## What Errors Can't Tell Us About Heritage Grammars: On Covert Restructuring of Aspect in Russian

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Heritage languages, spoken natively, albeit with varying degrees of proficiency, by people in immigrant and minority communities alongside a more dominant language, have for a long time been a unique and diverse linguistic laboratory for research on structural manifestations of intergenerational language loss and, more recently, language acquisition under reduced input. Research on linguistic properties of heritage grammars as systems distinct from the corresponding full-fledged baseline languages has over the years unraveled a range of linguistic areas shown to be systematically unstable or vulnerable in heritage language acquisition (HLA). The present work addresses vulnerabilities in the aspectual domain of heritage Russian (HR) and examines the interaction between viewpoint aspect (the perfective-imperfective distinction) and compositional telicity of verbal predicates at the syntax-pragmatics interface.

Existing work on the restructuring of aspect in HR (Polinsky, 1995, 2009; Pereltsvaig, 2005), focused primarily on the lower end of the proficiency continuum, has shown that a heritage grammar can differ radically from the grammar of baseline Russian: in the former, the perfective (PFV)-imperfective (IMP) aspectual contrasts are essentially absent for low-proficiency speakers, who make persistent errors with aspect in naturalistic production. Analysis of these errors has revealed systematic patterns in the use of aspectual markers, which have been linked to particular lexical properties of individual verb roots.

The present work focuses on what I label as *covert* restructuring of the aspectual system of HR, i.e. systematic grammatical reorganization not manifested in overt errors (Laleko, 2010). Verbal aspectual morphology is studied in relation to compositional (VP-level) telicity and larger discourse-pragmatic factors, with a special focus on aspectually transient predicates (activities and accomplishments, e.g. *eat popcorn, write books* vs. *eat a sandwich, write two letters*), which have previously not received systematic attention in the literature on HR, focused largely on individual verbs. Experimental data are presented to suggest that advanced heritage speakers (i.e., speakers who make few or no mistakes in production) can diverge from the monolingual speakers of Russian in the encoding of aspectual contrasts in the absence of overt errors. More specifically, evidence shows that the spectrum of the IMP aspectual functions is reduced in HR due to restrictions that emerge on the use of IMP aspect with single total events under certain discourse-pragmatic conditions. I suggest that these restrictions ultimately lead to a shift in the type of aspectual opposition between the two grammars: privative aspectual opposition in baseline Russian (where the IMP aspect is the unmarked member whose interpretation is to a large extent dependent on

contextual and pragmatic cues) is being gradually replaced with an equipollent opposition in heritage Russian.

Empirical data from two experiments are discussed: a sentence construction task (Task 1) and a scaled grammaticality judgment task (Task 2). Task 1 involved 9 heritage speakers (mean age = 24, mean age of arrival to the US = 5.5) and 9 controls tested in Russia (mean age = 33). All speakers were asked to construct Russian sentences from bare predicates (activities and accomplishments) in order to test for a correlation between compositional (VP-level) telicity and aspectual marking in HR (Laleko, 2008). The second task further measured the link between telicity-based aspectual marking and discourse-pragmatic (contextual) triggers of imperfectivity in the two varieties of Russian. For this task, heritage speakers (N= 16; mean age = 21.4; mean age of arrival to the US = 5.1) and monolingual controls (N=20; mean age = 36.4) were asked to rate PFV and IMP verbs (N=20) on a 4-point scale relative to the context.

In its theoretical assumptions, this work departs from the conventional view that viewpoint aspect in Russian is entirely independent of lexical aspect. Instead, I argue for a two-level approach to aspect in Russian, which is a development, in essence or spirit, of earlier analyses (Verkuyl, 1999; Schoorlemmer, 1995; Leinonen, 1982). On the lower level, which I label the default VP aspect, aspectuality of the VP determines viewpoint aspect: the perfective (PFV) marks a telic VP and the imperfective (IMP) marks an atelic VP. On the higher level, which I refer to as the sentential aspect level, the contribution of the default VP aspect can be overridden by imperfectivizing sentential operators (imperfective triggers in Schoorlemmer's (1995) terminology), which upon their application convert telic VPs into IMP predicates. These triggers include overt adverbials of temporal quantification (often, always), a silent habitual operator (HAB), as well as discourse-pragmatic factors, e.g. the general-factual presupposition of the IMP (Forsyth, 1970). In the absence of IMP triggers, the default VP aspect projects directly onto the sentential level.

This analysis of aspect in Russian predicts that atelic predicates should occur exclusively in the IMP, while telic predicates should be able to occur either in the PFV (the default projection) or in the IMP (in the presence of triggers). Data from the control group of Russian speakers tested in Russia support these predictions fully: in the sentence construction task, 97.9% of the target predicates are IMP in the atelic condition, while the target telic predicates are split nearly equally between IMP (51.2%) and PFV (48.8%). In contrast, HR exhibits a straightforward association between VP-telicity and aspectual marking in both conditions: 87.8% of telic predicates are PFV and 95.4% of atelic predicates are IMP.

In accounting for these results, I maintain that the heritage and the monolingual grammars of Russian converge with respect to the default VP aspect, but diverge on the level of sentential aspect. An in-depth analysis of sentential contexts in the data from both groups suggests that while the heritage grammar is somewhat sensitive to habitual operators, which account for the 12.2% of IMP forms with telic VPs in the heritage data, it is not at all sensitive to discourse-pragmatic IMP triggers. Hence, the derived sentential aspect in HR remains

identical to the default VP aspect more frequently than in baseline Russian. This hypothesis is further tested and confirmed with a scaled acceptability judgment task, on which pragmatically triggered IMP verbs receive consistently lower ratings in the heritage group than in the baseline group. I account for this divergence between the two aspectual systems with reference to the Interface Hypothesis (Sorace, 2005), according to which interface domains (e.g., syntax-pragmatics, rather than syntax alone) are more vulnerable in acquisition (including HLA) because they involve integrating various types of knowledge across domains. The present data suggest that heritage grammar diverges from the target grammar precisely in those contexts where syntactic knowledge must be integrated with discourse-pragmatic knowledge.

This analysis makes correct predictions with respect to the so-called perfective bias in the data from heritage speakers, who overall used the PFV forms more frequently than the monolingual controls. The two grammars diverge in the telic condition, where the IMP marking is largely avoided in the heritage group, and converge in the atelic condition, where the IMP marking is preferred in both groups. This pattern is accounted for under the current proposals: the IMP aspectual marking with compositionally atelic predicates is regulated in the syntactic component of grammar, where the derived aspectuality of the VP projects directly onto the sentential level. In contrast, the IMP marking with compositionally telic predicates in Russian is determined at the interface between the module of syntax and discourse-pragmatics factors (e.g., the presupposition of completion, statement of fact, and backgrounding functions of the IMP).

In accounting for the convergence between HR and the baseline variety on the default VP-aspect level, I relate the two grammars via the Subset Principle (Berwick, 1985), appealing to the idea that learners initially assume the most restrictive grammar and eventually expand it based on the evidence in the input. In the context of HLA, which takes place under a severely limited input, the more restrictive grammar does not expand fully beyond the 'core' level, i.e. the default VP-aspect.

From a methodological point of view, research on covert restructuring has important consequences for future linguistic work on HLA in striving to identify areas of divergence between the heritage and baseline grammars that extend beyond overt grammatical errors. Due to the nature of the Russian aspectual opposition, high-proficiency heritage speakers may appear target-like even in the absence of the full mastery of standard IMP aspect, particularly in contexts where both aspectual forms are grammatically acceptable, albeit without being pragmatically equivalent. From a pedagogical standpoint, the results suggest that additional emphasis on larger discourse-pragmatic context (e.g., focus on texts and dialogues, rather than isolated sentences) in the classroom can be necessary for facilitating the acquisition of the full range of aspectual meanings by advanced heritage speakers.

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