‘do/make’, *rodit’sja* ‘be born’, *umeret’* ‘die’, *ubit’* ‘kill’, *ostanovit’sja* ‘stop’, *upast’* ‘fall’, *najti* ‘find’, *ukusit’* ‘bite’ and *skazat’* ‘say’). In my corpus of production data, ‘do/make’, ‘be born’, ‘die’, ‘kill’, and ‘say’ are found only in the perfective (*sdelat’*, *rodit’sja*,

²¹ Similar mistakes are noted by Zemskaya et al. (2001:374) in the speech of first-generation 3rd wave emigrants in Canada (after about 20 years in emigration):

- (i) Ty nikogda ne otdala mne knigu.
 you never not gave-back.PERF me.DAT book.ACC
 ‘You never gave me the book back.’

umeret', *ubit'*, and *skazat'*, respectively); 'stop', 'fall', and 'bite' are not found at all; 'find' is found in the imperfective (which is problematic for my analysis so far, and will be discussed with four other problematic pieces of data in section 4.1 below).

To summarize so far, we have seen good evidence to support the Lexical Aspect Hypothesis, namely that American Russian retains aspectual forms depending on whether a given verb implies an inherent end-point. Thus, I conclude that aspectual morphology in American Russian encodes lexical rather than grammatical aspect. Furthermore, no realization of grammatical aspect (e.g., by adverbials) is found in American Russian.

It should be noted at this point that the restructuring of aspect in American Russian described here is different from a superficially similar development in colloquial Russian mentioned in Zemskaya et al. (2001:374-375). One illustrative example of the latter development is given below:

- (15) **Vremja ot vremeni s Ivanom Šurom udalos'** vyjti na svjaz'.
 time from time with Ivan Shur managed.PERF establish on contact
 'Off and on we were able to establish contact with Ivan Shur.'

[TV news program "Segodnja", NTV channel, 18-Nov-2000]

The main differences between the development in the use of aspectual forms in colloquial Russian and restructuring of aspect in American Russian are in the limited character and functional nature of the former. The aspectual development in colloquial Russian is limited to spread of the perfective (there is no corresponding systematic spread of the imperfective) in one specific context – habitual or iterative context.²² Moreover, the burden of expressing habituality or iterativity shifts in colloquial Russian from the verb form to adverbials; in American Russian such adverbials are not attested (except *nikogda* 'never', which has different compatibility constraints on verb forms). Hence, I disagree with Zemskaya et al.'s conclusion that restructuring of aspect attested in emigrant speech simply mimics developments in colloquial Russian. Before I propose an analysis for these aspectual phenomena in American Russian, I would like to describe how tense is encoded in American Russian.

3.3. Tense in American Russian

In the previous section, we have seen that American Russian speakers make numerous mistakes with the choice of aspectual form of the verb. It is then somewhat surprising that they make very few mistakes with tense (there are also a few mistakes where an indicative form is used instead of the subjunctive or conditional; I will not discuss these mood cases here). These mistakes are generally of two kinds: (i) confusion of present and future tenses, and (ii) using an infinitival or imperative form instead of the required indicative form. Crucially, there are no mistakes where past is used instead of present/future or vice versa.²³ Therefore, I propose to see

²² Perfectives are grammatical in similar contexts in Czech, and in a more limited way in Polish. I thank numerous Polish and Czech speakers who have replied to my query on the subject on the LinguistList.

²³ There is one example where either the non-past (present) tense form or the past tense form could be used in Standard Russian. Therefore, I will not consider the following example as a mistake with tense:

these mistakes as not mistakes with tense as such, but mistakes with aspect or agreement. Let me illustrate what I mean.

Consider first an example of a present/future mistake:

(16) a. American Russian

ja **pokazyvaju** tebjja moj-a sobak-a
I show.IMPF/PRESENT you.ACC my-NOM dog-NOM

b. Standard Russian

ja **pokažu** tebe svoj-u sobak-u
I show.PERF/FUTURE you.DAT self's-ACC dog-ACC

'I am going to show you my dog.'

In Standard Russian, there are only two tense forms: past (marked by the suffix *-l*) and non-past. While both perfective and imperfective past tense forms are interpreted as past, the non-past tense forms get different interpretation depending on the aspect: perfective non-past forms get the future temporal interpretation, whereas imperfective non-past forms get the present temporal interpretation; thus, "Perfective non-Past in Russian ... is primarily a future tense, and not a present tense, while apparent instances of its use as a present tense are to be treated as remnants, as anomalies within the synchronic system" (Comrie 1976:70); cf. Smith (1991:327).²⁴ In the example above, the American Russian speaker uses a seemingly incorrect tense form: present instead of future. Yet, the mistake derives from the wrong choice of aspectual form: the speaker uses the imperfective rather than the perfective form, which gives rise to an apparent mistake with tense. Note that the wrong choice of aspectual form can be explained by the Lexical Aspect Hypothesis: the verb 'show' does not imply an inherent end-point, hence the use of the imperfective.

Another type of apparent mistake with tense is the use of a non-tensed (infinitival or imperative) form of the verb instead of the appropriate tense form. Some illustrative examples are given below.

(i) a. American Russian

moj deduška i babuška on žil v Nju-York
my grandpa and grandma he lived.PAST in New York.NOM

b. Standard Russian

moi deduška i babuška žili / živut v Nju-York
my grandpa and grandma lived.PAST / PRESENT in New York.NOM

'My grandpa and grandma live in New York.'

²⁴ An account of this fact within the framework of assumptions about the grammatical aspect and tense assumed in the present paper is given in the Appendix.

- (17) a. American Russian
 deti **guljat'** tam
 children to-walk there
- b. Standard Russian
 deti **guljali** tam
 children walk.PAST.PL there
 'The children went for a walk there.'
- (18) a. American Russian²⁵
 Tanja včera ona **prixodi**
 Tania yesterday she come.IMPF
- b. Standard Russian
 Tanja včera **prišla**
 Tania yesterday came.PERF
 'Tania came yesterday.'

There might be a purely phonological explanation for the example in (18), but examples like (17) are more common. I believe that these examples illustrate not the inability to mark tense but the inability to mark subject-verb agreement.²⁶ In earlier work (Pereltsvaig 2002, to appear), I have argued that American Russian should be characterized as lacking syntactic agreement altogether; in other words, American Russian speakers cannot do either subject-verb or DP-internal agreement through feature checking or feature matching. Therefore, they have to choose a form that does not require morphological agreement (such as an infinitive or an imperative in the case of the subject-verb agreement), or use a default form (such as 3rd person singular masculine in the case of the subject-verb agreement, and masculine or neuter form depending on animacy in the case of DP-internal agreement), or rely on phonological clues (in the case of DP-internal agreement). The choice among these strategies appears to be truly random.

This analysis of infinitival and imperative forms is supported by the fact that there are numerous examples in the corpus where the tense is marked correctly but the subject-verb agreement is not. In such cases, the mistaken agreeing form is 3rd person singular masculine form, which is conceivably treated as the default verbal agreement. Some illustrative examples of this pattern are given below:

²⁵ The aspectual form used by the American Russian speaker is not ungrammatical, but it is not appropriate in the larger context (omitted here) in Standard Russian.

²⁶ Imperative forms in Standard Russian show agreement in number only, and the plural is typically used as the polite *vy*-form. American Russian speakers do not control the register variation necessary for the choice of *vy*- vs. *ty*-forms (with sometimes socially disastrous results). Therefore, we can consider imperatives are essentially non-agreeing forms in American Russian.

- (19) a. American Russian
 v *Chicago* vse **boitsja** prestupniki
 in Chicago everybody is-afraid.3.SG criminals.NOM
- b. Standard Russian
 v *Čikago* vse **bojatsja** prestupnikov
 in Chicago everybody is-afraid.3.PL criminals.ACC
 ‘In Chicago everybody is afraid of criminals.’
- (20) a. American Russian
 vse my **poexal** sjuda
 all we went.SG.MASC here
- b. Standard Russian
 vse my **poexali** sjuda
 all we went.PL here
 ‘We all went here.’

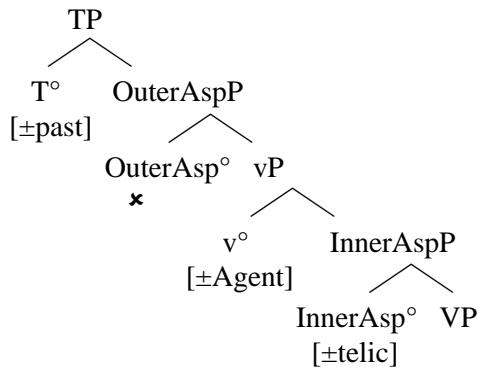
Thus, there are no mistakes with tense proper. To recap the situation with functional projections in American Russian, lexical aspect is marked by aspectual morphology, grammatical aspect is not marked at all, tense is marked correctly, but subject-verb agreement is not.

For the ease of exposition, I will couch the analysis in Minimalist terms, assuming the structure given below.²⁷ There are two aspectual projections (Travis 2000, Pereltsvaig 2000, to appear): InnerAspP which encodes lexical aspect and is sandwiched between the two VP-shells, and OuterAspP which encodes grammatical aspect and appears outside the VP-shells in the I-domain. In Standard Russian, aspectual morphology is associated with OuterAsp°, whereas in American Russian it is associated with InnerAsp°. Tense (past/non-past) morphology in both varieties of Russian is in T°. Furthermore, I assume that *v*P encodes agentivity / transitivity and not the lexical aspect (contra Brecht 1984, Piñon 1993, Verkuyl 1999, Slabakova 2001); I will ignore the issue of whether *v*P is relevant for aspectuality and event structure (cf. Borer 1996). Hence, I will have nothing to say about *v*P in the present paper.²⁸

²⁷ I believe that the analysis can be easily restated in terms of lexical theories of grammar, such as the LFG.

²⁸ As has been pointed out to me by Peter Svenonius (p.c.), if one assumes the structure in (21) and the association of verbal aspectual morphology with InnerAsp° in American Russian, a straightforward prediction emerges: aspectual morphology in American Russian should appear below (i.e., closer to the root than) the morphology associated with *v*°. It is, however, hard to test this prediction since it is hard to find a good case of a morpheme to associate with *v*°. One possibility is the intransitivizing morpheme *-sja*. This morpheme is a bad testing case, though, because it behaves like a clitic in that it appears outside all verbal morphology (including aspect, tense and agreement morphology) in Standard Russian. Another plausible candidate for a *v*° is a set of prefixes used to form verbs out of nouns/adjectives (e.g., *o-* as in *ozadačit* ‘baffle’, colloq. ‘give a task’ from *zadača* ‘task’). In Standard Russian, such verbs can be subject to further prefixation: *priozadačit* ‘baffle somewhat’. A prediction is, then, that in American Russian we should find forms like *o-pri-zadačit*. Yet, such forms are not found. There are two independent reasons, however, why such forms are not found. First, verbs like *priozadačit* ‘baffle

(21) (Specs omitted for simplicity)



As has been shown above, OuterAspP is not realized in American Russian even though projections above and below it (namely, TP and InnerAspP) are realized. It is also beneficial for our understanding of aspect in general to understand why American Russian marks lexical (Inner) aspect at the expense of grammatical (Outer) aspect. These issues are picked up in the next section.

3.4. Analysis

I have concluded the previous section with the question of why grammatical aspect is not realized in American Russian, whereas lexical aspect is. It has also been observed above that tense is represented correctly in American Russian. In this section, I will propose an analysis of these facts. The gist of the proposal is the following: grammatical aspect is unlike lexical aspect and more like tense in that it does not encode the “internal constituency of the situation” (Comrie 1976:1-3), but locates the event on the time-line. This proposal is similar to (and can be seen as further development of) the analyses by Klein (1995), Arefiev (1999), Demirdache and Uribe-Etxebarria (2000), and Julien (2001), who propose to treat aspect in a way similar to tense (Julien 2001 goes as far as renaming the Aspect projection as Tense; I will stick to the more traditional terminology to highlight the consistency of the morphological expression).²⁹

I will treat both tense and (grammatical) aspect as dyadic predicates over times (cf. McCawley 1971, Stowell 1995, 1996, Zagona 1995, Demirdache and Uribe-Etxebarria 2000, Julien 2001).³⁰ Furthermore, I will assume (following a suggestion in Giorgi and Pianesi 1997:36, fn. 42 and Julien 2001:127, fn. 2) that events and times are of the same ontological type; in

somewhat’ are extremely infrequent in Standard Russian (Brown 1996 lists no such forms in his list of 10,000 most frequent words of Russian) and thus are not likely to be acquired/retained by American Russian speakers. Second, under the Lexical Aspect Hypothesis defended in this paper, forms with perfectivizing prefixes will be found in American Russian only if the root is minimally non-stative (see main text). Since nouns/adjectives are stative, verbs formed from them will be found in American Russian only in the imperfective form (if at all). Hence, we do not expect to see either *pri-o-zadačit’* or *o-pri-zadačit’* in American Russian. The bottom-line is that there are no good candidates for the v° with which the prediction about morpheme order can be tested.

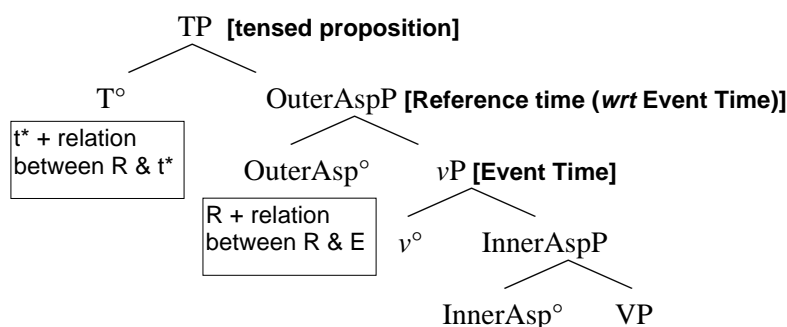
²⁹ It is curious that in Julien’s (2001) analysis the lower Tense head encodes the [±future] distinction. In my analysis the lower of the two time-locating heads – the OuterAsp° – does not encode futurity as such, but if the higher head T° is marked [-past], the OuterAsp determines whether the interpretation is that of present or future. This is derived within the framework of the present analysis in the Appendix.

³⁰ For arguments against Montague-style operator theory of tense, the reader is referred to Enç (1986) and Giorgi and Pianesi (1997). For arguments against a referential theory of tense, the reader is referred to Stowell (1995) and the references mentioned in the main text.

other words, relations between events and relations between times amount to one and the same thing. Thus, there are three times (cf. Reichenbach 1947, contra Vikner 1985): Event Time (E), Reference Time (R) and Speech Time (t^*). A distinction is made between temporal intervals and temporal instants: both E and R are intervals and t^* is an instant (this is why I use “ t^* ” rather than “S”).³¹ Relations are defined for two instants (PRECEDE, FOLLOW, and SIMULTANEOUS), for two intervals (PROPER INCLUSION) and for an interval and an instant (PROPERLY FOLLOWS, PROPERLY PRECEDES, INCLUSION, and ADJACENT-PRECEDE); the relations between two intervals and those between an interval and an instant are defined in terms of relations between instants. All the definitions are given in the Appendix.³²

Following earlier proposals (Arefiev 1999, Demirdache and Uribe-Etxebarria 2000, Julien 2001), I will take Outer Aspect to encode relations between the Event time and the Reference time, and Tense to encode relations between a temporal interval (usually R) and the Speech time t^* .³³ As we will see below, in American Russian Tense encodes a relation between a temporal interval which is not the Reference time and t^* . In contrast to the proposals by Zagona (1995), Stowell (1996) and Demirdache and Uribe-Etxebarria (2000), I will not take Speech time and Reference time to be projected in the specifier positions of TP and OuterAspP, respectively. Rather, I will assume that t^* and R are introduced by T° and OuterAsp $^\circ$, respectively, and will reserve the specifier positions for argumental and adverbial phrases that may be projected there. Furthermore, I will assume that the Event time is encoded at the level of vP .³⁴ This is schematized below:

(22)



OuterAsp $^\circ$ is merged with vP ; it introduces R and relates it with respect to E (computed at the level of its complement vP). Similarly, T° is merged with OuterAspP; it introduces t^* (itself an instant) and relates it with respect to a time interval. In Standard Russian and scores of other

³¹ For a discussion of potential problems with equating eventualities with time intervals associated with them and arguments for treating Reference time as an interval, the reader is referred to Arefiev (1999:33-36).

³² Arefiev (1999:37) gives a different set of relations and the relation of (Proper) Inclusion is defined differently in his theory.

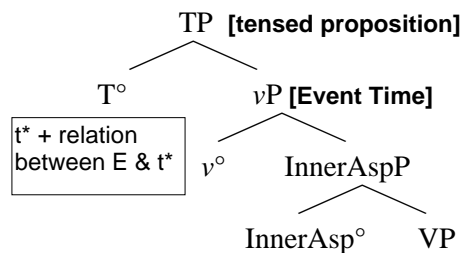
³³ I will ignore potential criticisms (cf. Stowell 1996) related to the interpretation of Tense in embedded clauses. American Russian shows no signs of embedding whatsoever.

³⁴ The analysis proposed here would not change significantly if one were to introduce an additional projection the head of which existentially closes the Event variable introduced by the V-heads, such as Travis' (1994) E(vent)P or Stowell's (1996) ZP. Here, I will ignore such possibility and will assume that each event/time-introducing head (minimally, T° , OuterAsp $^\circ$, and v°) existentially closes the event/time variable introduced by the lower head.

languages, T° relates t^* with respect to R (computed at the level of its complement OuterAspP); however, as we will see below, this need not be so.

Going back to American Russian, recall that this language shows no realization for grammatical aspect. Therefore, I propose that the projection that normally encodes grammatical aspect, namely OuterAspP, is not projected in American Russian. Consequently, Reference time is not introduced and cannot be related to the Event time. T° combines directly with ν P, introduces t^* (as usual), and relates the Event time encoded at the level of ν P with respect to t^* . The computation can proceed without a problem since Tense requires a temporal interval and it does not “care” if the interval it combines with is the Event time or the Reference time. This is schematized below:³⁵

(23)



To recap, if the Outer Aspect is not projected, fewer temporal relations can be encoded, but crucially, the semantic computation can proceed unhampered since T° can combine with ν P and relate E with respect to t^* (instead of relating R with respect to t^*). American Russian does not project the OuterAspP (hence, no realization for the grammatical aspect) because this allows the speakers to reduce the syntactic and semantic complexity without sacrificing interpretability. One obvious outcome of such reduction in complexity is the reduced on-line load.

3.5. Overt marking for lexical aspect

In the previous section, I have developed an analysis that answers the question of why grammatical aspect is not realized in American Russian. The next obvious question is why lexical aspect is realized (and marked overtly by verbal aspectual morphology). In order to answer this question, we must find answers to the following two questions: (i) what exactly is the relevant lexical aspect distinction, and (ii) how it is marked in other languages? The answer to the first of these two questions has been given above: the relevant semantic distinction is the presence vs. absence of an inherent end-point.

So how is this distinction realized/marked in other languages? Following Ramchand (1997), Kiparsky (1998, 2001), Svenonius (2001, 2002), and Pereltsvaig (2000, to appear), I will assume that (in many languages) the relevant lexical aspect distinction is encoded through case marking on the object DP.³⁶ For example, in Finnish verbs that do not imply an inherent end-point (such as *halveksia* ‘despise’, *rakastaa* ‘love’, *pohtia* ‘think about’, *ravistaa* ‘shake’, cf. Kiparsky 1998:281) take Partitive objects, verbs that always imply an inherent end-point

³⁵ A similar proposal is made by Julien (2001:128-131) with respect to simple tenses in English and elsewhere.

³⁶ Ramchand (1997) and Svenonius (2001, 2002) discuss Scottish Gaelic and Icelandic, respectively, and invoke slightly different lexical aspectual distinctions.

(such as achievement verbs, e.g., *huomata* ‘notice’, *nimittää* ‘nominate’³⁷) take exclusively Accusative/Genitive objects, and verbs that alternate between activity and accomplishment interpretations take either kind of object. With the latter type of verb (e.g., *ammua* ‘to shoot’), the telicity interpretation, the interpretation of the object DP and the case on the object DP correlate in a particular way: if the object is Partitive, it is interpreted as denoting unspecified quantity / unbounded object and the whole situation is interpreted as atelic; in contrast, if the object is Accusative/Genitive, it is interpreted as denoting specified quantity / bounded object and the situation is interpreted as telic. For a more detailed discussion and further examples, the reader is referred to the references mentioned above.

In Pereltsvaig (2000), I show that the analysis proposed to account for the above-mentioned Finnish facts can be profitably extended to (Standard) Russian, despite differences in morphological realizations of cases. In Pereltsvaig (to appear), I argue that the restructuring of aspectual marking in American Russian can be related to the restructuring of its case system. Here, I will only note that lexical aspect is retained (and regains overt morphological marking) in American Russian because it encodes important information about the event itself, and as such cannot be disregarded, even under severe attrition.

The apparent need to have an expression for lexical aspect **on the verb** is found also in L1 and L2 acquisition. It has been noted in the literature that both L1 and L2 learners use tense (past/non-past) or aspect (perfect/progressive) morphology to encode lexical semantic properties of the verb, much like speakers of American Russian do.

For example, the data concerning L1 acquisition of Russian presented in Brun (1999) are compatible with the claim that at the Optional Infinitive Stage aspectual marking encodes lexical rather than grammatical aspect or tense: verbs that appear in the perfective form are all telic (e.g., *odet* ‘put on’, *sest* ‘sit down’, *kupit* ‘buy’) and verbs that appear in the imperfective are all atelic (e.g., *kupat’sja* ‘bathe’, *kačat* ‘swing’). Similarly, Gagarina (2000a) concludes that children use tense and aspect morphology to encode lexical aspect in early L1 acquisition, and Stoll (2001:139) claims that for her 2-to-6 year-old subjects “Aktionsart is the really important factor for the development of the understanding of aspectual forms”.³⁸

Similar correlation in child English has been noted by Bloom et al. (1980), Shirai and Anderson (1995), Olsen and Weinberg (1999), and others. In particular, children acquiring English use the present participle *-ing* forms with atelic verbs (e.g., *flying*, *crying*, *talking*, *swimming*) and the past participle forms with telic verbs (e.g., *left*, *drawn*). Likewise, children acquiring Hebrew first use past tense forms with telic verbs, such as *nafal* ‘fell’, *maca* ‘found’, and *higi’a* ‘came’ (Berman 1983:66-67). Bronckart and Sinclair’s (1973, cited in Andersen and Shirai 1996) study of L1 acquisition of French concluded that French-speaking children also use overt morphological distinctions to encode lexical aspect. Moreover, similar claims have been made about L1 acquisition of Mandarin Chinese, Finnish, German, Greek, Italian, Spanish, Portuguese, Polish, Japanese, and Turkish (for an overview of the research on this topic, see Andersen and Shirai 1996 and Wagner 2001:663).³⁹

³⁷ This latter verb takes a partitive object in its other meaning – ‘call by name’ (Kiparsky 1998:282). I thank Elsi Kaiser for a useful discussion of Finnish case marking patterns.

³⁸ L1 acquisition of aspect and tense in Russian is discussed in more detail in section 5 below.

³⁹ Unfortunately, inconsistent use of the terminology makes it hard to interpret some of the relevant studies.

Likewise, overt marking for lexical aspect is found in L2 acquisition as well. For example, Gavrusseva (2000:329) notes that Dasha, an eight-year-old Russian speaker acquiring English as L2, “restricts the use of the past tense inflection *-ed* to achievements and accomplishments”. Similarly, Bardovi-Harlig (1992:262) claims that for L2 learners of English “lexical aspect determines the choice between simple past and past progressive forms” (cf. also Bardovi-Harlig and Reynold 1995). Likewise, Shirai and Karuno (1998) claim that there is a correlation between telicity (activity vs. achievement verbs) and the use of tense-aspect markers (progressive marker *-te i-* vs. past marker *-ta*) by L2-learners of Japanese. Similar correlation between lexical aspect and the use of tense-aspect morphology by L2-learners has been explored in a wealth of other studies on L2 acquisition of English by L1-speakers of Hebrew, Japanese, Mandarin Chinese, Russian, Serahuli, Spanish, and Vietnamese, and studies on L2 acquisition of Spanish by L1-speakers of English (these studies are discussed in Andersen and Shirai 1996).

The following examples have been noted by me in the speech of an L2-learner of Russian (whose L1 is Spanish): much like speakers of American Russian, this speaker restricts telic verbs to the perfective form.

- (24) a. (context: describing traditional hunting methods of Pomor villagers)
 Oni oxotilis' na tjulenja i ix tam **ubili**. (cf. Standard Russian: ... *ubivali*)
 they hunted on seal and them there killed.PERF
 ‘They used to hunt seals and kill them there.’
- b. (context: describing the habitual way of pronunciation of a particular person)
 On vsegda **skazal** tak. (cf. Standard Russian: ... *govoril*)
 he always said.PERF like-this
 ‘He always used to pronounce it like this.’

Such data have led the acquisition researchers to posit the Defective Tense Hypothesis (Weist et al. 1984, Andersen 1991) and the Primacy of Aspect (POA) Hypothesis (Robison 1990:316, cited in Bardovi-Harlig 1992:274). According to these hypotheses (which are essentially different formulations of the same idea), “in beginning stages of language acquisition only inherent aspectual distinctions [i.e., lexical aspect] are encoded by verbal morphology, not tense or grammatical aspect” (Andersen 1991:307). Note, however, that the American Russian data and Bardovi-Harlig’s (1992:274) findings – accounted for by the analysis proposed in this paper – are incompatible with the POA hypothesis because tense is marked correctly by those speakers, whereas grammatical aspect is not realized (and lexical aspect is realized).

To recap, overt marking for InnerAsp^o is found on the verb not only in American Russian but also in the grammars of L1 and L2 learners (of Russian and other languages). Although L1 acquisition data are compatible with the POA hypothesis, L2 acquisition data of Bardovi-Harlig (1992) and the American Russian data discussed in this paper are not. The analysis proposed in this paper is aimed at accounting for these L2 acquisition and L1 attrition data.

4. Factors in L1 attrition of aspect

In the previous section, I have developed the Lexical Aspect Hypothesis. In this section, I will show that this hypothesis is superior to two alternatives: the Statistical Frequency Hypothesis and the L2-Transfer Hypothesis. The former hypothesis maintains that a language under attrition retains statistically more frequent forms and loses those forms that are statistically less frequent. The latter hypothesis maintains that speakers of American Russian use aspectual marking in a way analogous to how such marking is used in English, their dominant L2. I will show that, despite their initial plausibility, these hypotheses fail to account for the American Russian data.

4.1. Statistical frequency in L1

One possible alternative to the Lexical Aspect Hypothesis defended in this paper is the Statistical Frequency Hypothesis formulated below:

(25) STATISTICAL FREQUENCY HYPOTHESIS:

American Russian retains statistically more frequent aspectual forms.

This hypothesis seems initially plausible: it stands to reason that word forms with low statistical frequency will not be encountered by a speaker often enough to be acquired (or not at all). Similarly, (statistically) more frequent constructions have a better chance to be acquired than rarer constructions. This hypothesis has been put forward by Sorace (2000), who characterized language attrition as the “re-emergence of the unmarked”.⁴⁰ Similar reasoning has been applied to language change induced by decreasing frequency of certain constructions; for example, the loss of V2 in English has been attributed to decreasing frequency of topicalization structures (cf. Lightfoot 1999).

Note that this markedness hypothesis has been challenged by Platzack (1996), who argues that marked constructions are retained under language attrition. However, Platzack’s arguments are irrelevant for the present study for two reasons. First, they are based on a study of speakers who begin their attrition process at a much later age; hence, their language attrition may be a different process. Second, the construction discussed by Platzack, namely, V2 (verb second) order in main clauses in Swedish, is marked in the syntactic sense but not in the statistical sense. According to Platzack, V2 in Swedish is marked because it involves overt movement which is not found in non-V2-languages (but see Westergaard 2002). Yet, from the point of view of statistical markedness, V2 is unmarked since (main) clauses in Swedish (nearly) uniformly exhibit the V2 order.

Going back to American Russian, it has been noted that statistical frequency of items in Standard Russian plays a role in lexical attrition (Polinsky 1997, 2002). It is not inconceivable to view the loss of certain aspectual verb forms in American Russian as part of a larger picture of lexical attrition. Just as American Russian speakers lose certain nouns, adjectives, verbs, and prepositions (or just parts of lexical entries, such as encoding inherent case-assigning properties

⁴⁰ In addition to the STATISTICAL sense of markedness, discussed in detail in this paper, one could hypothesize that SEMANTIC or MORPHOLOGICAL markedness plays a role in defining the aspectual system of American Russian. However, these hypotheses can easily be proven to be incorrect: (i) perfective, which is considered semantically marked (Jakobson 1932/1971, Forsyth 1970, Maslov 1974, Comrie 1976:117, Smith 1991:302) is often retained in American Russian at the expense of the imperfective; (ii) morphologically marked members of a given aspectual opposition are sometimes retained at the expense of the morphologically simpler forms, e.g., *napisat'* (P) is retained instead of *pisat'* (I) ‘write’, *pokazyvat'* (I) is retained instead of *pokazat'* (P) ‘show’.

of verbs and prepositions), it is not implausible that they would also lose certain aspectual forms of verbs. If restructuring of aspectual marking is viewed as lexical attrition, we would expect statistical frequency of different aspectual forms to play a role in this process. This is the essence of the Statistical Frequency Hypothesis.

According to Comrie (1976:117, citing Josselson 1953:20-22), the perfective aspect is more statistically frequent overall in Standard Russian than the imperfective. However, the ratio of perfective and imperfective verbs changes depending on the tense and mood of the verb; for example, imperative forms are more frequently imperfective than perfective (57% vs. 43%, according to Steinfeldt 1963:26), whereas in the past tense and in the infinitive perfective verbs predominate (infinitive: 48% imperfective vs. 52% perfective; past tense: 34% imperfective vs. 66% perfective); according to Comrie (1976:117, citing Josselson 1953:20-22), “in the Future the predominance of the Perfective is even greater” (synthetic perfective future is compared to analytic imperfective future). Moreover, different aspectual pairs exhibit different patterns of frequency. Therefore, the only meaningful prediction the Statistical Frequency Hypothesis can make is with respect to specific aspectual pairs: the member of a given aspectual pair which is more frequent statistically (in Standard Russian) is retained in American Russian, whereas the less frequent member of the aspectual opposition is lost.

Let us consider whether this prediction is borne out. In some aspectual pairs, it is the more frequent member that is retained in American Russian, in accordance with the Statistical Frequency Hypothesis. For example, the perfective *vzjat'* ‘take’ is more frequent than the imperfective *brat'*, and it is the perfective that is retained (cf. (14) above).⁴¹

(26)		<i>vzjat'</i>	vs.	<i>brat'</i>	‘take’
	frequency	311		106	(Steinfeldt 1963)
	frequency	752.82		322.82	(Sharoff 2002)
	markedness	132		419	(Brown 1996)

On the other hand, there are also examples where the less frequent member of the aspectual opposition is retained in American Russian. For example, the perfective *napisat'* ‘write’ is less frequent (i.e., more marked) than the imperfective *pisat'*, but it is the perfective that is retained (cf. (12) above).

(27)		<i>napisat'</i>	vs.	<i>pisat'</i>	‘write’
	frequency	120		251	(Steinfeldt 1963)
	frequency	329.57		459.22	(Sharoff 2002)
	markedness	362		164	(Brown 1996)

Thus, neither the Statistical Frequency Hypothesis nor the Lexical Aspect Hypothesis can account for all the data in the corpus (various examples not accounted for by the Lexical Aspect Hypothesis have been alluded to in footnotes above and will be discussed in more detail

⁴¹ Frequency figures from Steinfeldt (1963) indicate the number of tokens in the corpus: the higher the number, the more frequent the item. Similarly, figures from Sharoff’s (2002) frequency list indicate the number of occurrences per million words in his corpus of about 35 million words. In contrast, the numbers from Brown (1996) indicate the item’s position in the frequency list of 10,000 most frequent words: 1 indicates the most frequent word in Standard Russian, 2 the second most frequent, etc. In other words, Brown’s numbers indicate markedness: the higher the number, the more marked (i.e., less frequent) the item. For more detailed descriptions of these corpora the reader is referred to the original sources.

below). So, if we are to consider the overall picture, how does the Statistical Frequency Hypothesis fare in comparison with the Lexical Aspect Hypothesis?

Here are some figures. Only 34 aspectual forms that constitute mistakes in comparison with Standard Russian were considered (out of 38 such mistakes in the corpus; 4 mistakes had to be excluded because the speaker used a wrong verb, not just a wrong aspectual form). These 34 verb forms were classified according to whether they can be accounted for by the Statistical Frequency Hypothesis and/or the Lexical Aspect Hypothesis. As can be seen from the table below, many mistakes (namely, 17 out of 34, or 50%) can be accounted for by both hypotheses. This is not surprising given the distributional bias that is found in Standard Russian whereby telic verbs are more frequently found in the perfective and atelic verbs are more frequently found in the imperfective (cf. Andersen and Shirai 1996).⁴² A large number of mistakes (i.e., 11 out of 34, or 32.4%) can be accounted for by the Lexical Aspect Hypothesis but not by the Statistical Frequency Hypothesis. A few mistakes (i.e., 6 out of 34, or 17.6%) do not find an immediate explanation under either of the two hypotheses (these cases are discussed in more detail below). Crucially, **no** mistakes can be accounted for by the Statistical Frequency Hypothesis but not by the Lexical Aspect Hypothesis.

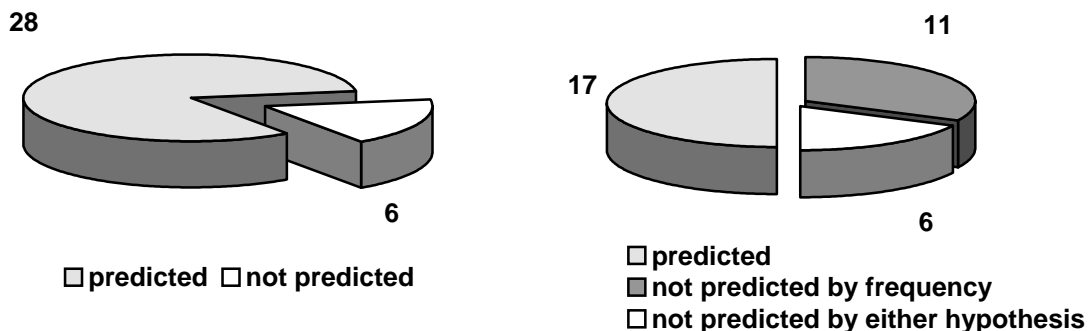
Table 2. Lexical Aspect vs. Statistical Frequency (Total number of verb forms = 34)

	accounted for by Statistical Frequency Hypothesis	not accounted for by Statistical Frequency Hypothesis
accounted by Lexical Aspect Hypothesis	17 (50%)	11 (32.4%)
not accounted by Lexical Aspect Hypothesis	0	6 (17.6%)

Before we consider the six exceptional examples that cannot be accounted by either hypothesis, let us consider the overall picture. The Lexical Aspect Hypothesis can account for about 82% of the data, whereas the Statistical Frequency Hypothesis can account for only 50% of the data. This is represented in the graphs below. Overall, the Statistical Frequency Hypothesis can account for about half of the mistakes. Given only two possible choices (PERF vs. IMPF), this hypothesis appears to have as good a predictive power as flipping a coin.

⁴² There is also a distributional bias with respect to tense: telic/perfective verbs tend to appear more frequently in the past tense, whereas atelic/imperfective verbs tend to appear more frequently in the non-past tense (cf. Bar-Shalom and Snyder 2001).

(28) LEXICAL ASPECT HYPOTHESIS VS. STATISTICAL FREQUENCY HYPOTHESIS



Let us briefly consider the six exceptional examples that can be explained by neither of the two hypotheses considered here (the figures for frequency and markedness for the relevant aspectual forms are given in Table 3 below).

Table 3. Frequency/markedness for exceptional mistakes

gloss	forms		frequency (Steinfeldt 1963)		frequency (Sharoff 2002)		markedness (Brown 1996)	
	retained	“lost”	retained	“lost”	retained	“lost”	retained	“lost”
want	<i>zaxotet'</i>	<i>xotet'</i>	33	580	82.61	1,276.75	1455	73
permit	<i>razrešat'</i>	<i>razrešit'</i>	n/d ⁴³	46	19.83	84.46	3325	1089
find	<i>naxodit'</i>	<i>najti</i>	45	177	85.34	386.65	1197	234
come	<i>prixodit'</i>	<i>priiti</i>	124	329	221.50	382.15	348	126
tell	<i>rasskazyvat'</i>	<i>rasskazat'</i>	190	211	263.09	255.38	226	194
shave	<i>brit'</i>	<i>pobrit'sja</i>	n/d	n/d	5.38	6.42	6484	n/d

The five problematic examples are given below. The example in (29) involves an atelic (stative) verb ‘want’ used in the perfective form. The other four examples involve telic verbs ‘permit’, ‘find’, ‘come’ and ‘tell’ used incorrectly in the imperfective form.

(29) a. American Russian

ty **zaxotela** rasskazat' menja o Moskve
 you wanted.PERF to-tell.PERF me.ACC about Moscow

b. Standard Russian

ty **xotela** rasskazat' mne o Moskve
 you wanted.IMPF to-tell.PERF me.DAT about Moscow
 ‘You wanted to tell me about Moscow.’

⁴³ Items marked “n/d” are not listed in the relevant frequency list.

- (30) a. American Russian
 esli ja xotel exat' v *East Coast* moj mat' ne **razrešat'** menja
 if I wanted.IMPF to-go.IMPF to East Coast my mother not to-permit.IMPF me.ACC
- b. Standard Russian
 kogda ja xotel poexat' ... moja mat' ne **razrešila** mne
 when I wanted.IMPF to-go.PERF ... my mother not to-permit.IMPF me.DAT
 'When I wanted to go to the East Coast, my mother didn't allow me.'
- (31) a. American Russian
 ty vseгда ty **naxodi** naš dom
 you always you find.IMPF our house
- b. Standard Russian
 ty vseгда **najdeš** naš dom
 you always find.PERF our house
 'You will always find our house.'
- (32) a. American Russian
 Tanja včera ona **prixodi**
 Tania yesterday she come.IMPF
- b. Standard Russian
 Tanja včera **prišla**
 Tania yesterday came.PERF
 'Tania came yesterday.'
- (33) a. American Russian
 esli ja **rasskazyvaju** o ix žizn' ty plakala
 if I tell.IMPF about their life.NOM/ACC you cry.IMPF
- b. Standard Russian
 esli by ja **rasskazala** ob ix žizni ty by plakala
 if COND I tell.PERF about their life.PREP you COND cry.IMPF
 'If I told you about their life, you would cry.'

(34) a. American Russian⁴⁴

ja **budu brit'**

I will-be to-shave.IMPF

b. Standard Russian

ja **pobrejus'**

I shave.PERF

'I will shave...'

What possible explanations can be put forward to account for these problematic examples? The explanation proposed by Polinsky (1994) for (29) is that the two verbs in a “restructuring” context (i.e., where the higher verb is a modal, a phasal verb, such as *načat'* / *načinat'* ‘begin’, or a “preference” verb, such as *ljubit'* ‘like’) have to agree in aspectual marking in American Russian. This is supposed to contrast with Standard Russian, which generally allows all four patterns of aspectual marking, including the “disagreeing” patterns (i.e., PERF+IMPF and IMPF+PERF); examples in (35 a-c) from Forsyth (1970:229), glosses mine:

(35) a. **IMPF + IMPF:**

Mne prixodilos' zagljadyvat' v slovar'.

to-me had-to.IMPF look.IMPF in dictionary

'I had to look in the dictionary.'

b. **IMPF + PERF:**

Mne prixodilos' zagljanut' v slovar'.

to-me had-to.IMPF look.PERF in dictionary

'I had to look in the dictionary.'

c. **PERF + IMPF:**

Mne prišlos' zagljadyvat' v slovar'.

to-me had-to.PERF look.IMPF in dictionary

'I had to look in the dictionary frequently.'

d. **PERF + PERF:**

Mne prišlos' zagljanut' v slovar'.

to-me had-to.PERF look.PERF in dictionary

'I had to look in the dictionary.'

There are, however, some contexts where some of the patterns are excluded even in Standard Russian. For example, “preference” verbs in the perfective can appear only with an imperfective complement, whereas “implicative” verbs (like ‘manage’) can appear only with a perfective complement. For a more detailed discussion, see Forsyth (1970:230-231) and Smith (1991:332-333).

⁴⁴ In this example (and in numerous others) the reflexive *-sja* is omitted (cf. fn. 7 above). I will not discuss this issue in this paper.

(36) PREFERENCE VERBS

- a. On **poljubil** guljat' / *poguljat' po večeram.
 he liked.PERF to-walk.IMPF / *PERF in evenings
 'He has come to like to go for a walk in the evenings.'
- b. On **ljubil** guljat' / poguljat' po večeram.
 he liked.IMPF to-walk.IMPF / PERF in evenings
 'He has come to like to go for a walk in the evenings.'

IMPLICATIVE VERBS

- c. Gostjam konferencii udalos' uvidet' / *videt' Severnoe Sijanije.
 guests.DAT conference.GEN managed to-see.PERF / * IMPF Northern Lights
 'The conference guests managed to see the Northern Lights.'

Thus, in Standard Russian the aspect of the infinitival verb depends mostly on the meaning, but also on the aspect of the selecting verb. Furthermore, Forsyth (1970:229) notes that "it seems probable that a kind of linguistic inertia operates in such sentences where the aspect of the complement is relatively unimportant, to produce a carry-over or 'contamination' from aspect of the predicator, when the latter is imperfective." Thus, in cases like (35 a-b) above there is no difference in meaning between the two variants, but (35a), the agreeing pattern, is preferable to many speakers.

According to Polinsky's (1994) suggestion in American Russian the selecting (finite) verb may acquire the same aspect as the selected infinitival verb. For example, in (29a) the selecting finite verb *zaxotet'* is perfective because the selected infinitival verb *rasskazat'* is perfective (in accordance with the Lexical Aspect Hypothesis). Note first that this goes against the direction of agreement identified by Forsyth (1970), or 'contamination' in his terminology. Furthermore, in the corpus available to me so far there is little evidence to support this "agreement in aspect" analysis. In particular, there are examples of "disagreeing" patterns where a perfective verb appears with an imperfective complement and vice versa. One typical construction where such a "disagreeing" pattern occurs in American Russian (as, indeed, in Standard Russian) involves the so-called aspectual (or "phasal") verbs, such as *načinat'/načat'* 'begin', *prinimat'sja / prinjat'sja* 'set about', *prodolžat'* 'continue', *končat'/končit'* 'finish', *perestavat'/perestat'* 'stop', *brosat'/brosit'* 'give up'.⁴⁵ In this construction, a perfective verb always appears with an imperfective complement (for more discussion of this construction in American Russian, see Pereltsvaig to appear).⁴⁶ Thus, more research is needed into such constructions in American Russian.

⁴⁵ According to Forsyth (1970:229), the selection of an imperfective infinitival complement by phasal verbs is "the most definite practical rule governing the choice of aspect of the infinitive".

⁴⁶ One also finds the agreeing IMPF+IMPF pattern in this construction.

(37) a. American Russian

ona nikogda ona ne **načnet** **govorit'** ko mne pervaja
 she never she not will-begin.PERF to-speak.IMPF to me first.NOM

b. Standard Russian

ona nikogda ne **zagovorit** so mnoj pervoj / pervaja
 she never not speak.PERF with me first.INSTR / first.NOM
 'She would never speak to me first.'

As for the example in (30) above, one possible explanation relies on the fact that the morphological marking here consists of a change of vowel suffix rather a simple addition of suffix or prefix. According to Spagis (1961), there are about 15 patterns of suffix change in aspectual alternations in Standard Russian; these patterns are highly infrequent, irregular and trigger additional morpho-phonological processes, such as consonant changes. Therefore, it is possible that this particular example illustrates a morpho-phonological rather than a morpho-syntactic problem.

The examples in (31) and (32) involve verbs with motion-verb stems (*naxodit'* 'find' involves a motion verb stem *na+xodit'* lit. 'on+walk'). Motion verbs in Russian draw two aspectual distinctions: in addition to the usual perfective/imperfective distinction, motion verbs distinguish iterative (indeterminate) and unidirectional (determinate) imperfective forms (often with suppletive stems, e.g., *xodit'* vs. *idti* 'go'). American Russian speakers are noted to make numerous mistakes with motion verbs, usually retaining the unidirectional/determinate imperfective at the expense of the iterative/indeterminate imperfective form (similar phenomenon has been noted in the speech of Austrian Russian speakers whose socio-linguistic profile is similar to that of American Russian speakers; an illustrative example is given below from Zemskaya et al. 2001:382).⁴⁷

(38) a. American Russian

vy ljubite **idti** v cerkov'??
 you like to-go.IMPF/UNIDIRECTIONAL to church

b. Standard Russian

vy ljubite **xodit'** v cerkov'??
 you like to-go.IMPF/ITERATIVE to church
 'Do you like to go to church?'

⁴⁷ As noted by Gagarina (2000a:243) first verbs of motion in L1 acquisition of Russian are those of the unidirectional/determinate type.

(39) a. Austrian Russian

ja ljublju v London tože **exat'**...

I like to London too to-go.IMPF/UNIDIRECTIONAL

b. Standard Russian

ja tože ljublju **ezdit'** v London

I too like to-go.IMPF/ITERATIVE to London

'I like to go to London too.'

The examples in (31) and (32) do not fall into this pattern since the form used in these examples is the iterative/indeterminate (used instead of the Standard Russian perfective). However, it is possible to attribute these mistakes to the general complexity of motion-verb morphology. More research is needed about motion verbs in American Russian.

At this stage, I have no explanation for the examples in (33) and (34).

Finally, note that four out of six problematic examples feature verbs that are attested in the corpus in both aspectual forms: alongside the perfective *zaxotet* 'want' we find 7 tokens of the imperfective *xotet* 'want'; alongside the imperfective *razrešat* 'permit' we find the perfective *razrešit* 'permit' (one token). Similarly, alongside the imperfective *rasskazyvat* 'tell' we find two tokens of the perfective *rasskazat* 'tell', and alongside the imperfective *prixodit* 'come' we find two tokens of the perfective *prijti* 'come'. Thus, it is inaccurate to claim that the forms predicted by the Lexical Aspect Hypothesis are lost in American Russian.⁴⁸

From the above discussion, I conclude that the Lexical Aspect Hypothesis makes better predictions as to which aspectual forms are retained in American Russian than the Statistical Frequency Hypothesis. Note also that statistical frequency plays a role in lexical attrition (Polinsky 2002), but not in the attrition of aspect. From this I conclude that Russian aspect is a grammatical rather than lexical category (contra Maslov 1948, Isačenko 1960, *inter alia*).

4.2. Properties of L2

In this section, I will consider another alternative to the Lexical Aspect Hypothesis – the L2-Transfer Hypothesis formulated below:

(40) L2-TRANSFER HYPOTHESIS:

American Russian speakers use aspectual marking in a way analogous to how aspectual markers are used in their dominant L2 (i.e., English).

According to this hypothesis, L1 attrition reduces to grammatical borrowing of constructions and phenomena found in the speakers' L2. Again, this hypothesis is not *a priori* unreasonable since for the speakers in question the L2 is the dominant language.

This L2-Transfer Hypothesis makes two independent predictions with respect to aspectual marking in American Russian: on the one hand, imperfective morphology is predicted to be used in a way analogous to English progressive *-ing*; on the other hand, perfective morphology

⁴⁸ The verbs *naxodit* 'find' (IMPF) and *brit'(sja)* 'shave' are exceptional in that they are not attested in the corpus in its perfective form *najti* and *pobrit'sja*, respectively. However, this may simply be a problem of a small-sized corpus. Note that Polinsky (p.c.) maintains that 'find' is translated from English by American Russian speakers only with the perfective form.

is predicted to be used in a way analogous to English perfect aspect. As will be shown below, neither prediction is borne out.

Consider first the correlation between Russian imperfective and English progressive *-ing*. Both can be used for ongoing dynamic events; however, English progressive *-ing* cannot be used with stative verbs (hence, the ungrammaticality of **Peter is liking this Moroccan dish*). If American Russian used imperfective morphology in the same way English uses the progressive *-ing*, we would expect to find no imperfective stative verbs in American Russian. As has been discussed in section 3.2 above, the exact opposite is found in American Russian: stative verbs are retained exclusively in the imperfective (e.g., (10) above).

Now consider the putative correlation between Russian perfective and English perfect. The latter can be used to refer to the result state, as in *Barbara has painted her nails black*, which can be used to state that Barbara's nails are black. Thus, the following prediction emerges: American Russian speakers will use perfective to refer to the result state. Yet, quite the opposite is true: American Russian speakers sometimes use stative forms (denoting the result state of a dynamic event) instead of the perfective, which would be appropriate in the given context in Standard Russian. For example, in the example below the speaker describes his actions when invited for a job interview; instead of using the perfective forms *podstričsja* 'get a haircut' and *nadet'* 'put on' denoting non-habitual completed events, the speaker uses stative verbs *nosit'* 'wear' and *byt'* 'be' denoting the result states of his actions.

(41) a. American Russian

... i budu **nosit'** korotkie volosy i ja **budu** s galstuk
and will wear.IMPF short hair and I will-be with tie

b. Standard Russian

... ja **podstrigus'** i **nadenu** galstuk
I will-get-haircut-self.PERF and will-put-on.PERF tie

'I will get a haircut and will put on a tie.'

In addition, L2-Transfer Hypothesis predicts that American Russian speakers should exhibit context-sensitive alternations (like the English *has broken* vs. *is breaking*).⁴⁹ But as we have seen above, the choice of the aspectual form is made on verb-by-verb basis, and such alternations are not found in American Russian.

Finally, under the L2-Transfer Hypothesis we also expect to see a different pattern in aspectual marking among speakers with a different dominant L2. However, this expectation is also not met. Zemskaya et al. (2001:248) describe the speech of a Swedish-dominant German Russian speaker AO, who makes the same types of mistakes as American Russian speakers do: atelic verbs are retained (incorrectly) in the imperfective, whereas telic verbs are retained (incorrectly) in the perfective.⁵⁰

⁴⁹ I thank Peter Svenonius for pointing this out to me.

⁵⁰ This speaker belongs to the third-generation of the 1st wave of emigrants. She acquired Russian as her first language even though it never went much beyond a home language. She was born and lives now in Germany and is married to a non-Russian-speaking German, but she spent much of her childhood and youth in Sweden, and Swedish is still her dominant language (for example, she counts in Swedish). For more details on her history and speech, see Zemskaya et al. (2001:241-256).

- (42) a. Swedish-dominant speaker AO [context: telling about one completed action]
 Ja **uveličivala** odnu fotografiju.
 I enlarged.IMPF one photo
- b. Standard Russian:
 Ja **uveličila** odnu fotografiju.
 I enlarged.PERF one photo
 ‘I enlarged one photo.’
- (43) a. Swedish-dominant speaker AO [context: telling about her aunt’s ability to draw]
 Ona tože **narisovala** xorošo.
 she too drew.PERF well
- b. Standard Russian:
 Ona tože **risovala** xorošo.
 she too drew.IMPF well
 ‘She too drew well.’

To conclude, the L2-Transfer Hypothesis makes the wrong predictions with respect to the aspectual marking in American Russian. This result is particularly interesting in the context of Bardovi-Harlig’s (1992:262) findings that L1-transfer does not play a role in the choice of aspectual forms by L2-learners of English. Thus, it appears that neither L1 plays a role in L2 acquisition, nor L2 plays a role in L1 attrition, as far as aspect is concerned. This further supports the proposal made in this paper about the primacy of **lexical** aspect (regardless of whether tense is marked correctly or not).

As has been concluded at the end of the previous section, the Statistical Frequency Hypothesis does not much better than the L2-Transfer Hypothesis. Hence, the Lexical Aspect Hypothesis makes the best predictions with respect to aspectual marking in American Russian.

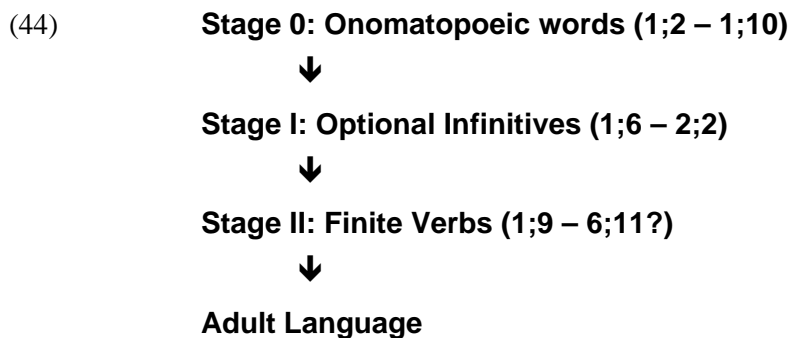
5. L1 attrition vs. L1 acquisition

In this section, I will consider how L1 attrition of aspect compares with L1 acquisition of aspect. There are two ways in which L1 attrition has been conceptualized in terms of L1 acquisition. One possibility is that L1 attrition represents the reverse process of L1 acquisition: during L1 acquisition language is learned in a particular sequence, and during L1 attrition it is “unlearned” in the reverse sequence. According to this conceptualization of L1 attrition, elements acquired late are less stable and are lost first (Zemskaya et al. 2001:129 mention that Jakobson entertained this idea; I haven’t been able to trace the quote).

Another way to conceptualize L1 attrition in terms of L1 acquisition is to see L1 attrition as L1 acquisition “frozen” at some early stage. This the way Polinsky has been characterizing L1 attrition in her work. She has characterized American Russian speakers as “incomplete learners”, meaning that their L1 acquisition of Russian has not reached its completion. This is a plausible approach since American Russian speakers become English-dominant before puberty, and hence, may not have a chance to acquire Russian fully, the way monolingual L1 learners of Russian do. Note that with both of these conceptualizations of L1 attrition, it is expected to match some stage of L1 acquisition of Russian. Yet, as I will argue below, it does not.

Note first that the situation found with respect to tense and aspect realization in American Russian is suspect from the point of view of L1 acquisition, since the projection encoding grammatical aspect, namely, OuterAspP is missing, whereas projection above it and below it (specifically, TP and InnerAspP) are projected and marked fairly consistently. The general picture emerging from L1 acquisition literature is that L1 acquisition proceeds from the bottom of the tree up with no gaps (e.g., VP is acquired before TP; TP is acquired before CP / NegP / Agr_SP; DP is acquired before KP, etc.; cf. Meisel 1994, Prévost 1997, Ingram 1998, among others).⁵¹ Research on the acquisition of aspect and tense shows that (by and large) aspect is acquired prior to tense (see section 3.5 above).

Specifically with respect to the acquisition of tense and aspect by monolingual Russian children, the following picture emerges. Children go through three non-adult stages:⁵²



At the earliest stage (cf. Gagarina 2000a) – even before the appearance of verbs as such – children are able to make the distinction encoded in adult Russian by perfective/imperfective morphology. Yet, young children have no verbal morphology to encode this distinction with. However, this distinction appears to be encoded through the use of onomatopoeic words like *bul'* ‘cluck’, *bax* ‘plop’, etc.: a single occurrence of an onomatopoeic word “denotes an instantaneous and limited action”, whereas a repeated onomatopoeic word “denotes an ongoing situation” (Gagarina 2000a:237, examples below are from p. 238). In other words, a single occurrence of an onomatopoeic word corresponds to perfective aspect in adult language, whereas a repeated onomatopoeic word corresponds to imperfective.

- (45) a. SINGLE ONOMATOPOEIC WORD:
 Philip S. (1;8.28) plays with a hat, bites it:
 Sjapa njam.
 šljapu ukusil
 hat.ACC bit.PERF

⁵¹ How exactly this acquisition process proceeds is of course a matter of considerable debate. Some of the issues involved include: (i) whether the tree is present in full (even at the earliest stages) and is not realized through overt marking, (ii) if yes, why parts of the tree are not realized from the start, (iii) if not, how are the “missing” parts of the tree acquired. I will have no direct evidence to contribute to any positions in this debate.

⁵² The ages given for the various stages partially overlap because different researchers focused on different stages and studied different (though partially overlapping) sets of children. Furthermore, the rate of linguistic development at this early age can differ significantly from child to child.

b. REPEATED ONOMATOPOEIC WORD:

Philip S. (1;9.3) answers mother's question 'What are you doing?'

Njam-njam.

Kušaju

eat.IMPF

Later, children may use a verbal root in much the same way: a repeated occurrence of the root denoting an ongoing action (example from Gagarina 2000a:238).

(46) Varja P. (1;6) shows the hare, imitating how he jumps:

Pik-Pik.

Prygaet

jump.IMPF

The first stage at which distinguishable verbs appear is the Optional Infinitive (OI) Stage. At this stage, (the majority of) verbs are infinitives (i.e., tense is not marked). Note that Russian infinitives – much like finite forms – are marked for aspect; therefore, we can talk about the use of aspectual morphology even at the OI Stage. Brun (1999) and Brun et al. (1999) claim that at the OI stage the aspectual morphology correlates with temporal interpretation: “the events in the past tense are overwhelmingly expressed through the verbs in perfective aspect, while the present tense interpretation is almost always expressed through imperfective verbs” (Brun 1999:9). The following are illustrative examples from Brun et al. (1999):

(47) a. PERF = past interpretation

Sasha P. (1;8) after he had put on his pants:

odet'

to-put-on.PERF

'(He) has put (the pants) on'

b. IMPF = present interpretation

Sasha J. (1;6 / 2;4) describes the actions of his sister who is playing with her toy stroller in the same room.⁵³

kačat' kolyasočku

to-swing.IMP stroller.DIM

'(She) is swinging the stroller.'

However, data presented in Gagarina (2002:9) and Gagarina (2000b:157) challenge this claim. Here are some illustrative examples:

⁵³ The first age indicated is the child's mental age and the second age is his physical age. The reader is referred to Brun et al. (1999) for discussion.

(48) a. PERF but non-past interpretation

Vanja (2;2) starts to break a toy car door, commenting on his action:

Sjamat' (= *sloamat'*)

break.PERF

'(I) am breaking (car door).'

b. IMPF but past interpretation

Roma describes how he went for a walk with daddy:⁵⁴

Guljat' papa, mašina exat'.

walk.IMPF daddy car go.IMPF

'(I) was walking (with) daddy, went (by) car.'

The alternative hypothesis is that aspectual morphology encodes lexical aspect rather than grammatical aspect or tense. Thus, in the above examples *odet'* 'put on' and *sloamat'* 'break' are telic and therefore perfective, whereas *kačat'* 'swing', *guljat'* 'walk' and *exat'* 'go/drive' are atelic and therefore imperfective.

After the OI Stage comes the Finite Verb stage at which (the majority of) verbs are marked for tense (quite accurately too). As for aspectual morphology, it appears to encode the grammatical aspect much like it does in adult language. Thus, Bar-Shalom and Snyder (2001) have found that the correlation between aspectual marking (i.e., perfectivity) and tense (i.e., past/non-past distinction) does not exceed the distributional bias found in adult language. Similarly, Vinnitskaya and Wexler (2001) maintain that children acquire the aspectual semantics of the perfective/imperfective aspect by the age of 3. The difference between Finite Verb Stage and adult language is that children still make mistakes with the use (i.e., pragmatics and discourse functions) of aspect; cf. Stoll (2001). However, children at this stage do not rely on lexical aspect to make the choice between perfective and imperfective verbs. One example from Gagarina (2002:10) illustrating the disassociation of morphological aspect from lexical aspect is given below (cf. (12) above):

(49) Liza (1;9) answering mother's question 'What are you doing?':

Pisis' kajajas' (= *pišeš karandaš*)

write.2.SG.IMPF pencil.NOM

'(I am) writing (with a) pencil.'

Crucially, there appears to be no developmental stage in L1 acquisition of Russian aspect at which tense is marked correctly but grammatical aspect is not realized, as in American Russian. In other words, L1 attrition of aspect by American Russian speakers does not match any stage of L1 acquisition. Hence, it is not appropriate to characterize L1 attrition as "incomplete acquisition".

⁵⁴ No age is indicated for this example.

6. Conclusions.

In this paper, I have developed an analysis of the aspectual system in American Russian, providing further support for the Lexical Aspect Hypothesis. In addition, I have shown that alternative hypotheses, namely, the Statistical Frequency Hypothesis and the L2-Transfer Hypothesis cannot account for the relevant data. In particular, the Statistical Frequency Hypothesis predicts half of the attested data, and the L2-Transfer Hypothesis makes wrong prediction with respect to stative verbs. Furthermore, I have addressed the question of why the grammatical aspect is not represented in American Russian, whereas the lexical aspect is. I have maintained that the projection associated with the grammatical aspect, namely, OuterAspP is not projected in American Russian; nevertheless, the semantic computation can proceed unhampered because T° can relate the Event Time computed at the level of νP with respect to the Speech Time (t^*). In contrast, InnerAspP is not only projected but is marked overtly through the verbal aspectual marking. This is so because InnerAspP provides important information about the internal structure of the event itself. The findings of this paper shed new light on the comparison between L1 attrition, on the one hand, and L1 and L2 acquisition on the other hand.

Appendix: Semantics of Aspect and Tense in Russian.

Definitions:

There are two types of temporal entities: instants and intervals. Aspect and tense are represented with three temporal elements: Event Time (E), Reference Time (R) and Speech time (t^*). The latter is an instant, whereas E and R are intervals.

Relations between intervals and between an interval and an instant are defined through interval edges, which are themselves instants. Each interval has two edges:

- $]_R$ is the right edge of an interval; e.g., $]_R(E)$ is the right edge of the Event Time
- $[_L$ is the left edge of an interval; e.g., $[_L(R)$ is the left edge of the Reference Time

The following relations are defined:

- for two instants:

PRECEDE: $t_1 < t_2$ iff t_1 is *before* t_2

FOLLOW: $t_1 > t_2$ iff t_1 is *after* t_2

SIMULTANEOUS: $t_1 = t_2$ iff t_1 is *simultaneous with* t_2

- for two intervals:

PROPER INCLUSION: $X \subset Y$ iff $[_L(X) > [_L(Y) \wedge]_R(X) <]_R(Y)$

in plain English: the time interval X is *properly included* in the time interval Y if and only if the left edge of X follows the left edge of Y and the right edge of X precedes the right edge of Y.

- for an interval and an instant:

PROPERLY FOLLOWS: $X \succ t$ iff $[_L(X) > t$

in plain English: the time interval X *properly follows* the time instant t if and only if the left edge of X follows t

PROPERLY PRECEDES: $X \prec t \text{ iff }]_R(X) < t$

in plain English: the time interval S *properly precedes* the time instant t if and only if the right edge of X precedes t

INCLUSION: $t \subset X \text{ iff } [L(X) < t \wedge]_R(X) > t$

in plain English: the time instant t is *included* in the time interval X if and only if the left edge of X precedes t and the right edge of X follows t

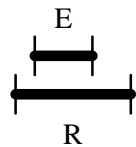
ADJACENT-PRECEDE:⁵⁵ $t \vdash X \text{ iff } [L(X) = t$

in plain English: the time instant t *adjacent-precedes* the time interval X if and only if the left edge of X is simultaneous with t

Semantics of Outer Aspect (Standard Russian):⁵⁶

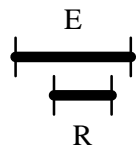
perfective:

(50) [perf]: $E \subset R$



imperfective:

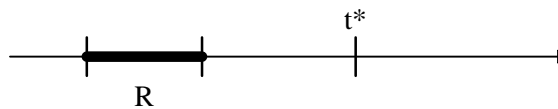
(51) [imprf]: $R \subset E$



Semantics of Tense (universal):

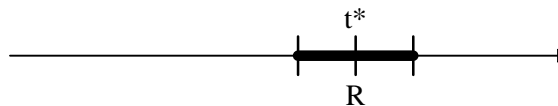
past:

(52) [past]: $t^* \succ R$



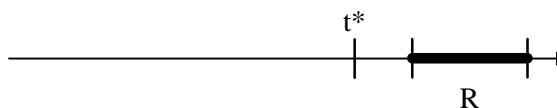
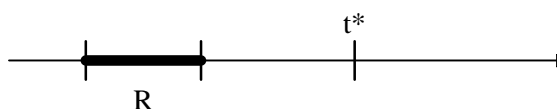
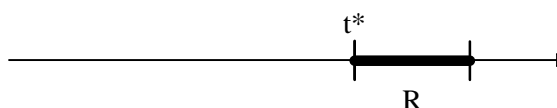
present:

(53) [present]: $t^* \subset R$



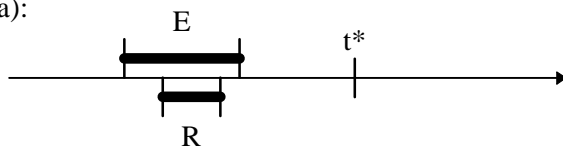
⁵⁵ The mirror-image relation of adjacent-follow can be defined but will not be relevant for the discussion of Russian.

⁵⁶ This proposal is based on Smith (1991:301-302) and Arefiev (1999:40-41).

future:(54) [future]: $t^* \langle R$ Semantics of Tense morphology in (Standard) Russian:**past tense morphology:**(55) [past]: $t^* \rangle R$ **non-past tense morphology:**(56) [non-past]: $t^* \vdash R$ Interactions of Outer Aspect and Tense in Russian:⁵⁷**Past + perfective morphology:**(57) [past]: $t^* \rangle R$
[perf]: $E \subset R$ **Past + imperfective morphology:**(58) [past]: $t^* \rangle R$
[imprf]: $R \subset E$

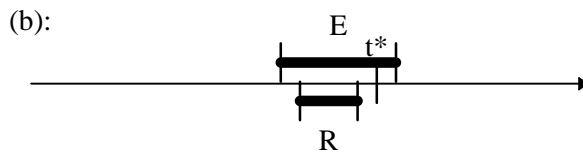
This combination of morphemes is vague with respect to the question of whether the event has ended before the Speech time. The two possibilities are schematized below:⁵⁸

(a):



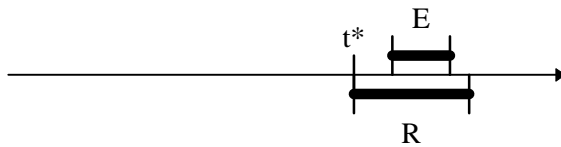
⁵⁷ The importance of the facts accounted for here is highlighted in the following quote from Arefiev (1999:22): “the future meaning test ... correlates best with the native speaker’s intuition [about aspectual classification of verbs].”

⁵⁸ Note: interpretation (a) is preferred for pragmatic reasons (cf. present imperative).



Non-past + perfective morphology:

- (59) [non-past]: $t^* \vdash R$
 [perf]: $E \subset R$

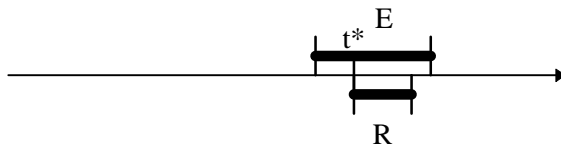


$t^* < [L(E) \Rightarrow t^* \langle E \Rightarrow$ future interpretation

in plain English: since the Speech Time precedes the left edge of the Event Time, the Speech Time properly precedes the Event Time. Hence, the future temporal interpretation (cf. (54) above).

Non-past + imperfective morphology:

- (60) [non-past]: $t^* \vdash R$
 [imprf]: $R \subset E$



$[L(E) < t^* \wedge]_R(E) > t^* \Rightarrow t^* \subset E \Rightarrow$ present interpretation

in plain English: since the left edge of the Event Time precedes the Speech Time and the right edge of the Event Time follows the Speech Time, the Speech Time is included in the Event Time. Hence, the present temporal interpretation (cf. (53) above).

REFERENCES:

- Alexiadou, Artemis (1996) Aspectual Restrictions on Word Order. *Folia Linguistica* 30(1-2):35-46.
- Andersen, Roger W. (1990) Developmental sequences: The emergence of aspect marking in second language acquisition. In T. Huebner and C.A. Ferguson (eds.) *Crosscurrents in second language acquisition and linguistic theories*. Amsterdam: John Benjamins. Pp. 305-324.
- Andersen, Roger W. and Yasuhiro Shirai (1996) The Primacy of Aspect in First and Second Language Acquisition: The Pidgin-Creole Connection. In William C. Ritchie and Tej K. Bhatia (eds.) *Handbook of second language acquisition*. San Diego: Academic Press. Pp. 527-570.
- Arefiev, Andrei (1999) *Interval Semantics of Russian Aspect*. MA thesis, University of Tromsø.
- Babko-Malaya, Olga (1999) *Zero Morphology: A Study of Aspect, Argument Structure and Case*. Ph.D. dissertation, Rutgers University.
- Bardovi-Harlig, Kathleen (1992) The relationship of form and meaning: A cross-sectional study of tense and aspect in the interlanguage of learners of English as a second language. *Applied Psycholinguistics* 13:253-278.
- Bardovi-Harlig, Kathleen and Dudley W. Reynolds (1995) The Role of Lexical Aspect in the Acquisition of Tense and Aspect. *TESOL Quarterly* 29(1):107-131.
- Bar-Shalom, Eva and William Snyder (2001) *Against the Aspect First Hypothesis: Evidence from Early Child Russian*. Paper presented at FASL10, Ann Arbor, MI.
- Berman, Ruth (1983) Establishing a schema: Children's construals of verb-tense marking. *Language Sciences* 5:61-78.
- Blauvelt, Yvonne (1980) *Russian Verbal Government*. Ph.D. dissertation, Ohio State University.
- Bloom, Lois, Karin Lifter and Jeremie Hafitz (1980) Semantics of verbs and the development of verb inflection in child language. *Language* 56(2):386-412.
- Borer, Hagit (1996) Deriving Passive without Theta Roles. In Steven G. Lapointe, Diane K. Brentari and Patrick M. Farrel (eds.) *Morphology and Its Relation to Phonology and Syntax*. Stanford, CA: CSLI Publications. Pp. 60-99.
- Brecht, Richard D. (1984) The form and function of aspect in Russian. In Michael S. Flier and Richard D. Brecht (eds.) *Issues in Russian Morphosyntax*. Columbus, OH: Slavica Publishers.
- Bronckart, J.P. and H. Sinclair (1973) Time, tense and aspect. *Cognition* 2(1):107-130.
- Brown, Nicholas J. (1996) *Russian Learners' Dictionary: 10,000 words in frequency order*. London: Routledge.
- Brun, Dina (1999) *Temporal interpretation of root infinitives during the Optional Infinitive stage in Russian*. Paper presented at ConSOLE 7, Bergen, Norway.
- Brun, Dina, Sergey Avrutin and Maria Babyonyshev (1999) Aspect and Its Temporal Interpretation during the Optional Infinitive Stage in Russian. *Proceedings of Boston University Conference in Language Development*.

- Comrie, Bernard S. (1976) *Aspect*. Cambridge, UK: Cambridge University Press.
- Demirdache, Hamida and Myriam Uribe-Etxebarria (2000) The Primitives of Temporal Relations. In Roger Martin, David Michaels, and Juan Uriagereka (eds.) *Step by Step*. Cambridge, MA: The MIT Press. Pp. 157-186.
- Dowty, David (1979) *Word Meaning and Montague Grammar*. Dordrecht: Reidel.
- Dowty, David (1991) Thematic Proto-Roles and Argument Selection. *Language* 67:547-619.
- Enç, Muvvet (1986) Towards a referential analysis of tense expressions. *Linguistics and Philosophy* 9:405-426.
- Forsyth, James (1970) *A Grammar of Aspect. Usage and Meaning in the Russian Verb*. Cambridge: Cambridge University Press.
- Gagarina, Natalia (2000a) The acquisition of aspectuality by Russian children: the early stages. *ZAS Papers in Linguistics* 15:232-246.
- Gagarina, Natalia (2000b) Early verb development in one Russian-speaking child. *ZAS Papers in Linguistics* 18:143-162.
- Gagarina, Natalia (2002) The early verb development and demarcation of stages in three Russian-speaking children. To appear in D. Bittner, M. Kilani-Schock and Wolfgang U. Dressler (eds.) *Cross-linguistic approaches to early verb development*. Berlin: De Gruyter.
- Garey, Howard (1957) Verbal Aspect in French. *Language* 33(2):91-110.
- Gavruseva, Elena (2000) Aspect Parameter in the Guise of Optional Infinitives in Child L2 English. In S. Catherine Howell, Sarah A. Fish, and Thea Keith-Lucas (eds.) *Proceedings of the 24th Annual Boston University Conference on Language Development*. Somerville, MA: Cascadilla Press. Pp. 319-330.
- Giorgi, Alessandra and Fabio Pianesi (1997) *Tense and Aspect: From Semantics to Morphosyntax*. Oxford, UK: Oxford University Press.
- Glovinskaja, M. Ja. (1982) *Semantičeskije tipy vidovyx protivopostavlenij russkogo glagola* [Semantic types of aspectual oppositions of Russian verbs]. Moscow: Nauka.
- Ingram, Richard (1998) Tense Without Agreement in Early Clause Structure. *Language Acquisition* 7(1):51-81.
- Isačenko, Aleksandr V. (1960) *Grammatičeskij stroj russkogo jazyka v sopostavlenii s slovackim. Čast' 2-aja: Morfologija* [The grammar of Russian in comparison with Slovak. Part 2: Morphology]. Bratislava: Izdatel'stvo slovackoj Akademii Nauk.
- Jakobson, Roman (1932/1971) Zur Struktur des russischen Verbums. In *Selected Writings 2*. The Hague: Mouton. Pp. 3-15.
- Josselson, H.H. (1953) *The Russian word count and frequency analysis of grammatical categories of Standard Literary Russian*. Detroit: Wayne University Press.
- Julien, Marit (2001) The syntax of complex tenses. *The Linguistic Review* 18:125-167.
- Kiparsky, Paul (1998) Partitive Case and Aspect. In Miriam Butt and Wilhelm Geuder (eds.) *The Projection of Arguments: Lexical and Compositional Factors*. Stanford, CA: CSLI Publications. Pp. 265-307.
- Kiparsky, Paul (2001) Structural Case in Finnish. *Lingua* 111:315-376.

- Klein, Wolfgang (1995) A Time-Relational Analysis of Russian Aspect. *Language* 71(4):669-95.
- Krifka, Manfred (1992) Thematic Relations and links between nominal reference and temporal constitution. In Ivan A. Sag and Anna Szabolcsi (eds.) *Lexical Matters*. Stanford: CSLI Publications. Pp. 29-53.
- Lightfoot, David (1999) *The Development of Language. Acquisition, Change and Evolution*. Oxford: Blackwell.
- Maslov, Yuriy S. (1948) Vid i leksičeskoe značenie glagola v sovremennom ruskom literaturnom jazyke [Aspect and lexical meaning of the verb in Modern Literary Russian]. *Izvestija Akademii Nauk SSSR, Otdel literatury i jazyka* 7(4):303-316.
- Maslov, Yuriy S. (1974) Zur Semantik der Perfektivitätsopposition. *Wiener Slavistisches Jahrbuch* 20:107-22.
- McCawley, James D. (1968) The Role of Semantics in a Grammar. In Emmon Bach and Robert T. Harms (eds.) *Universals in Linguistic Theory*. New York: Holt, Rinehart and Winston. Pp. 124-169.
- Mehlig, Hans Robert (1996) Some Analogies between the Morphology of Nouns and the Morphology of Aspect in Russian. *Folia Linguistica* 30(1-2):87-109.
- Meisel, J. (1994) Getting fat: finiteness, agreement and tense in early grammars. In J. Meisel (ed.) *Bilingual first language acquisition: French and German grammatical development*. Amsterdam: John Benjamins. Pp. 89-129.
- Olsen, M.B. and A. Weinberg (1999) Innateness and the acquisition of grammatical aspect via lexical aspect. In A. Greenhill, H. Littlefield and C. Tano (eds.) *BUCLD 23 Proceedings*. Pp. 529-540.
- Padučeva, Elena Victorovna (1990) Vid i leksicheskie znachenia glagola [Aspect and lexical meanings of the verb]. *Russian Linguistics* 14(1):1-18.
- Pereltsvaig, Asya (2000) On Accusative adverbials in Russian and Finnish. In Artemis Alexiadou and Peter Svenonius (eds.) *Adverbs and Adjunction. Linguistics in Potsdam* 6. Pp. 155-176.
- Pereltsvaig, Asya (2002) *Agreement in the absence of Agreement: A Case Study of Gender Agreement in American Russian*. Ms., University of Tromsø.
- Pereltsvaig, Asya (to appear) *What does American Russian morphology tell us about syntax?* To appear in *Journal of Slavic Linguistics*.
- Piñon, Christopher (1993) Nominal reference and the imperfective in Polish and English. *Proceedings of NELS*. Pp. 383-397.
- Platzack, Christer (1996) The initial hypothesis of syntax: a minimalist perspective on language acquisition and attrition. In Harald Clahsen (ed.) *Generative Perspectives on Language Acquisition*. Amsterdam: John Benjamins. Pp. 369-414.
- Polinsky, Maria (1994) *What happens when you lose aspect: American Russian*. Paper presented at the UCLA Symposium on Aspect.

- Polinsky, Maria (1997) American Russian: Language Loss Meets Language Acquisition. In W. Browne, E. Dornisch, N. Kondrashova, and D. Zec (eds.) *Annual Workshop on Formal Approaches to Slavic Linguistics*. Ann Arbor, MI: Michigan Slavic Publishers. Pp. 370-406.
- Polinsky, Maria (1998) A Composite Linguistic Profile of a Speaker of Russian in the U.S. In Olga Kagan and Benjamin Rifkin (eds.) *The Learning and Teaching of Slavic Languages and Cultures*. Pp. 437-465.
- Polinsky, Maria (2002) *Structure Mapping in Incomplete Acquisition*. Ms., UC San Diego.
- Polinsky, Maria (to appear) *American Russian: An Endangered Language?* To appear in *Journal of Slavic Linguistics*.
- Prévost, Philippe (1997) *Truncation in second language acquisition*. Ph.D. dissertation, McGill University.
- Ramchand, Gillian Catriona (1997) *Aspect and Predication: The Semantics of Argument Structure*. Oxford: Oxford University Press.
- Reichenbach, Hans (1947) *Elements of Symbolic Logic*. New York, NY: Macmillan.
- Robison, R. (1990) The primacy of aspect: Aspectual marking in English interlanguage. *Studies in Second Language Acquisition* 12:315-330.
- Schmitt, Elena (2000) The Lost Word: Language Attrition Among Children. In S. Catherine Howell, Sarah A. Fish, and Thea Keith-Lucas (eds.) *Proceedings of the 24th Annual Boston University Conference on Language Development*. Somerville, MA: Cascadilla Press. Pp. 645-656.
- Sharoff, Serge (2002) *The list of most frequent Russian words*. Available on the web from: <http://www.artint.ru/projects/frqlist/frqlist-en.asp>
- Shirai, Yasuhiro and Roger W. Andersen (1995) The acquisition of tense-aspect morphology: a prototype account. *Language* 71(4):743-762.
- Shirai, Yasuhiro and Atsuko Karuno (1998) The Acquisition of Tense-Aspect Marking in Japanese as a Second Language. *Language Learning* 48(2):245-279.
- Slabakova, Roumyana (2001) *Telicity in the Second Language*. Amsterdam: John Benjamins.
- Smith, Carlotta S. (1991) *The Parameter of Aspect*. Dordrecht: Kluwer Academic.
- Sorace, Antonella (2000) Differential Effects of Attrition in the L1 Syntax of Near-native L2 Speakers. In S. Catherine Howell, Sarah A. Fish, and Thea Keith-Lucas (eds.) *Proceedings of the 24th Annual Boston University Conference on Language Development*. Somerville, MA: Cascadilla Press. Pp. 719-725.
- Spagis, Anna Andreevna (1961) *Obrazovanie i upotreblenie vidov glagola v rusском jazyke* [Derivation and Use of Verbal Aspects in Russian]. Moscow: Uchpedgiz.
- Steinfeldt, E. (1963) *Russian word count. 2500 words most commonly used in Modern Literary Russian*. Moscow: Progress Publishers.
- Stoll, Sabine Erika (2001) *The Acquisition of Russian Aspect*. Ph.D. dissertation, University of California, Berkeley.

- Stowell, Tim (1995) What do the Present and Past Tenses Mean? In Pier Marco Berinnetto, Valentina Bianchi, James Higginbotham and Mario Squartini (eds.) *Temporal Reference, Aspect and Actionality. Vol 1: Semantic and Syntactic Perspectives*. Torino: Rosenberg & Sellier. Pp. 381-396.
- Stowell, Tim (1996) The Phrase Structure of Tense. In Johan Rooryck and Laurie Zaring (eds.) *Phrase Structure and the Lexicon*. Dordrecht: Kluwer. Pp. 277-291.
- Svenonius, Peter (2001) Case and Event Structure. In Nina Zhang (ed.) *ZAS Working Papers* 26. Berlin: ZAS.
- Svenonius, Peter (2002) Icelandic Case and the Structure of Events. Submitted to *Journal of Comparative Germanic Linguistics*.
- Tenny, Carol Lee (1987) *Grammaticalizing Aspect and Affectedness*. Ph.D. dissertation, MIT.
- Travis, Lisa deMena (1994) Event Phrase and a Theory of Functional Categories. In Päivi Koskinen (ed.) *Proceedings of the 1994 Annual Conference of the Canadian Linguistic Association*. University of Toronto, Toronto.
- Travis, Lisa deMena (2000) Event Structure in Syntax. In James Pustejovsky and Carol Tenny (eds.) *Events as Grammatical Objects*. Stanford, CA: CSLI Publications.
- Turian, Donna and Evelyn P. Altenberg (1991) Compensatory strategies of child first language attrition. In Herbert W. Seliger and Robert M. Vago (eds.) *First Language Attrition*. Cambridge, UK: Cambridge University Press. Pp. 207-226.
- Verkuyl, Henk J. (1999) Tense, aspect and aspectual composition. In Marina Dimitrova-Vulchanova and Lars Hellan (eds.) *Topics in South Slavic Syntax and Semantics*. Amsterdam: John Benjamins. Pp. 125-162.
- Vikner, Sten (1985) Reichenbach Revisited: One Two, or Three Temporal Relations? *Acta Linguistica Hafniensia*, 19(2):81-98.
- Vinnitskaya, Inna and Ken Wexler (2001) The role of pragmatics in the development of Russian aspect. *First Language* 21(2).
- Wagner, Laura (2001) Aspectual influences on early tense comprehension. *Journal of Child Language* 28:661-681.
- Weist, R.M., H. Wysocka, K. Witkowska-Stadnik, E. Buczowska and E. Konieczna (1984) The defective tense hypothesis: On the emergence of tense and aspect in child Polish. *Journal of Child Language* 11:347-374.
- Westergaard, Marit R. (2002) *On the Acquisition of Word Order in WH-Questions in the Tromsø Dialect*. Ms., University of Tromsø.
- Zagona, Karen (1995) Temporal Argument Structure: Configurational Elements of Construal. In Pier Marco Berinnetto, Valentina Bianchi, James Higginbotham and Mario Squartini (eds.) *Temporal Reference, Aspect and Actionality. Vol 1: Semantic and Syntactic Perspectives*. Torino: Rosenberg & Sellier. Pp. 396-410.
- Zemskaya, Elena Andreevna et al. (2001) *Jazyk Russkogo Zarubezhja* [Language of Russian emigration]. Moscow/Vienna: Wiener Slawisticher Almanach.

