

Without aspect*

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This paper presents and analyzes the encoding of aspect in Heritage Russian (HR), an incompletely acquired language spoken by those for whom another language became dominant at an early age. The HR aspectual system is distinct from the baseline. Aspectual distinctions are lost due to the leveling or loss of morphological marking. As a result, heritage speakers often maintain only one member of a former aspectual pair. Such HR verb forms are underspecified for aspect. To compensate for that, heritage speakers regularly express aspect through the use of analytical forms with the light verbs ‘be’, ‘become’, ‘do’. The frequent occurrence of these forms supports the notion that aspectual distinctions are universal, belonging with the conceptual representation of events. What varies is the actual linguistic encoding of these distinctions, but not the underlying distinctions themselves.

1. Introduction¹

The goal of this paper is to bring together old and new. On the side of the old, I will revisit some issues in the study of Russian aspect, mostly reiterating what

*I am honored to be included in the celebration of Bernard Comrie’s distinguished career. When I started working on incomplete acquisition about ten years ago, Bernard was one of the few people who was always willing to hear about the unseemly quirks of heritage languages. His own work on aspect has been a major inspiration for this study. Happy birthday to a wonderful friend!

1. This paper owes a great deal to Hana Filip, whose insightful comments and general encouragement have made me think of some larger issues related to the grammar and meaning of aspect. I am also grateful to Bernard Comrie, Grev Corbett, Michael Flier, Lenore Grenoble, Gaby Hermon, Olga Kagan, Robert Kluender, Beth Levin, Hazel Pearson, David Perlmutter, Keith Plaster, and Ekaterina Protassova for their comments and suggestions. All errors are my sole responsibility.

The following abbreviations are used throughout the paper: ACC=accusative; IMPF=imperfective; INF=infinitive; NOM=nominative; PERF=perfective; PL=plural; SG=singular; UNM=unmarked.

has already been proposed in the relevant literature. As for the new, I will address issues of incomplete acquisition, a phenomenon whose relevance for linguistic description and theory has been steadily on the rise.

Incomplete, or interrupted, acquisition is represented by heritage speakers, who only recently have been recognized as a group separate from those bilinguals for whom one language is strongly dominant. In the last decade, heritage speakers have come to the fore in a number of fields, from language teaching (Kagan & Dillon 2001; Bermel & Kagan 2000; Geislerik 2005) to sociolinguistics (Andrews 1998; Fenyvesi 2005; Seliger and Vago 1991, among many others) to general linguistics (Dorian 1989; Seliger & Vago 1991) and psycholinguistics (Sorace 2004; Tsimpli et al. 2004; Montrul 2004; Montrul & Slabakova 2003). Very little is known about heritage speakers, which makes the study of particular phenomena in their language important from the standpoint of the initial data collection needed to advance our understanding of heritage languages. Aspect is an intriguing phenomenon in its own right, and heritage speakers' control of aspectual distinctions may shed new light on its grammar and meaning.

In what follows, I will first provide a general background on heritage speakers. Then I will discuss aspect in heritage Russian, and in doing so will also address some general issues relating to the grammar of aspect in Russian. To anticipate the conclusions of this paper, the aspect data presented here argue that the language system emerging under incomplete acquisition is subject to regular, systematic constraints, albeit different from what is found in the baseline language.

2. Heritage speakers at a glance

An incomplete learner, or heritage speaker, of language A is an individual who grew up speaking (or only hearing) A as his/her first language, but who later switched to another language as dominant and primary. The language (A) that a heritage speaker was exposed to as a child constitutes the baseline language. In general, heritage speakers rarely, if ever, have access to the baseline language norm through formal schooling; this means that the baseline should not be identified with the standard language available to educated and fully competent speakers of A. Rather, the baseline is the language that heritage speakers are exposed to in the home and immediate community – in the case of Russian in the USA, this communal standard happens to be closer to southern Russian than to the standard language, which reflects more central dialects (see Polinsky 2000). This proximity to southern varieties of Russian is a mere accident of demographic patterns. But even the deviation from the standard is just the beginning of a comprehensive understanding of the baseline; given that different heritage speakers receive different dialectal input in

the home, their baseline may be generally more varied than the baseline assumed for competent speakers, who have been exposed to different dialects and registers and who generally have the awareness that there is a standard out there that may be different from their own speech. The general recognition that the baseline for heritage speakers may be not entirely regular leads to another important observation – one concerning the uniformity of the heritage group.

There is a temptation to treat heritage speakers as a *homogenous group*; what seems to underlie this drive is the realization that heritage speakers are quite different from speakers of the baseline and all share the same language history: a once-used home language later supplanted by the dominant language. However, such an approach is dangerously simplistic; researchers have long-since noticed that heritage speakers do not form a homogeneous group, and should be separated into several groups. A parallel can be drawn with the lectal divisions in creole languages. For extended pidgins and creoles, it is common to distinguish a basilect, which is often identified with creole *sensu stricto*, a mesolect, and an acrolect, which is closest to the lexifier. Disagreements abound as to whether basilect, acrolect and mesolect form contiguous links in a creole continuum (Bickerton 1973, 1989, 1995; Rickford 1987, and many subsequent publications) or whether they should be treated as distinct entities. Regardless of this issue, no one questions the existence of these three lectal divisions. Similarly, heritage speakers can be divided into several groups, but the bases on which divisions should be made are not yet clear.

Three main approaches to address the possible heterogeneity of heritage speaker populations have emerged so far. The first approach is essentially sociolinguistic in nature; under this approach, speakers are divided into groups on the basis of their actual language history, relying especially on such criteria as the age at which they switched from the home language to the dominant language, their current use of the home language (when, with whom, and how extensively), and, if applicable, their ability to read and write in the home language (cf. Yokoyama 2000; Geislerik 2005; Fenyvesi 2005). While a speaker's language history is certainly important, there is no one-to-one correspondence between the age of interruption and proficiency (Godson 2003), and self-reporting of language history may often yield faulty data because memory, especially that of early childhood, is never perfect.

The second approach designed to address the heterogeneity of heritage populations combines data from the speakers' individual language histories with information relating to the speakers' understanding of the baseline language in adulthood, in addition to their developmental profile. A distinction is drawn between those who were never directly addressed in the home language ("overheaters" – cf. Au & Romo 1997; Au & Oh 2005) and those who actually spoke

the language in the home prior to interruption by the dominant language, with further subdivisions in the latter group on the basis of their understanding of the language. This approach has proven effective in defining group boundaries in heritage populations, and has been used to separate different levels of proficiency for classroom purposes.

A third approach, and one that this author very much subscribes to, advocates combining the speakers' actual linguistic history with specific proficiency measures, such as lexical knowledge, mean length of utterance, and speech rate (Polinsky 1995, 2006b). Assuming that the speech rate for the baseline is known, heritage speakers can be effectively assessed by comparing their rate to the rate for the baseline. More research is needed to determine effective measures that would establish reliable subgroups within heritage populations, but the realization that such subgroups exist is an important step in that direction. Much pedagogical effort has been directed at the more proficient heritage speakers (Valdés 2001; Bermel & Kagan 2000, etc.), but from a developmental standpoint, the less proficient groups may be equally interesting.

The focus of this study is on those speakers who rank quite low on the proficiency scale, and this choice is not accidental. Assuming that incomplete acquisition is a phenomenon that needs to be distinguished from bilingualism, lower-proficiency heritage speakers provide the most promising way to determine if this distinction is real, rather than imaginary. The state of the grammar of low-proficiency speakers can be taken as representative of incomplete acquisition *per se*, and the differences from the baseline grammar found in the grammars of these speakers also would be expected to be more pronounced. Russian aspect is one area in which a marked distinction is evident between lower-proficiency speakers and bilinguals.

3. Aspect in Russian: Characteristics of the baseline system

The main distinction in Russian aspect is between formally perfective and imperfective verbs. However, this simple formal distinction is just the beginning – Russian aspect is encoded in many different ways, and even the meanings of each aspectual subclass are far from uniform.²

Simplifying things somewhat, aspectual distinctions are most commonly expressed by prefixes (usually deriving formally perfective verbs), as in (1b), (2b),

2. The semantic issues that arise in the domain of aspect are set aside in the present discussion; I assume that the semantics of aspect is an issue that is important, but orthogonal to my immediate concerns, and give priority to the task of defining the lexical space in which heritage speakers operate.

and (3b); suffixes whose common function is to derive imperfectives, as in (4b), or perfectives, as in (5b); and combinations of prefixes and suffixes, as in (5c).

- (1) a. **zvat'** 'call'
 b. **po-zvat'** 'call up'
- (2) a. **delat'** 'do, make'
 b. **s-delat'** 'do, make'
- (3) a. **moč'** 'be able to'
 b. **s-moč'** 'manage'
- (4) a. **DAT'** 'give (PERF.)'
 b. **da-va-t'** 'give (IMPERF.)'
- (5) a. **kričat'** 'scream'
 b. **krik-nu-t'** 'scream (punctual)'
 c. **po-krik-iva-t'** 'shout regularly'

Despite morphophonemic variation, the main suffixes that encode imperfective aspect are relatively regular; they include the suffix – (V)*va-*, (e.g., (4b), (5c)), where V is the vowel conditioned by the stem, and the suffix – *a-* (Švedova 1982: 589–590), as in (6):

- (6) a. prognat' 'chase away' (PERF.)
 b. progonj-a-t' 'chase away' (IMPERF.)

The derivation of the latter type of imperfectives crucially depends on the identification of present vs. past verbal stems that are available for conjugation. As will be discussed below, the loss of conjugation in heritage Russian thus plays a major role in the restructuring of aspectual marking for these imperfectives.

Finally, some aspectual distinctions are expressed via suppletion, for example:

- (7) a. **brat' – vzjat'** 'take (IMPERF./PERF.)'
 b. **govorit' – skazat'** 'say (IMPERF./PERF.)'

Suppletion notwithstanding, the idea that Russian aspect can be treated as an inflectional category relies on 'true' aspectual pairs, which are formed in two different ways: (i) from perfective verbs by means of imperfective suffixation (cf. (6) above), or (ii) from bare imperfectives by simple prefixation, as in the aspectual pairs in (2) and (3) above. However, such a view is difficult to maintain. Aspectual prefixes³ are varied and verb class-dependent. The inventory of prefixes is a rich

3. Throughout this discussion, I use the term 'aspectual prefixes' to refer to prefixes that play a role in encoding aspectual distinctions. However, the choice of terminology is not intended

and diverse system that is arguably lexical, and thus the derivation of prefixed perfective verbs is subject to lexical rules. This in turn suggests that the category of aspect in Russian is not fully grammatical – rather, it represents a mix between an inflectional and derivational system, as in fact has been proposed by many researchers (Comrie 1976; Dahl 1983; Dahl & Karlsson 1976; Filip 1999; Spencer 1991: 195, and many others).

In the rich linguistic literature on Slavic aspect, the emphasis on the derivational facet of aspect often leads to a lexicalist treatment of aspect, which takes us back to the beginning of the lexical-or-grammatical debate. Much of that general discussion hinges on the following issues: (i) the derivational *vs.* inflectional nature of prefixes and suffixes that encode aspectual distinctions, and (ii) the relationship between grammatical aspect (perfective *vs.* imperfective) and event structure. Both questions address fundamental issues of lexical semantics as well as more language-specific issues of morphological structure and lexical rules. In Filip's (1999, 2003) thorough work on Slavic aspect, the argument is made that the interpretation of aspect requires at least three ingredients: the recognition of individual classes within the homogenous predicate category, the establishment of fine-grained lexical distinctions within individual affixes (especially prefixes), and the application of morphological rules that derive individual lexical items (mainly via prefixation, which is particularly varied and suggestive of derivational, rather than inflectional, processes). The division of labor that Filip argues for is critical for the description and analysis of aspect in heritage Russian: while the conceptual distinctions are arguably stable across languages, the inventory of prefixes (a lexical subsystem) and the application of morphological rules may be more fragile under incomplete acquisition.

4. Aspect in Heritage Russian: Expectations and main results

4.1 Some predictions

In this section, I will summarize the results of both my observation of spontaneous production in heritage Russian and experiments designed to probe the expression of aspect by heritage Russian speakers. Before doing so, I would like to formulate some general predictions concerning the representation of aspect in heritage Russian. These predictions are based on the general outline of aspect sketched in the previous section.

to suggest that the contribution made by these morphemes is restricted exclusively to aspectual marking.

Firstly, taking as our object of interest the grammatical rather than semantic side of aspect, we do not expect the grammatical realization of aspect via the morphology of a given verb to remain unchanged in the grammar of heritage speakers. As I have previously shown, the morphology of heritage Russian is impoverished compared to the morphology of baseline Russian (see Polinsky 1995, 1997, 2000, 2006a,b for the loss of nominal declension classes, which lead to the restructuring of case and gender). The impoverished morphology of the verbal domain should lead to the weakening or loss of the past/present stem distinction, and this, in turn, should affect the representation of aspect. In addition, the regular suffixal derivation of imperfectives may either be lost, along with other morphological processes, or overgeneralized, as is often the case with heritage speakers, who tend to avoid irregular forms.

Second, assuming that aspectual prefixes are more derivational/lexical in nature, heritage speakers should retain isolated prefixal forms, but these prefixal forms may not be integrated into a general network of prefixed perfectives derived from a particular stem, as exists in baseline Russian. In other words, for a complete learner of Russian, it is natural to form associations among derived forms of a particular verb, identifying the semantic contribution of the relevant aspectual prefixes, but a heritage speaker may lack most of these forms and thus be unable to produce, or possibly even understand, all of them. To illustrate, the associations among all of the prefixal forms of 'cook', as in (8), are quite straightforward for baseline speakers, but due to their more limited vocabulary, heritage speakers may not even be able to access some of the forms in (8).

- (8)
- a. *-varit'* 'cook, boil' (IMPF.)
 - b. *s-varit'* 'boil, cook' (PERF.)
 - c. *za-varit'* 'brew' (e.g., tea)
 - d. *na-varit'* 'cook a large quantity'
 - e. *ob-varit'* 'scald'
 - f. *pod-varit'* 'conduct some additional boiling'
 - g. *ot-varit'* 'boil'
 - h. *do-varit'* 'cook as much as required'
 - i. *pro-varit'* 'cook through, cook fully'
 - j. *vy-varit'* 'boil through'
 - k. *u-varit'* 'reduce, poach'
 - l. *pere-varit'* 'overcook'

Assuming the lexical nature of aspectual prefixes, heritage speakers are expected to show significant individual variation in the retention of some but not other prefixal forms. Using (8) as an illustration, speaker X could have (8a) and (8e), speaker Y (8c), speaker Z (8b) and (8g), and so on. Lexical variation is of course

very hard to constrain and the only apparent constraining factor may be the frequency of individual lexical items.

Lastly, assuming that core aspectual distinctions such as telicity, incremental theme or measured out events are relatively stable cross-linguistically, and hence have some independence from the question of how they are expressed in a given language, one would expect that aspectual distinctions in heritage Russian would still be expressed, albeit by different morphosyntactic or lexical means from the baseline.

To summarize, given the loss of morphology and the reduced lexical competence typical of heritage languages and speakers in general, it is expected that heritage Russian will lose or regularize the formation of the imperfective, will have a smaller set of prefixal perfective forms with possible variation across speakers, and will develop compensatory mechanisms for expressing general aspectual distinctions which have a conceptual basis. All of these predictions appear to be borne out, although often with interesting complications.

4.2 Morphological change in the encoding of aspect

The loss of morphological distinctions in heritage Russian has multiple repercussions for the heritage verbal system. In production, heritage speakers often lack the present tense entirely, using infinitives and past tense and imperative forms instead (Polinsky 1995, 2006a). As a result, the dual base distinction (perfective/past-present) is absent from heritage Russian, which leads to the reduction of the entire verbal paradigm. Consequently, the morphological foundation of the aspectual distinction is no longer available, which in turn results in the weakening of the aspectual paradigm.

In the formation of the imperfective, heritage speakers regularly use derived forms in *-Vva-*, which suggests that this morphological operation is active in their grammar. However, we also occasionally find forms in *-Vva-* that are ungrammatical in the baseline, which suggests that heritage speakers actually overgeneralize this suffix. Cf. the forms below, which are ungrammatical in the baseline:

- (9) *vsegda on zabyvyvaet ego veščī* (baseline *zabyvaet*)
 always 3SG forgets his things
 'He always forgets things.'

- (10) *eti doktory otmenivajut appointments* (baseline *otmenjajut*)
 these doctors cancel
 'Such doctors cancel appointments.'

The overgeneralization of this imperfectivizing suffix seems related to the loss of the imperfectivizing *-a-* (cf. (6) above), which never occurs in spontaneous production.

Of course the suffix *-a-* is no longer productive in the baseline so it does not ‘compete’ with the more productive *-Vva-*, which makes it less surprising that heritage speakers overgeneralize the latter. It would be informative to conduct a systematic study of the range of application of the suffix *-Vva-*, but at this stage I can only offer general observations based on naturally occurring data.

4.3 Loss of aspectual pairs

In addition to the overgeneralization of imperfective morphology, there are cases where heritage speakers use imperfective forms while the baseline usage requires the use of perfective forms, as in (11)–(14):

- (11) *ja tak ustalaja ty ne veriš'* (baseline *po-veriš'*)
1SG so tired 2SG not believe.IMPF.2SG
'You wouldn't believe how tired I am.'
- (12) *oni mogli kupili ètot dom* (baseline *smogli kupit'*)
3PL be_able.3PL.IMPF buy.3PL.IMPF this house
'They were able to buy this house.'
- (13) *gde ty? ja uže gotovila tebjja obed* (baseline *prigotovila*)
where 2SG 1SG already prepared.IMPF 2SG.OBJ dinner
'Where are you? I have already cooked a dinner for you.'
- (14) *ja ostavljala moj plašč zdes'* (baseline *ostavila*)
1SG leave.IMPERF my coat here
'I left my coat here.' (the speaker is looking for her coat in a cloakroom after lunch)

The opposite pattern also holds – perfectives occur in cases where the baseline requires the use of an imperfective:

- (15) *moj deduška často porugal ego* (baseline *rugal*)
my grandfather often scold.PERF him
'My grandfather often scolded him.'
- (16) *ona vseгда postaraetsja pomogat'* (baseline *staraetsja pomoč'*)
3SG always try.PERF help.IMPERF.INF
'She always tries to help.'
- (17) *ona tak bystro skazat' ja ne vse ponimaju⁴*
3SG so fact talk.PERF 1SG not all understand
'She talks so fast I miss certain things.'

4. In addition to the difference from the baseline in terms of aspect, note that the main predicate (*skazat'*) appears as an infinitive, not as an inflected form.

In both replacement scenarios (use of the imperfective instead of the perfective, and use of the perfective instead of the imperfective) there seems to be variation across speakers. This suggests that, in at least some cases, heritage speakers retain just one member of an aspectual pair, but the actual choice of the form (perfective/imperfective) may be rather arbitrary. In earlier work (Polinsky 1995, 2000, 2007) I entertained the idea that the retention of a particular form is determined by telicity (see also Pereltsvaig 2005, who develops this idea further). While this may still be a possibility (one that I revisit below, after the examination of aspect in verbs of motion), it is certainly not the only relevant factor in the retention of one form over another. In particular, cross-speaker variation suggests that the survival of a particular form may also be determined by lexical idiosyncrasies, rather than principled grammatical constraints.

4.4 Verbs of motion and retention of isolated prefixal forms

With verbs of motion, the system of aspectual distinctions is further complicated by the contrast between unidirectional and multidirectional verbs of motion; each type has its own perfective and imperfective. For example, consider the verb ‘fly’:

Table 1. Russian verbs of motion

	unidirectional	multidirectional
imperfective	<i>letet’</i>	<i>letat’</i>
perfective	PREFIX- <i>letet’</i> (e.g., <i>uletet’</i>)	PREFIX- <i>letat’</i> (e.g., <i>poletat’</i>)

In heritage Russian, only one of the four cells in the chart above is usually represented. The following example was spontaneously produced in a frog story narrative (Polinsky 2007):

- (18) malčik i ego novyj ljaguška budet idet domoj
boy and his new frog will go.IMPF home
‘The boy and his new frog were going home.’

In the corresponding baseline sentence, the perfective is required:

- (19) malčik s novoj ljaguškoj pošli/pojdut domoj
boy with new frog went.PERF/will go.PERF home
‘The boy and his new frog went/will go home.’

In addition to *idti* ‘go’, seen in example (18), the following verbs of motion or position were used differently from the requirements of the baseline by the heritage speakers:

- (20) a. 'jump': *prygat'* (IMPERF.) instead of *prygnut'* (PERF.)
 b. 'sit': *sidet'* (IMPERF.) instead of *sest'* (PERF.) (see also fn. 7 below)
 c. 'get up': *vstavat'* (IMPERF.) instead of *vstat'* (PERF.)
 d. 'go': *xodit'* (multidirectional) instead of *idti* (unidirectional)
 e. 'run': *begat'* (multidirectional) instead of *bežat'* (unidirectional)

As with the other verbs discussed above, a question arises as to whether it is at all possible to predict which aspectual form is retained for each verbal concept. An even more general question concerning aspectual pairs in heritage Russian relates to the difference between production and comprehension. It is conceivable that heritage Russian speakers have problems producing a certain aspectual form, but have no problem understanding both forms and, more importantly, differentiating between them. In that case, the use of one form instead of the other becomes a simple production problem, and such problems are ubiquitous in language acquisition, decline, or aging. Below I present some preliminary experimental data which bear on this question.

Before turning to these more general questions, let me return to the predictions that were outlined in the beginning of this section. As expected, heritage Russian has regularized the formation of imperfective forms (and lost the less morphologically transparent imperfective pattern in *-a-*). Likewise, in keeping with the expectations outlined above, heritage Russian shows a smaller set of prefixal perfective forms, with variation across speakers. This result is not surprising under the assumption that prefixal forms belong with lexical derivations, which are severely limited in an incompletely acquired system. I will discuss the third prediction, regarding expression of aspect, later on.

5. Aspect in heritage Russian: Some emerging patterns

In this section, I will present empirical evidence that speaks to the third prediction given above, addressing three main questions, each of which has already been mentioned in passing: (i) do the deficiencies in aspectual forms observed in heritage Russian follow from the online limitations of heritage speakers (especially those with lower proficiency), or do they reflect more fundamental properties of incomplete grammars? (ii) is there a principled explanation as to why the perfective or imperfective form of a particular verb is retained, or is such retention completely arbitrary? (iii) assuming that incomplete learners maintain the relevant conceptual distinctions between different types of events, how are these distinctions encoded in the absence of the standard aspectual machinery available to the baseline speaker? I will take up these questions in turn.

5.1 Speechless or aspectless?



Observations of spontaneous production are insufficient to establish whether the attested aspectual deficiencies observed in heritage Russian are merely an issue of performance. With that in mind, a simple pilot experiment was conducted in which heritage speakers were presented with a forced choice between aspectual pairs consisting of a matrix verb followed by an infinitive in the perfective or imperfective. In order to understand the nature of the experiment, the reader should be aware that some matrix verbs in Russian require that the infinitive of the verbal complement appear in just one aspect but not the other; for example, ‘get tired’ requires an imperfective complement (21a), while ‘forget’ requires a perfective complement (21b):



- (21) a. ustat’ pit’/*vypit’ ‘get tired of drinking (IMPERF./*PERF.)’
b. zabyt’ *pokupat’/kupit’ ‘forget to buy (*IMPERF./PERF.)’

All of the matrix verbs used for this experiment were subject-restructuring verbs, and are given in Table 2.

Table 2. Matrix verbs restricting the aspect of the complement

Imperfective bias	Perfective bias	No bias control
Matrix verbs requiring the imperfective	Matrix verbs requiring the perfective	Matrix verbs that do not impose aspectual constraints on the complement
<i>ustat’</i> ‘get tired’	<i>zabyt’</i> ‘forget’	<i>xotet’</i> ‘want’
<i>prekratit’</i> ‘stop’	<i>sumet’</i> ‘manage’	<i>bojat’sja</i> ‘be afraid’
<i>prodolzhat’</i> ‘continue’	<i>soobrazit’</i> ‘realize’	<i>obeščat’</i> ‘promise’

The embedded infinitives were chosen in such a way that their aspect was visible due to the affixal morphology (and in some cases, stem morphology as well, cf. *sobrat’–sobirat’* ‘collect’). The subjects were auditorily presented with full sentences containing the congruent and the ungrammatical condition and were asked to identify the correct sentence. For the non-biased control verbs, the subjects were also given two choices. Each matrix verb was combined with ten embedded infinitives, so that each subject heard 90 sentences altogether, presented in random order. The infinitives were different for each matrix, and each lexical verb appeared only once. Thus, the subjects were presented with pairs such as the ones illustrated in Table 3.

Nine subjects, all of whom were chosen based on striking similarities in their language histories and proficiency levels, participated in this experiment. Currently college students (mean age 20.8), each of the subjects was born in Russia but arrived in the USA between age 2 and 5. All reported that they did not use Russian and could not read it, but could understand when spoken to. In addition,

Table 3. Forced choice stimuli

	Imperfective bias	Perfective bias	No bias control
Congruent Condition	<u>Deti ustali čitat' rasskazy</u>	<u>Malčik sumel sobrat' vse konfety</u>	<u>Vnuk obeščal navestit' babušku</u> <u>Vnuk obeščal naveščat' babušku</u>
Incongruent Condition	* <u>Deti ustali pročitat' rasskazy</u>	* <u>Malčik sumel sobirat' vse konfety</u>	NA
Translation	'The children got tired of reading stories'	'The boy managed to collect all the candy'	'The grandson promised to visit his grandmother'

the subjects were tested for rate of speech in spontaneous production with a traditional frog-story task. They all had an extremely low rate of speech (43 wd/min averaged over 9 subjects), which suggests very low proficiency (Kagan & Friedman 2003; Polinsky 2006b). The aggregate results of their responses to the forced choice task are shown in Figure 1.⁵

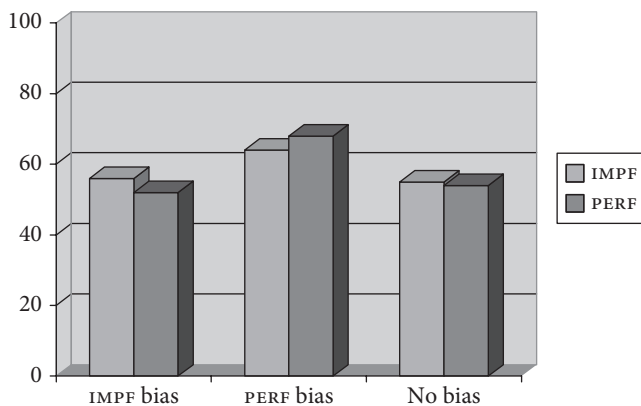


Figure 1. Percentage correct responses to verb-verb combinations (30 sentences per category, 9 speakers)

5. The subjects performed slightly better with matrix verbs requiring a perfective complement (though the difference is not significant). In general, child language acquisition studies show that children under age 4;0 slightly favor the perfective (Stoll 2005), especially in the passive (Babyonyshev & Brun 2004), and generally have difficulty with the imperfective (Kazanina & Phillips 2003). It would be tempting to connect this child language preference for the perfective with the results of heritage language comprehension, but such a connection seems premature. Firstly, the subjects of this study were interrupted in their acquisition later than 3 years of age; secondly, the general Jakobsonian 'last in – first out' approach to the acquisition and retention of linguistic phenomena has been proven wrong outside incomplete acquisition (e.g., Caramazza 1994) and there are reasons to doubt its validity in heritage language as well (Polinsky 1997, 2006b).

These are only the results of a pilot study, and further work is needed to investigate individual variation across speakers and performance on similar forced choice tasks by more proficient heritage speakers. But even without going into the details of possible individual variation, the preliminary result is striking in that the heritage speakers performed at chance. This suggests that their aspectual system is indeed different from what is found in the baseline, and that the deviations observed in spontaneous production go deeper than simple on-line production problems.

5.2 Perfective or imperfective?

Let's address the next question: what explains the maintenance of the imperfective of some verbs and the perfective of others? The emerging descriptive generalization is as follows: if only one verb is maintained in heritage Russian, then it represents the member of the aspectual pair that denotes the more common conceptualization associated with the activity designated by the verb. Suppose that if a more commonly occurring eventuality is one that has an inherent limit, then the event is conceptualized as telic, and the perfective form of the verb is more likely to be maintained. If the event is more commonly conceptualized as atelic, lacking an inherent limit, then the imperfective form is maintained.⁶ If indeed the more common conceptualization of a given verb is the determining factor, then the frequency of the perfective and imperfective verbs in aspectual pairs of the input language may serve as an indirect predictor of what is going to be used in heritage Russian. A sample of verb frequencies, presented in Table 4 below, shows that frequency alone does not always predict the retention of a particular form—some other mediating factors may be at work, but even if we can hypothesize what they are (salience of conceptualization, for instance), it is unclear how to formalize and quantify these intuitions.

The disagreement between the frequency and retention of a particular form may be due to several additional factors. First, heritage speakers' crucial input was provided by the child-directed speech heard in the home. It would be ideal to be in a position to rely on frequencies of the relevant verbs in child-directed speech, since these are likely to be different from the corresponding frequencies established on general adult corpora. However, there are no such statistics established for Russian, and in their absence, existing frequency data have to be used, if only as an approximation. Second, the frequency of conceptualizations may be

6. I again remain neutral as to the semantic questions that arise in the context of events; my concern is rather with grammatical implementation of the relevant distinctions in heritage Russian and its relationship with folk conceptualization of events.

better gleaned from type rather than token frequency, and it is the latter that is available in standard frequency dictionaries. Third, as I have shown elsewhere, frequency of input forms often plays a secondary, mediating role in heritage grammars (Polinsky 2005).

Table 4. Frequency of imperfectives vs. perfectives of certain verbs in baseline Russian (Sharoff 2001; Lönngren 1993), and the form occurring in heritage Russian (based on the frog-story narratives (Polinsky 2006b))⁷

Event	baseline Russian		heritage Russian
	Imperfective, frequency	Perfective, frequency	more common form
cry, scream	kričat', 394	zakričat', 1741	kričat'
call	zvat', 428	pozvat', 1950	zvat'
give ⁸	davat', 149	dat', 155	dat'
become	stanovit'sja, 622	stat', 59	stat'
stay, stand	stojat', 104	(v-)stat', 444	stojat'
sit	sidet', 143	sest', 343	sidet'
take	brat', 419	vzjat', 132	vzjat'
lie down	ležat', 1368	leč', 259	ležat'
look for, search	iskat', 646	poiskat', 6641	iskat'
find	naxodit', 1197	najti, 234	najti
jump	prygat', 2994	prygnut', 7450	prygat'

If the generalization concerning the way particular members of an aspectual pair are chosen for retention is on the right track, it is important to bear in mind that heritage speakers of Russian have a very different representation of aspectual forms than baseline speakers. While a heritage speaker presumably maintains the conceptual representation of telicity, this representation does not translate into a grammatical contrast. Thus, a heritage speaker may not perceive the verb they retain as grammatically imperfective or perfective. Since heritage speakers no longer have

7. The traditional view of Russian aspect has *sadit'sja* – *sest'* as an aspectual pair, with *sidet'* as imperfective only, associated with *posidet'*; similarly *vstavat'* pairs with *vstat'* versus *stojat'*, and *ložit' sja* pairs with *leč'* versus *ležat'*. Although such traditional pairings cannot be completely ruled out for the heritage language, both spontaneous speech and experimentally monitored production indicate that heritage speakers make the associations between *sest'* and *sidet'*, etc. As in other cases involving deviations from the standard, it would be counterproductive to assume aspectual pairs the way they are set in the standard, because heritage speakers have never been exposed to it.

8. Here frequency cannot distinguish between the two.

the relevant morphosyntactic oppositions of baseline Russian, for them the verb *dat* ‘give’ or the verb *sidet* ‘sit’ is a lexical item without a specified aspectual value. The chance performance on the aspectual pair task discussed above (see Fig. 1) further confirms that the grammatical contrast present in the baseline language is no longer available to heritage speakers for either production or comprehension.

5.3 The expression of aspectual meanings in heritage Russian: Emergence of a new grammar

The descriptive generalizations presented in the previous section raise the next set of questions. Assuming that the baseline Russian system is no longer available to heritage speakers, what means of expressing aspect are used in heritage Russian?

Aspect has a strong semantic dimension, and it may therefore remain conceptually constant even if the relevant morphosyntax used to express it is absent. Thus, while in heritage Russian the means used to express aspect may be different from those used in baseline Russian, the aspectual distinction does still exist. Instead of the fairly arcane system of affixes employed in Russian aspectual grammar, heritage Russian seems to use either a bare verb or a combination of a light verb and content verb (or other lexical category) to express aspectual distinctions. Roughly, the perfective of accomplishments and achievements is expressed using the light verbs *stat* ‘become’ and *načat* ‘begin’; these same verbs are used as perfective forms in baseline Russian, but in heritage Russian they become the primary means of expressing perfectivity.

For example, in a frog story, describing how the boy grabs the reindeer by the antlers, a speaker used the following:

- (22) on načinaet deržit olen' roga
he begins.IMPF holds.IMPF deer.NOM horns.UNM.PL
‘He grabbed the deer by the antlers.’ (M)

The corresponding baseline sentence involves synthetic verb forms: a prefixal perfective or a suffixal imperfective:

- (23) on sxvatil/xvataet olenja za roga
he seized.PERF/seizes.IMPF deer.ACC by horns.ACC.PL
‘He grabbed/grabs the deer by the antlers.’

The heritage Russian imperfective is either unmarked or is marked by the light verb *byt* ‘be’ (the same verb is used as the auxiliary to express states if followed by a noun or adjective). Overall, it seems that heritage speakers use a greater number of perfective forms (at least in spontaneous production), which is different from patterns found in child language, where there is a small imperfective bias (with

the exception of the passive) – cf. Gvozdev 1961; Babyonyshev and Brun 2004; Kazanina & Phillips 2003.

This overall system of encoding aspect resembles aspect-marking strategies in creole languages (for an overview of tense-aspect systems in creoles, see Singler 1990; for the development of a tense-aspect system as contrasted with the lexifier, see Youseef & James 1999). In heritage Russian, such a system may have arisen either under the influence of English, which would amount to transfer, or under the creolization of Russian under incomplete learning. At this point, it is impossible to tell which of these two scenarios applies; to choose between them, it would be important to compare the heritage Russian of the USA with heritage Russian that had developed in contact with languages other than English. Such data, however, are not yet available.⁹

6. Conclusions

A mixed lexical-grammatical category with complex nuances whose analysis bears on event types and conceptual structure, Slavic aspect has long fascinated researchers, especially in the theoretical arena. However, understanding of the acquisition or reanalysis of Russian aspect is much more limited, and new empirical data in this area are of value not only to theoretical linguists, but to the field in general. This paper has presented data, drawn mainly from spontaneous production, on the encoding of aspect in heritage Russian, the incompletely acquired language spoken by those for whom another language (in this case, American English) became dominant at an early age. The data show that the aspectual system of heritage speakers of Russian is distinct from baseline Russian in several ways.

First, in the restructuring of aspect, heritage Russian shows some loss of aspectual distinctions present in the baseline, which is due to the leveling and loss of morphological marking. The shallow morphology characteristic of heritage Russian leads to the disappearance of the perfective/present stem distinction in verbs, and to overgeneralization of suffixal imperfectives in *-Vva-*. The latter process is quite unsurprising and actually finds parallels in the early acquisition of Russian, where children overmark imperfectives with *-Vva-* as well (Gvozdev 1961; Stoll 2001).

9. The rise of the analytical system of aspectual marking in Finnish Russian (heritage Russian as spoken in Finland), reported by Leisiö (2001), suggests that the influence of English cannot be the sole determining factor.

Second, heritage speakers often maintain only one member of an aspectual pair. For instance, if a baseline speaker has both *leč'* and *ležat'* 'lie down', a heritage speaker may end up with just one verb (typically the imperfective *ležat'* for this particular pair). This loss of presumed aspectual pairs may be due to the aforementioned shallowness of morphology, which could in turn be attributed to the lexical nature of the relationship between members of Russian aspectual pairs. In the more restricted, compressed lexicon that is typical of heritage speakers, it is not surprising that only one form is retained. And if only one form is retained, it no longer holds the aspectual value that it has in the baseline – after all, the opposing member of the pair is gone, leaving no source for an aspectual contrast; hence whatever is left after this restriction of the lexicon is underspecified for aspect. At least tentatively, we can then conclude that heritage speakers have certain verbal items without aspectual value (that is, that are underspecified for aspect).

Finally, in the absence of regular expression of aspect by affixes or suppletion, heritage speakers regularly express aspect through the use of analytical forms with the light verbs 'be', 'become', or 'do'. The frequent occurrence of these forms in heritage speech supports the notion that aspectual distinctions are universal, belonging with the conceptual representation of events. What varies is the actual linguistic encoding of these distinctions, but not the underlying distinctions themselves. If so, it is not accidental that heritage speakers, with limited morphological dexterity, encode the universally specified properties of events, such as telicity or inception, by analytical means.

Despite the relatively good retention of aspectual forms and a rather low number of aspectual errors, heritage speakers perform rather poorly on judgment tasks, which suggests that their representation of aspect is quite different from that of the baseline speaker. More work is needed to fully understand the aspectual grammar of heritage speakers, but hopefully this paper will help us move in that direction.

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