



# Bi-aspectual verbs in heritage Russian against the background of baseline language dynamics

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## Abstract

Our study investigates language processing in mono- and multilingual settings, focusing on language dynamics in heritage Russian against the background of baseline Russian.

In this context, we explore bi-aspectual verbs as an unstable part of Russian grammar. As verbs without morphologically marked expression of aspectual contrasts, bi-aspectual verbs represent a special case within Russian aspectual morphology and demonstrate significant variations in their monolingual use. Our study examines the use of bi-aspectual verbs in heritage Russian acquired as a home language in a multilingual environment in families with migrant background. In contrast to monolingual speakers, heritage speakers operate with polylingual variation, which can comprise single varieties within the same language or even two or more typologically different languages. These language variation mechanisms in heritage speakers represent notable specifics of their language use and the special dynamics of heritage Russian. Therefore, when comparing the use of a dynamic part of the language system, we aim to shed light on the analogous vs specific language processing in baseline and heritage Russian.

Based on the elaborated production data, we test the use of ten bi-aspectual verbs in heritage speakers ( $N = 30$ ) with high proficiency in Russian. The control group of the study was composed of monolingual Russian respondents ( $N = 30$ ). By examining the use of bi-aspectual verbs in monolingual (baseline Russian) and bilingual (migrant heritage Russian) speakers, we focus on the question of the extent to which language dynamics in the core domains of the language system are either similar or dissimilar in heritage vs baseline language. In so doing, we further contribute to the discussion of the primary vs secondary role of the internal vs external mechanisms of language change.

## 1 Introduction: language change in mono- and multilingual settings

Language change is increasingly being studied in the context of multilingual language practices worldwide. Alongside colonial and indigenous heritage languages, migrant heritage languages have come to the attention of the scientific community in typology and formal grammar (Alexiadou & Lohndal, 2016). In fact, as a particular case of multilingualism next

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to other well-studied cases, heritage languages provide an appropriate testing ground for hypotheses about the effects of language contact and real-time processes of language change (Grant, 2020; Benmamoun et al., 2013a; Warditz, 2016, 2021; Nagy, 2024). Some avenues to the study of language change remain, however, underexplored, such as on language change in baseline languages through the prism of the corresponding contact varieties, e.g., of the migrant heritage languages. This is where our study starts.

Following William Labov's idea that "the questions of the mechanism of change, the inciting causes of change, and the adaptative functions of change, are best analysed by studying in detail linguistic changes in progress" (1965, p. 92), we explore Russian bi-aspectual verbs as a manifestation of language change (Piperski, 2018, pp. 117, 130). Their previously documented monolingual use deviates from the canonical patterns prescribed, among others, in the *Academy Grammar of the Russian language* (Švedova, 1980, pp. 591–592) and thereby shows a dynamic variability significant for language change. To the best of our knowledge, the use of Russian bi-aspectual verbs in multilingual settings, i.e. in Russian heritage speakers, has hardly been described (Pavlova, 2017). Our study aims to fill this gap through an experimental collection of language production data. By comparing the use of bi-aspectual verbs in monolingual (baseline Russian) and bilingual (migrant heritage Russian) speakers, we attempt to understand to what extent language dynamics in the core domains of the language system is either similar or dissimilar in heritage vs baseline language. In so doing, we further contribute to the discussion over the primary vs the secondary role of the internal vs external mechanisms of language change in mono- and multilingual settings (Thomason, 2017; Backus et al., 2011; Heine & Kuteva, 2008; Sakel & Matras, 2008).

Grammatical aspect has been considered one of the most prominent features of Slavic languages. Following Comrie (1976, p. 3), we understand aspects as "different ways of viewing the internal temporal constituency of a situation". As an "explicit reference to the internal temporal structure of a situation" (Comrie, 1976, p. 24), the perfective and imperfective aspects in the Russian language are expressed morphologically through perfective or imperfective affixes, respectively. Russian aspect, therefore, offers a fertile ground for investigation of language changes in contact situations, in the Russian language itself (Laleko, 2008, 2011; Mikhaylova, 2019), on the one hand, and in the languages affected through contact with Russian or other Slavic languages, on the other (Arkadiev, 2017; Sonnemann, 2022). Against the monolingual (or baseline) background, bi-aspectual verbs therefore prove to be verbs lacking any morphologically marked aspectual distinction, which is a special case in the Russian aspectual system. The study of bi-aspectual verbs represents a twofold interest against the previously mentioned multilingual background, especially in contact with languages without grammatical aspect, such as German. In this case, the instability in the baseline language matches the previously documented instability of the Russian-style aspect in heritage speakers.

Much like baseline Russian, heritage Russian undergoes variations and changes, which are especially noticeable in transgenerational comparison (Zemskaja, 2001; Golubeva-Monatkina, 2004a,b; cf. for other heritage languages Nagy, 2024). Migrant heritage Russian as a language acquired and used in a multilingual environment deviates from the baseline Russian through intensive material and immaterial transfer from a stronger societal language. In other words, heritage speakers demonstrate a broad spectrum of – first and foremost – contact-induced variations and changes. Error patterns and deviations in heritage Russian have usually been studied in the context of monolingual language use in Russia. Thereby, the previous studies have generally focused on the parts of Russian grammar which are stable and hardly demonstrate any significant variations in monolingual use. Among other features, it applies to the use of the regular aspectual correlates, cf. the overview in the fourth section

of this paper. Our study, by contrast, poses the question about language change in those unstable parts of Russian grammar that address the comparative framework of language dynamics in mono- and multilingual situations. Using collected production data, we explore the use of bi-aspectual verbs in the second generation of Russian heritage speakers in Germany. When examining the main trends in the use of bi-aspectual verbs in heritage speakers within the context of the previously discussed variations in monolingual speakers, we want to understand the interplay between external and internal trigger mechanisms of language change in mono- and multilingual settings.

The paper is structured as follows: The second section addresses the main specifics of migrant heritage Russian in contrast to baseline Russian. The third section examines the question of what makes the Russian bi-aspectual verbs specific. The fourth section presents a brief overview of the use of Russian aspect in heritage speakers, and the fifth discusses the main differences between Russian and German aspectuality. The sixth section presents our empirical study. In the seventh section, we discuss the main findings of the study, addressing our hypotheses and research questions. The conclusions are made in the final eighth section.

## 2 Specifics of heritage Russian in contrast to baseline Russian

In this section, we present the characteristics of heritage Russian against the baseline, focusing on language processing in both settings.

A migrant heritage language is typically the first language (L1)<sup>1</sup> in terms of acquisition and use at home (Fishman, 2001). However, it is not the dominant language, neither in society nor in the minds of individuals when they reach adulthood (Benmamoun et al., 2013b). This definition refers effectively to the second and subsequent generations with a migrant background who acquire their heritage language in a multilingual environment.

Among heritage speakers, their heritage language and societal language (in our case, it is German) are functionally distributed: home vs official domains, respectively. As a consequence, the multilingual variation becomes a distinctive feature of heritage speakers' communication and is also promoted by the language attrition already noticeable in the first generation of migrants (Yagmur, 1997; De Bot & Clyne, 1994; for Russian, see Ždanova & Trubčaninov, 2001). In contrast to monolingual speakers, heritage speakers operate with polylingual variation, which can comprise (single) varieties within the same language as well as two or more typologically different languages (Franceschini, 1998; Légise & Moreano, 2017). This results in a number of different occasional variants, but also in variations with a systemic character that become part of the speakers' linguistic repertoire (Clyne, 2003). These language variation mechanisms in heritage speakers can be qualified as a notable characteristic of their language use. Its concrete manifestations are expressed in pragmatics, prosody, phonetics, syntax, grammar, and lexicon (for an overview, see Warditz, 2020), whereby they have the status of occasional code-switching phenomena or of systemic structural and lexical patterns that have either been borrowed or emerged independently. The increased frequency of certain variation types is, furthermore, indicative of the language change (Gardani et al., 2005).

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<sup>1</sup>The use of terms L1 vs L2 in relation to heritage speakers simplifies the real (often not homogeneous) status of both languages in their case. In fact, heritage language usually changes its status in speakers during their primary socialization, usually at kindergarten or school, and becomes L2 or a loosely defined heritage language (Polinsky & Kagan, 2007). When using these terms in the paper, we are aware of the specific nature of heritage languages.

In summary, heritage Russian represents a dynamic contact-induced phenomenon mainly used in unofficial oral communication in the migrant community. Its special dynamics result from language attrition and transgenerational shifts in heritage speakers and also from intensive contact with a dominant societal language. This phenomenon is characterised by restructuring the monolingual strata repertoire in favour of a mixed, multilingual repertoire of strata and by transfer from the functionally dominated societal language to the functionally reduced heritage language (Warditz, 2023; Stehl, 2011). Against the background of the evolution of the baseline language, we can identify that the creativity of heritage speakers is concentrated on borrowing rather than internal innovation, and linguistic processes occur without regular reference to standard languages (Stoffel, 1988, p. 2).

When understood as a part of native speakers' continuum (Wiese et al., 2022),<sup>2</sup> heritage languages can be investigated within the framework of the baseline language's evolution. However, to the best of our knowledge, only very few studies have compared language processing and change in heritage and baseline Russian (Glovinskaja, 2001; Ždanova, 2012). Both of these corpus-based studies have explicitly addressed this issue, albeit without investigating bi-aspectual verbs nor comparing evolutionary dynamics of the unstable parts of the Russian language in mono- and multilingual settings. Nevertheless, these studies have produced a catalogue of empirically documented language variations in heritage and baseline Russian.

In this paper, we explore language dynamics in both settings from another point of view. Variations in heritage Russian have been mostly studied as either error patterns or deviations from the baseline (Zemskaja, 2001; Isurin & Ivanova-Sullivan, 2008; Mikhaylova, 2018) qualifying heritage Russian as a pidgin (Polinsky, 1998, p. 78), as a regional contact variety of Russian, e.g., American Russian (Laleko, 2011, p. 13) or – alongside other heritage languages – as a new dialect (Nagy, 2016). By contrast, our study focuses on the identification and comparison of manifestations of analogous language processes in mono- and multilingual settings, examining bi-aspectual verbs as an unstable part of Russian grammar.

Furthermore, in the previous research, variations in heritage Russian have been interpreted primarily due to its incomplete acquisition vs attrition in heritage speakers and – to a lesser extent – as a result of intensive language contact (for an overview regarding the acquisition of Russian aspect, see Mikhaylova, 2019). Thus, internal language processes navigating language dynamics in monolingual settings have hardly been applied to multilingual settings, although they may also play a role in such cases (Jakobson, 1996, p. 42; Glovinskaja, 2001, p. 482; Parkvall, 2008, p. 234; Ždanova, 2012, pp. 690–692; Warditz, 2016, pp. 114–115). Our study challenges both issues. We investigate language dynamics in heritage Russian that have also been emerging (but remain incomplete) in baseline Russian. We therefore intend to address the internal language mechanisms that potentially lead to language changes alongside the aforementioned factors of language change in heritage Russian. Additionally, when comparing language dynamics in both settings, we expect more common than specific processes – in line with Mečkovskaja's (2004, p. 251) observation that the repertoire of “common variations” in heritage and baseline Russian (identified in Glovinskaja, 2001) represents a larger and more varied number than “specific variations” of heritage Russian.

<sup>2</sup>Migrant heritage languages and heritage Russian in particular represent, in turn, a heterogeneous continuum that broadly varies depending on the language competence of concrete speakers. For these reasons, we focus on a special, clearly defined speaker group within the continuum – the high-proficiency speakers of a similar age and educational background.

### 3 Bi-aspectual verbs in baseline Russian

In this section, we provide an overview the main specifics of bi-aspectual verbs in monolingual use that are relevant for their potential dynamics in heritage Russian.

Considered from a typological perspective, aspectuality occurs in different languages of the world (Breu, 1980, p. 15; Dahl, 1985, p. 69). Russian-style aspect (in terms of Dahl, 1985, p. 84) is traditionally associated with morphologically marked and semantically opposed imperfective and perfective verbs (Comrie, 1976). As a rule, they are formed through affixation, i.e. through the addition of perfective vs imperfective prefixes or suffixes,<sup>3</sup> e.g., *делат<sub>perf</sub>* / *сделат<sub>imp</sub>* ‘to make, to do’ and *переделат<sub>perf</sub>* / *переделыват<sub>imp</sub>* ‘to remake’.<sup>4</sup> This perfective vs imperfective aspectual distinction is not expressed, however, by the bi-aspectual verbs such as *ликвидироват<sub>perf</sub>* / *ликвидироват<sub>imp</sub>* ‘to liquidate’. Until now, bi-aspectual verbs have not received an unambiguous interpretation in Russian linguistics (Gorobec, 2017, p. 106; Gorbova, 2017). Regarding this issue, Laura Janda (2007a, p. 85) has pointed out that bi-aspectual verbs are often ignored in discussions of Russian aspect.

*The Academy Grammar of the Russian language* defines bi-aspectual verbs as verbs whose aspectual meaning is not expressed by special markers in most of their forms. In different contexts, they have properties of either imperfective or perfective aspect (Švedova, 1980, p. 591). Within the framework of Russian-style aspect, this might seem a contradiction. Since the grammatical category of aspect is a system of two series of verb forms in opposition to each other (perfective and imperfective) and all Russian verbs are allegedly either perfective or imperfective in all tenses and forms (Švedova, 1980, p. 581), bi-aspectual verbs present a special case within the system. Laura Janda (2007a) highlights their specifics as follows: Although both the semantic and the morphological expression of aspect are obligatory for all forms of all verbs and the aspect is marked morphologically,<sup>5</sup> bi-aspectual verbs can express both perfective and imperfective aspect with the same morphological form, without recourse to the perfectivising and imperfectivising affixes (Janda, 2007a, p. 88),<sup>6</sup> cf. examples (1) and (2).

- (1) Пожарные несколько дней *ликвидировали<sub>imp</sub>* последствия аварии.  
‘Firefighters have been dealing with the consequences of the accident for several days.’
- (2) Пожарные окончательно *ликвидировали<sub>perf</sub>* последствия аварии.  
‘Firefighters have finally dealt with the consequences of the accident.’

On the basis of previous research, Laura Janda highlights that every use of a bi-aspectual verb is either perfective or imperfective (Janda, 2007a, p. 89). She cites Alan Timberlake’s (2004, pp. 407–409) suggestion that bi-aspectual verbs do not express aspect as the only

<sup>3</sup>Igor Melčuk, however, points out that neither existing theoretical nor didactical works explain clearly how aspect is expressed in a concrete Russian verbal form (Melčuk, 2016).

<sup>4</sup>Hereafter, the perfective and imperfective aspects are indicated by the subscripts *perf* vs *imp* respectively.

<sup>5</sup>Due to this fact, most scholars starting with Alexander Isačenko (1960) consider Russian aspect to be a derivational, not an inflectional, phenomenon (Dahl, 1985; Arkadiev, 2017; Janda, 2007a). However, when examining different models of the grammatical description of Russian aspect according to Igor Melčuk’s parameters (Melčuk, 1997), Elena Gorbova (2020) regards the *Academy Grammar*’s (Švedova, 1980) traditional and wide-spread classificatory model as complementary and not contradictory to the derivational classification, see also the critical analysis of Gorbova’s concept in (Chrakovskij, 2018).

<sup>6</sup>For this reason, Bernhard Comrie (1976, p. 164) views bi-aspectual verbs as a case of morphological neutralization.

exception to this dominant interpretation of bi-aspectual verbs (Janda, 2007a, p. 89). Timberlake's view corresponds with Larisa Demidenko's (1966, p. 152) proposal to acknowledge the "anaspectual" or "neutral" aspect in Russian grammar.

Questions about the number of bi-aspectual verbs in Russian, their position within the aspectual system, and their evolutionary dynamics remain controversial. The aforementioned issues contribute to the remarkable characteristics of bi-aspectual verbs.

While the *Grammatical Dictionary of Russian* (Zalizniak, 1977) contains 966 bi-aspectual verbs, Elena Gorobec (2008, p. 19) counts approximately 1400 bi-aspectual verbs in Russian and divides them into three subgroups according to origin: 1) verbs with Slavic vs Old Russian bases: *венчать* 'to crown', *даровать* 'to bestow', *женить* 'to marry', *наследовать* 'to inherit' (in total 83 verbs, about 6%),<sup>7</sup> 2) borrowed verbs: *амортизировать* 'to amortize', *бомбардировать* 'to bombard', *оккупировать* 'to occupy' (in total 1297 verbs, about 93%), and 3) non-borrowed verbs of late origin, created by analogy with borrowed verbs consisting of a Russian or Slavic root and a suffix of foreign origin: *военизировать* 'to warriorize', *складировать* 'to warehouse' (in total 14 verbs, about 1%) (Gorobec, 2008: 20–21). Especially the third subgroup allegedly demonstrates the productivity of the derivational model used in her analysis and supposedly confirms, in turn, that bi-aspectual verbs do not tend to lose their bi-aspectuality as usually claimed (Gorobec, 2008, pp. 6, 21).

Indeed, bi-aspectual verbs are commonly regarded as grammatical archaisms steadily receding from the modern language. In line with this position, Anna Zaliznjak (Zaliznjak et al., 2015, p. 87) considers bi-aspectual verbs as a marginal phenomenon, given that the language system tends to make grammatical correspond to formal distinctions.<sup>8</sup> Vladimir Plungian (2017, p. 167) examines the formation of the past tense in his paper and objects to this "uncompromising" statement, arguing that a larger (than earlier assumed) number of Russian verbs behave bi-aspectually, e.g., *пасть* 'to fall'. Therefore, bi-aspectual verbs are relatively small in number but still an essential (and not diminishing) element of the Russian aspectual system (Plungian, 2017: 168). This view of bi-aspectual verbs corresponds, in turn, to the evidence that the formal binarity of aspectual systems of Slavic languages is not at all absolute or without exception binarity is merely the dominant tendency (Plungian, 2012, p. 17). Accordingly, Laura Janda (2007b) suggests that problems related to bi-aspectual verbs be considered not through the usual prism of the aspectual pair, but rather within a model of aspectual clusters that presents a more detailed picture of the aspectual morphology in all its variation.

In her examination of the evolutionary dynamics of bi-aspectual verbs, Laura Janda (2007a, p. 90) confirms an overall tendency to eliminate bi-aspectual verbs by integrating them into the system of Russian aspectual morphology. This integration can happen in two ways: a) by marking the simplex verb as an imperfective and accepting a prefixed form as the perfective correlate (example 3), or b) by marking the simplex verb as a perfective and accepting a suffixed form as the imperfective correlate (example 4).

- (3) анализировать<sub>imp</sub> – проанализировать<sub>perf</sub>  
'to analyze'

<sup>7</sup>Since bi-aspectual verbs are present in other Slavic languages, it is remarkable that their number varies so greatly between, for example, Ukrainian, Russian, and Slovenian (Androsjuk et al., 2020): Ukrainian has it its disposal a lesser number of bi-aspectual verbs of Slavic origin and Slovenian a larger one.

<sup>8</sup>Cf. the claimed tendency of an extension of aspectual binarity that, in turn, reinforces correlative organization of Russian aspect (Petruchina, 2017, p. 163).

- (4) арестовать<sub>perf</sub> – арестовывать<sub>imp</sub>  
 ‘to arrest’

As it is most common among the borrowed verbs that comprise 93% of the total number of bi-aspectual verbs, the first solution is the dominant trend in monolingual, i.e., baseline Russian. This pattern conforms mostly closely to the prototypical use of Russian aspect (Janda, 2007a, pp. 90–91; Timberlake, 2004, pp. 401–407).

In summary, the aspectual distinction between perfective and imperfective use of bi-aspectual verbs is not marked morphologically, in contrast to the main trend of Russian-style aspect. For reasons of conformity, bi-aspectual verbs tend to be integrated into the dominant binary system of perfective and imperfective correlates. Due to their previously mentioned specifics, bi-aspectual verbs are seen as an unstable part of the aspectual system that, having emerged historically, strives to conform to the dominant trend in Russian aspectual morphology. In multilingual settings, however, bi-aspectual verbs can conform to language systems where the aspect is not marked morphologically, i.e., they can remain resistant to the trend in the monolingual use that we have considered above. This issue, along with discussed specifics of bi-aspectual verbs previously discussed, makes tracking their use in multilingual and, among others, in heritage speakers especially intriguing.

#### 4 Russian aspect in heritage speakers

In this section, we will briefly discuss what is already known about the use of aspect in Russian heritage speakers, with a special focus on bi-aspectual verbs.

The acquisition of Russian aspect in children and adult heritage speakers has been studied intensively; for the most recent overview, see (Mikhaylova, 2019).<sup>9</sup> Unlike the overviewed studies, which differ in their theoretical and methodical frameworks, there exists a consensus about deviations in the acquisition of aspect in heritage speakers vis-à-vis monolingual speakers. These asymmetries involve, first and foremost, the expression of perfective-imperfective aspectual contrasts (Laleko, 2008, 2011) and, to a lesser extent, the expression of further fine nuances of Russian aspectuality in heritage speakers across generations (Glovinskaja, 2001; Golubeva-Monatkina, 2004a,b).<sup>10</sup> The specifics observed have hence been qualified as deviations that have led to a predictable loss of the grammatical category of aspect (Polinsky, 2008) through the restructuring of the Russian-style aspect (Laleko, 2011) and have been viewed as a simplification of mixed languages,<sup>11</sup> previously applied in the context of creole languages (Muhlhausler, 1974; Bakker & Muysken, 1995).

The latter error-based predictions (Polinsky, 2008) are founded on observation of heritage speakers with low proficiency and are consequently not particularly conclusive. Given that

<sup>9</sup>Being at the time of writing the most detailed presentation of the current state of research on the acquisition of Russian aspect in monolingual and bilingual Russian speakers, this overview focuses on the didactic implications of the documented asymmetries in different speaker groups.

<sup>10</sup>In this context, it is quite surprising that Marina Glovinskaja (2001, p. 478), while documenting several forthcoming trends in aspect use in baseline and heritage Russian, does not determine any specific processes in heritage speakers. Nor does Marina Bobrik (2001), when analyzing spoken texts of three migrant generations recorded in 1950–1960 years, report any indication of aspect attrition. This statement is reaffirmed by Elena Zemskaja (2001, pp. 93, 235, 246). However, Natalia Golubeva-Monatkina (2004a,b) reports attrition in aspect use already in the first generation of migrants on the basis of her data corpus.

<sup>11</sup>The breadth of this claim is critically discussed, among others, in (Kantarovich et al., 2021) and in (Meakins et al., 2019).



migrant and heritage speakers demonstrate a heterogeneous scale of language competence in Russian (Warditz, 2021, pp. 308–309; Warditz, 2016, pp. 107–109; Ždanova, 2012, pp. 685; for other languages, cf. Auer, 1999, pp. 309), the demonstrated deviations refer only to one group of overgeneralised or idealised speakers or to one extreme on the speakers' continuum. In this context, studies dealing with the other pole in the continuum, namely with the high-proficiency speakers, report more nuanced observations: the effects of Russian proficiency on the success of aspect acquisition (Slabakova, 2005a,b; Nossalik, 2008), alternative explanations of non-convergence between complete acquired grammars in monolinguals, and various types of incompletely acquired grammars in heritage speakers (Mikhaylova, 2012, 2018). However, although they focus on the acquisition of the morphologically marked aspectual distinctions, the aforementioned studies do not address bi-aspectual verbs, which are special in their ability to express the aspect without recurring to the derivational mechanisms of perfectivisation vs imperfectivisation. To the best of our knowledge, bi-aspectual verbs in heritage Russian have been hardly studied whatsoever; the only studies on bi-aspectual verbs in Slavic heritage languages are (at the time of writing) (Stoffel, 1988) and (Pavlova, 2017). Considering the difference between heritage speakers' proficiency, Anna Pavlova shows that there are nearly no differences in comprehension of bi-aspectual verbs in highly proficient mono- and bilingual speakers (Pavlova, 2017). However, this survey-based study is not without limitations. Both experimental groups are not delineated according to differences in their Russian proficiency or other aspects of language competence, nor in terms of their biographical background (age of immigration, duration of residence in Germany, etc.). As the study examines comprehension and not production of aspectual meanings, it is possible that productive data between both groups would show significant differences (Ryskin et al., 2015; Meyer et al., 2016). By contrast, Hans-Peter Stoffel (1988) examining bi-aspectual verbs in migrant Serbo-Croatian through three migrant generations uses productive data. His study shows a clear tendency for verbs borrowed from New Zealand English to be integrated into New Zealand Serbo-Croatian dialects as bi-aspectual verbs. This phenomenon has been explained through "both the extensive contact with English and in a tendency towards a simplified register in the morphology of many Slavic migrant dialects in general" (Stoffel, 1988, p. 1). Both explanations have also been addressed in the discussion of trigger mechanisms in the acquisition of the "basic concept" of Russian-style aspect, cf. (Laleko, 2011, p. 13).

The studies mentioned above studies additionally highlight the significance of attrition (i.e. of the gradual loss of language competence) in heritage speakers by the restructuring of heritage grammars (Laleko, 2011). Consequently, low-proficiency speakers can be seen as more affected by attrition than high-proficiency speakers. Since this attrition, in turn, especially promotes contact-induced changes in heritage languages (Mikhaylova, 2019; Ždanova, 2012), heritage speakers with low proficiency should be expected to demonstrate contact- and attrition-related restructuring of the heritage grammar to a greater extent than high-proficiency speakers.

In line with these observations, we focus on highly proficient heritage speakers in our investigation of bi-aspectual verbs. This heritage speaker group demonstrates less attrition, has greater input and, in other words, greater contact with normative oral and written sources of baseline language. For this reason, our testing group is more similar to monolinguals, among other things, in the use of Russian aspect, cf. the results of the corresponding studies (Mikhaylova, 2012, 2018; Laleko, 2008, 2011).

Based on the previous research on Russian aspectual morphology in heritage speakers, we can also expect a restructuring in their use of bi-aspectual verbs. However, if we follow the idea that the aforementioned linguistic transfer from the societal to heritage language is a major trigger mechanism of the interlingual variations already documented in other parts



of the language system, language contact can also affect the use of bi-aspectual verbs in heritage Russian. This is the topic of the next section.

## 5 Russian aspect against the background of German

In this section, we briefly address the differences between Russian and German aspectuality. These differences can potentially affect the use of Russian aspect in the contact situation of German as a societal language and Russian as a heritage language. A detailed presentation of Russian aspectuality against the background of German is not the aim of this paper (for details, see Gladrow, 1998).

As we have previously mentioned, we understand aspect as a universal category that not only occurs in different languages but is also expressed in different ways (Comrie, 1976; Dahl, 1985; Plungian, 2012). In contrast to the grammaticalised Russian aspect, aspectuality in German is not expressed on a grammatical, but rather a lexical, syntactic or contextual level (Böttger, 2008, p. 186; Gladrow, 1998, p. 65). According to Gerda Haßler (2021, p. 222), German lacks the very core of the category of aspect. The imperfect and the perfect in German are not opposed but are distinguished by their diaphasic and diastatic significance. Consequently, the following sentence (5) has no different aspectual meaning from sentence (6), with the verb form transformed into the imperfect.

- (5) Dann *sind* wir das Rheinufer entlang *gelaufen* bis zum Schokoladenmuseum.  
'Then we walked along the bank of the Rhine to the Chocolate Museum.'
- (6) Dann *liefen* wir das Rheinufer entlang bis zum Schokoladenmuseum.  
'Then we walked along the bank of the Rhine to the Chocolate Museum.'

These two sentences are distinguished only through the more colloquial and perhaps regional character of the perfect, which is hardly ever used in Southern Germany (Haßler, 2021).

Aspectuality in German can, however, be expressed syntactically through constructions such as *Ich bin am Lesen* 'I am reading' or *Ich bin beim Kochen* 'I am cooking', or lexically, e.g. through the verb pairs such as *suchen* 'to search' – *finden* 'to find' (example 7) or throughout different lexical markers (example 8) (Haßler, 2021).

- (7) Ich habe das Buch *gesucht*. vs Ich habe das Buch *gefunden*.  
'I was looking for the book' vs 'I have found the book'
- (8) Ich habe das Buch *zum Ende* gelesen.  
'I have finished reading the book.'

Due to the lack of the grammatical category of aspect in German, we would expect no cross-linguistic support in the acquisition of Russian aspect in heritage speakers, but rather its attrition or loss (Weinreich, 1953; Müller & Hulk, 2001; Wei, 2003; cf. also the idea of positive and negative transfer in language acquisition in Odlin, 1989). Accordingly, Russian bi-aspectual verbs without morphologically marked aspectual contrasts can show resistance to the baseline trend to their integration as basic perfective–imperfective pairs. Furthermore, given that aspectuality in German can be expressed through lexical markers, we may also expect that heritage speakers will tend to express aspect in bi-aspectual verbs through lexical indicators, following the prescribed trend in Russian. For instance, in examples (9) and (10), perfective – imperfective contrasts are marked through time indications such as *последний раз* 'the last time' and *каждый день* 'every day', respectively.

- (9) Последний раз его *арестовали*<sub>perf</sub> прошлым летом.  
'The last time he was arrested was last summer.'
- (10) Полиция каждый день *арестовала*<sub>imp</sub> протестующих.  
'The police were arresting the protesters every day.'

From the comparative perspective, English demonstrates an interplay between temporality and aspectuality and presents a more interesting case than German, which lacks a grammatically marked aspect. The previous studies on aspect in heritage Russian, however, do not address contrastive studies on Russian and English aspectuality to identify potential language shifts by comparison. In this context, a comparative approach (Mellor, 1995) is a possible desideratum for future studies. By contrast, studies on Slavic-style aspect in different contact situations show, on the one hand, an influence of a productive prefixal perfectivisation in Slavic and Baltic languages on languages such as Yiddish, Romani, Livonian, and Istroromanian (Sonnemann, 2022; Arkadiev, 2017). On the other hand, they make claims about the limits of contact-induced change in aspectual systems (Arkadiev, 2017). And yet bi-aspectual Slavic verbs have not been addressed in these studies.

## 6 The current study: bi-aspectual verbs in heritage speakers

### 6.1 Research questions and hypotheses

This study has emerged at the cross-point of the following issues:

- (1) The controversial status of bi-aspectual verbs in baseline grammar due to their increasing vs decreasing number and their stability vs instability of usage, cf. several scenarios of their evolution above, e.g. loss of their bi-aspectuality through imperfectivisation vs perfectivisation, i.e., the trend of marking a perfective vs imperfective manifestation of bi-aspectual verbs in monolingual use;
- (2) Attrition of aspect vs instability of this grammar category in Russian heritage speakers;
- (3) Since they are considered an unstable part of the baseline aspectual morphology, bi-aspectual verbs can show a higher instability in heritage Russian and undergo the integration described above to a greater extent than in baseline Russian. Concurrently, they benefit from conditions that ensure their preservation in multilingual settings (Stoffel, 1988): in our case, heritage Russian is in contact with German as a societal language, i.e. with a dominant language lacking morphologically marked aspectual contrasts.

Proceeding from these premises, our study examines dynamics in the use of bi-aspectual verbs in heritage Russian in comparison with the baseline dynamics by addressing the following research questions:

- RQ1: What, if any, changes do bi-aspectual verbs undergo in heritage Russian? What trends can be identified in their use by heritage speakers?
- RQ2: If there are differences, then why? How can the documented trends be explained in light of monolingual use?
- RQ3: Can (and if so, to what extent) an examination of bi-aspectual verbs used in mono- and multilingual settings contribute to the understanding of the interplay of internal and external mechanisms in language change?

Accordingly, we can expect the following three scenarios:

- (1) When in a German-dominant linguistic environment, it is rather unlikely that heritage speakers can receive cross-linguistic support in the acquisition of Russian-style aspect

(Gladrow, 1998; Müller & Hulk, 2001). Moreover, as a language without a grammaticalised verbal aspect, German as a societal language should be expected to promote attrition or loss of Russian-style aspect in heritage speakers (Weinreich, 1953; Thomason & Kaufman, 1988; Odlin, 1989; Wei, 2003). As a result, Russian bi-aspectual verbs lacking morphologically marked aspectual contrasts may show resistance against the baseline trend to their integration in the basic perfective vs imperfective pairs and can, therefore, be used according to the regular trend as prescribed in the *Academy Grammar* (Švedova, 1980) and other grammars (*Hypothesis 0*). This trend would correspond to the aforementioned evidence on heritage Croatian (Stoffel, 1988).

(2) Nonetheless, since heritage and baseline speakers share more common than specific linguistic features (Glovinskaja, 2001; Mečkovskaja, 2004), we would expect heritage speakers to use bi-aspectual verbs in line with the current monolingual usage, i.e. the same scenario as in baseline Russian. In this case, we would observe similar tendencies to perfectivisation vs imperfectivisation of bi-aspectual verbs in heritage speakers. This trend would be supported, in turn, by the high proficiency of our heritage speaker group on the one hand and through the predominance of intrinsic properties of the language system in language change on the other (Dediu & Cysouw, 2013) (*Hypothesis 1*).

(3) Finally, analogous to other parts of heritage Russian (Avramenko et al., 2024; Meir et al., 2021; Warditz, 2021), we would expect a third scenario: the emergence of a new (mixed) system in the use of bi-aspectual verbs as a result of the restructuring of the heritage grammar in multilingual settings (Aalberse et al., 2019, pp. 183–202) (*Hypothesis 2*). This trend would correspond to the tendencies already demonstrated in other contact situations, i.e. the analogous alignment within a language system (Timberlake, 2004; Janda, 2007a; Piperski, 2018) or, conversely, the simplification of contact-affected grammar (Bakker et al., 2011; Aboh, 2017).

It is the goal of the present study to demonstrate the validity of these hypothetical statements. Depending on the dominant scenario, our study will consequently determine the ranking of different factors in language change and, in so doing, contribute to the understanding of language change in mono- and multilingual settings.

## 6.2 Empirical data: elaboration and evaluation

### 6.2.1 The sociolinguistic background of respondents

In our study, we utilise two groups of respondents: an experimental group and a control group. While the control group, which was composed of monolingual Russian speakers from Russia, serves as a baseline for comparison, the experimental group is the focus of the analysis. The respondents within the experimental group are high-proficiency heritage speakers who – in contrast to low-proficiency speakers – show more advanced acquisition of Russian aspect (see the details above). These representatives of the second migrant generation with high proficiency in the dominant societal language, German,<sup>12</sup> study their heritage language Russian as a main subject at university. By virtue of this, they are awarded certification of near-native proficiency in Russian. It was, however, noticed during our participatory monitoring and in our interview corpus<sup>13</sup> that the highly proficient speakers also use a

<sup>12</sup>They have proven their high competence in German by successfully graduating (receiving the qualification *Abitur*) from a German grammar school (*Gymnasium*).

<sup>13</sup>The corpus of interviews with representatives of the 1st and 2nd generation of heritage speakers was collected and transcribed within a framework of the international project “Multilingual families’ response to

mixed Russian-German code in their day-to-day communication in Russian, partly for pragmatic reasons and partly as an insider marker (cf. corpus-based studies such as Ždanova & Trubčaninov, 2001; Goldbach, 2005). As a result, contact-induced variations and error patterns come to the fore variously in different speakers; in other words, their quality and quantity can vary greatly (Warditz, 2021, pp. 308–309; Warditz, 2016, pp. 107–109; Ždanova, 2012, p. 685; Auer, 1999, p. 309).

The high proficiency in Russian in the chosen respondent group allows us to compare trends in their language use with those of baseline speakers and to expect similar trends in heritage and baseline Russian. At the same time, the previously documented specifics in their language use, such as 1) transfer phenomena on all language levels 2) the tendency to simplification and restructuring semantics and grammar 3) a general trend towards language mixing or translanguaging (García & Wei, 2014), primarily for pragmatic reasons, and 4) the replacement of the intralingual variation in heritage Russian through the interlingual variation (Warditz, 2023), allow us to expect significant deviations from the baseline, especially in the use of bi-aspectual verbs as an unstable and dynamic part of Russian grammar.

The experimental group was composed of 30 Master's students of Russian Studies from two German universities. They were aged between 22–27 years and had been born in Russian-speaking families with migrant backgrounds in Germany, i.e. they were second-generation Russian heritage speakers. The bilingual respondents are highly proficient in their heritage language Russian (certified C1-CEFR level) and in the societal language German (they had graduated from secondary school).

The control (monolingual) group was composed of 30 Master's students of Russian Studies vs Russian Philology from two Russian universities, aged between 22–27 years, with Russian as L1. The proficiency of monolinguals in their L1 Russian has been verified through certification by graduating from Russian secondary school. Therefore, respondents in both groups shared the same sociolinguistic characteristics (besides the country of residence) but differed in their linguistic characteristics, being either Russian monolinguals or Russian heritage speakers.

## 6.2.2 The survey

Our study is based on experimentally elaborated production data (Gillioz & Zufferey, 2020). The chosen methodological design aims to showcase how heritage speakers navigate their bilingual environments in real-time. Furthermore, production data facilitate comparisons between heritage speakers and monolingual speakers, offering insights into the cognitive and sociolinguistic factors influencing their language use (De Houwer, 2009). Language production data thus provides a more authentic and dynamic understanding of language use in heritage speakers than other methods.

By conducting the survey, we aimed to identify whether and, if so, to what extent heritage speakers demonstrate other preferences in the use of bi-aspectual verbs in comparison to the monolingual trends. Having been designed in line with experimental methods for generating language production data (Lust & Blume, 2017), the task consisted of twenty sentences with ten bi-aspectual verbs in infinitive form, see Fig. 1. The respondents in both groups were asked to put the verbs given in brackets in the perfective vs imperfective form depending on the given context, see details below.

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**1. организовать** ‘to organise’

1a. Когда мы прошлым летом (организовать)<sub>imp</sub> конференцию, он нам совсем не помогал.

‘When we were organising the conference last summer, he didn’t help us at all.’

1b. Он уже все (организовать)<sub>perf</sub> к завтрашнему дню?

‘Has he already organised everything for tomorrow?’

**2. жениться** ‘to get married’

2a. Прошлым летом мои друзья решили (жениться)<sub>perf</sub>.

‘Last summer, my friends decided to get married.’

2b. Когда они (жениться)<sub>imp</sub>, шел дождь.

‘When they got married, it was raining.’

**3. арестовать** ‘to arrest’

3a. Во время студенческих протестов 1968 года полиция регулярно (арестовать)<sub>imp</sub> активистов.

‘During the 1968 student protests, the police would routinely arrest activists.’

3b. На этот раз его (арестовать)<sub>perf</sub> прямо в аэропорту.

‘This time, he was arrested right at the airport.’

**4. аттестовать** ‘to certify’

4a. Его регулярно не (аттестовать)<sub>imp</sub> на протяжении лет.

‘He wasn’t certified for many years.’

4b. Но потом он показал рекомендации, и его немедленно (аттестовать)<sub>perf</sub>.

‘But then he showed references and was immediately certified.’

**5. реагировать** ‘to react, to respond’

5a. За всё время нашего знакомства он всегда сразу (реагировать)<sub>imp</sub> на мои письма.

‘The whole time we’ve known each other, he has always responded immediately to my letters.’

**Fig. 1** Tested bi-aspectual verbs

5b. На моё приглашение подруга еще не (реagirовать)<sub>perf.</sub>

‘My friend hasn’t responded to my invitation yet.’

**6. крестить** ‘to baptize’

6a. Они (крестить)<sub>perf</sub> ребенка на сороковой день.

‘They baptised the baby on the fortieth day.’

6b. Священник обычно (крестить)<sub>imp</sub> детей после службы.

‘The priest would usually baptise the children after the service.’

**7. нейтрализовать** ‘to neutralise’

7a. Пока они (нейтрализовать)<sub>imp</sub> кислоту, все остальные уже закончили эксперимент.

‘While they were neutralising the acid, everyone else had already finished the experiment.’

7b. Ты сумеешь (нейтрализовать)<sub>perf</sub> раствор?

‘Will you be able to neutralise the solution?’

**8. конфисковать** ‘to confiscate’

8a. В те годы в таких случаях, как правило, (конфисковать)<sub>imp</sub> всё имущество.

‘In those years, it was common in such cases to confiscate all property.’

8b. Все вклады фирмы (конфисковать)<sub>perf</sub> в первый же день.

‘All of the firm’s deposits were confiscated on the very first day.’

**9. атаковать** ‘to attack’

9a. Не успела я высказаться, как меня начали (атаковать)<sub>imp</sub>.

‘No sooner had I made my point than I was attacked.’

9b. Войско короля немедленно (атаковать)<sub>perf</sub> крепость.

‘The king’s army immediately attacked the fortress.’

**10. критиковать** ‘to criticise’

10a. В детстве родители меня постоянно (критиковать)<sub>imp</sub>.

‘In my childhood, my parents used to criticise me all the time.’

10b. Фильм сразу же после выхода на экран (критиковать)<sub>perf</sub> за отсутствие вкуса.

‘The film was criticised immediately upon release for its lack of taste.’

**Fig. 1** (Continued)

The chosen bi-aspectual verbs are borrowings as well as of Slavic origin; preferences in their monolingual use have been proved in the *Russian National Corpus* (*Национальный корпус русского языка*, [ruscorpora.ru](http://ruscorpora.ru), hereafter – RNC). Following the example of the RNC, we have chosen bi-aspectual verbs that demonstrate a tendency towards integration in the aspectual oppositions, particularly by perfectivisation using prefixation (*крестить* – *покрестить* ‘to baptise’) vs imperfectivisation using suffixation (*организовать* – *организовывать* ‘to organise’), but also bi-aspectual verbs that do not demonstrate such trends, e.g., *эмигрировать* ‘to emigrate’, *исследовать* ‘to investigate’ or *конфисковать* ‘to confiscate’. However, according to the RNC, the bi-aspectual verbs are either not involved or only to a limited extent in the aforementioned integration by affixation and are

used very frequently in perfective vs imperfective contexts. For instance, results of a grammatical search show that *атаковать* 'to attack' is mostly used in imperfective contexts, cf. 3817 examples of the imperfective use as opposed to 441 examples of the perfective use, while *конфисковать* 'to confiscate' is mostly used in perfective contexts, cf. 1597 examples as opposed to only 261 examples of the imperfective use. However, to be able to verify a conclusion about preferred vs dominant use of bi-aspectual verbs in monolinguals, a manual evaluation of the available examples is needed.

In the final shortlist, we have also included verbs that have their German correspondents morphologically marked in a similar, but not identical way, cf. *критиковать* vs *kritisieren* 'to criticise', *атаковать* vs *attackieren* 'to attack', *нейтрализовать* vs *neutralisieren* 'to neutralise' or *конфисковать* vs *konfiszieren* 'to confiscate'. These interlingual paronyms often confuse heritage speakers, who tend to adopt German pendants through affixation and to create hybrid forms as *критизировать*, *атакировать*, *нейтрализовать* or *конфискировать*.

Nevertheless, even under consideration of the listed criteria, the composition of our experimental task should be viewed as a random choice of a list of bi-aspectual verbs in (Gorobec, 2007). The choice of bi-aspectual verbs for the test is also complicated by the fact that they are quite dissimilar (Piperski, 2018, p. 134). The small number of respondents and tested verbs are further limitations of the survey.

The respondents were asked to respond orally to the following questions written in a questionnaire, with a corresponding verb in brackets, without subscripts indicating aspect or translation (e.g. *Когда мы прошлым летом (организовать) конференцию, он нам совсем не помогал.*). The questions were shown to respondents one by one, in a random order, e.g. 1a, 3b, 7b, etc., to avoid the potential priming of aspectual contrasts. The answers were recorded and transcribed. In so doing, we believe that collected production data will reflect real-world language performance in both speaker groups, which often reveal distinct patterns of language mixing and transfer in heritage speakers.

In Fig. 1, in contrast to the questionnaire given to respondents, the tested bi-aspectual verbs vs sentences are presented with a translation, and the aspect is indicated by subscripts. The perfective vs imperfective aspect in the example sentences has been marked for time or frequency specifications, e.g., *каждый раз* 'each time', *часто* 'often' or *редко* 'rarely' for imperfectivity vs *вдруг* 'suddenly', *немедленно* 'immediately' or *едва* 'barely' for perfectivity (Janda, 2007a,b; Chrakovskij, 2018).

### 6.2.3 Data analysis: bi-aspectual verbs in heritage speakers

In this section, we present the results of our empirical study. The recorded responses of Russian monolinguals are summarised in Fig. 2, and the responses of Russian heritage speakers in Fig. 4, respectively. The figures only include the documented examples and numbers of their use. Due to the small number of respondents and the random sample of tested verbs, we have omitted percentages in both figures. Abbreviations IMP and PERF in the glossed examples are adopted for indication of the imperfective vs perfective use, respectively.

Our sample of monolingual data shows certain trends, thereby confirming the already documented tendencies in the use of bi-aspectual verbs, see Sect. 3. Most bi-aspectual verbs are used in monolinguals as perfective or imperfective verbs, respectively, without any further morphological change to express the corresponding aspect. Thus, *организовать* 'to organise', *арестовать* 'to arrest', *аттестовать* 'to certify' and *конфисковать* 'to confiscate' have been perceived by monolinguals as perfective verbs, and *жениться* 'to get married', *реагировать* 'to react, to respond' and *крестить* 'to baptise' as imperfective

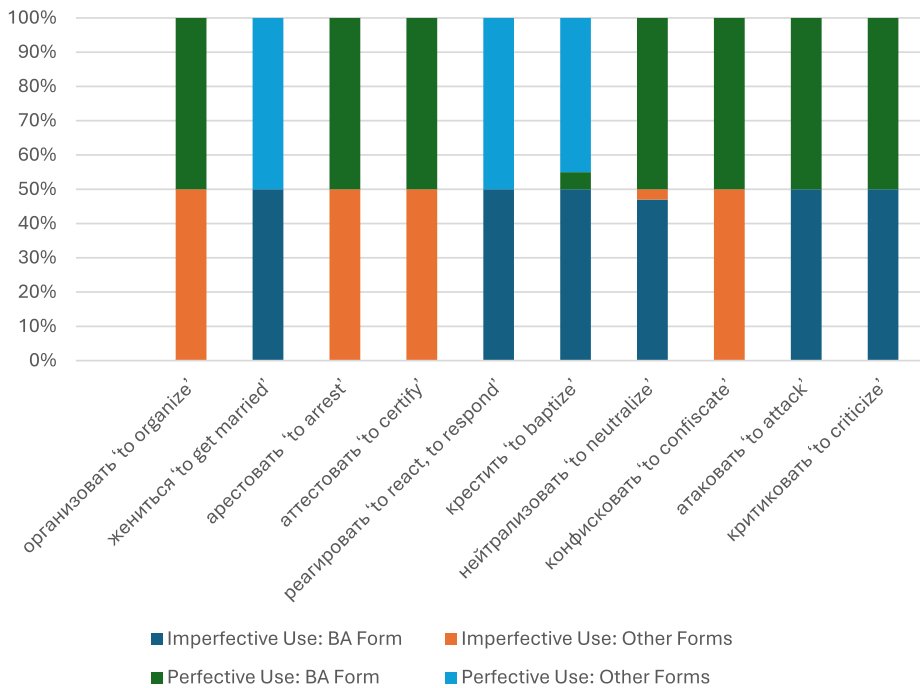


Bi-aspectual verbs	Imperfective use	Perfective use
	<i>Examples (Number of responses)</i>	<i>Examples (Number of responses)</i>
организовать 'to organise'	организовывали (30) 3PL to <i>organise</i> -IMP	организовал (30) 3SG to <i>organise</i> -PERF
жениться 'to get married'	женились (30) 3PL to <i>get married</i> -IMP	пожениться (30) 3PL to <i>get married</i> -PERF
арестовать 'to arrest'	арестовывала (30) 3SG to <i>arrest</i> -IMP	арестовали (30) 3PL to <i>arrest</i> -PERF
аттестовать 'to certify'	аттестовывали (30) 3PL to <i>certify</i> -IMP	аттестовали (30) 3PL to <i>certify</i> -PERF
реагировать 'to react, to respond'	реагировала (30) 3SG to <i>react, to respond</i> -IMP	отреагировала (30) 3SG to <i>react, to respond</i> -PERF
крестить 'to baptise'	крестит (30) 3SG to <i>baptise</i> -IMP	крестили (3)/ покрестили (27) 3PL to <i>baptise</i> -PERF
нейтрализовать 'to neutralise'	нейтрализовали (28)/ нейтрализовывали (2) 1PL to <i>neutralise</i> -IMP	нейтрализовать (30) to <i>neutralise</i> INF-PERF
конфисковать 'to confiscate'	конфисковывали (30) 3PL to <i>confiscate</i> -IMP	конфисковали (30) 3PL to <i>confiscate</i> -PERF
атаковать 'to attack'	атаковать (30) 3PL to <i>attack</i> -IMP	атаковало (30) 3SG to <i>attack</i> -PERF
критиковать 'to criticise'	критиковали (30) 3PL to <i>criticise</i> -IMP	критиковали (30) 3PL to <i>criticise</i> -PERF

**Fig. 2** Responses of monolinguals

verbs. Accordingly, the aspectual pendants for the first group have been built through the secondary imperfectivisation by adding the suffix *-ыва-* (*-yva-*), cf. *организовывали*<sub>imp</sub>, *арестовывала*<sub>imp</sub>, *аттестовывали*<sub>imp</sub> and *конфисковывали*<sub>imp</sub>, and for the second group through perfectivisation by adding suffixes *по-* (*po-*) or *от-* (*ot-*), cf. *пожениться*<sub>perf</sub>, *покрестили*<sub>perf</sub>, and *отреагировала*<sub>perf</sub>. In a prescribed way, i.e. without further morphological indications, our respondents used only *атаковать* 'to attack' and *критиковать* 'to criticise'; *нейтрализовать* 'to neutralise' shows the same tendency to a lesser extent. It is obvious that different frequencies and different established patterns of use shape individual image of each exemplary bi-aspectual verb (Piperski, 2018; Pavlova, 2017). These issues have not been addressed in our study, but they deserve a closer look in future research as complimentary factors that impact the use of bi-aspectual verbs. Individual profiles of tested bi-aspectual verbs in monolingual use have been visualised in Fig. 3.

Against the previously addressed monolingual background, heritage speakers show a broader spectrum of variations in their use of bi-aspectual verbs, cf. Fig. 4 and Fig. 5. The summarised quantitative and qualitative distribution of patterns used in monolinguals and heritage speakers are presented at the end of this section in Fig. 6.



**Fig. 3** Monolinguals: the use of bi-aspectual verbs

Against the background of an idealised use of the same bi-aspectual verbs form for both the perfective and imperfective aspect (Švedova, 1980), the following deviation patterns in heritage speakers have been identified.

First of all, heritage speakers tried to express aspectual distinctions of bi-aspectual verbs, see Fig. 4. They therefore perceived most bi-aspectual verbs as perfective or imperfective verbs, respectively, and used bi-aspectual verbs accordingly without any further morphological change to express the corresponding aspect. Thus, the verb *организовать* ('to organize') also functions predominantly as a perfective variant in multilingual settings (example 11) and receives an additional marker of (secondary) imperfectivization, namely the suffix *-ыва-* (*-ыва-*), when expressing the imperfective aspect (example 12).

(11) Он уже все *организовал*<sub>perf</sub> к завтрашнему дню?  
'Has he already organised everything for tomorrow?'

(12) Когда мы прошлым летом *организовывали*<sub>imp</sub> конференцию, он нам совсем не помогал.  
'When we were organising the conference last summer, he didn't help us at all.'

The same pattern of imperfectivisation by suffixation applies for the tested perfective verbs *арестовать* 'to arrest', *аттестовать* 'to certify', *нейтрализовать* 'to neutralise', *конфисковать* 'to confiscate' and *атаковать* 'to attack'. By contrast, the verb *критиковать* 'to criticise' has the same formal appearance and has been borrowed into Russian. It was also perceived as perfective and, by consequence, was used without any further imperfective markers, cf. the almost unanimous response of heritage speakers (example 13):

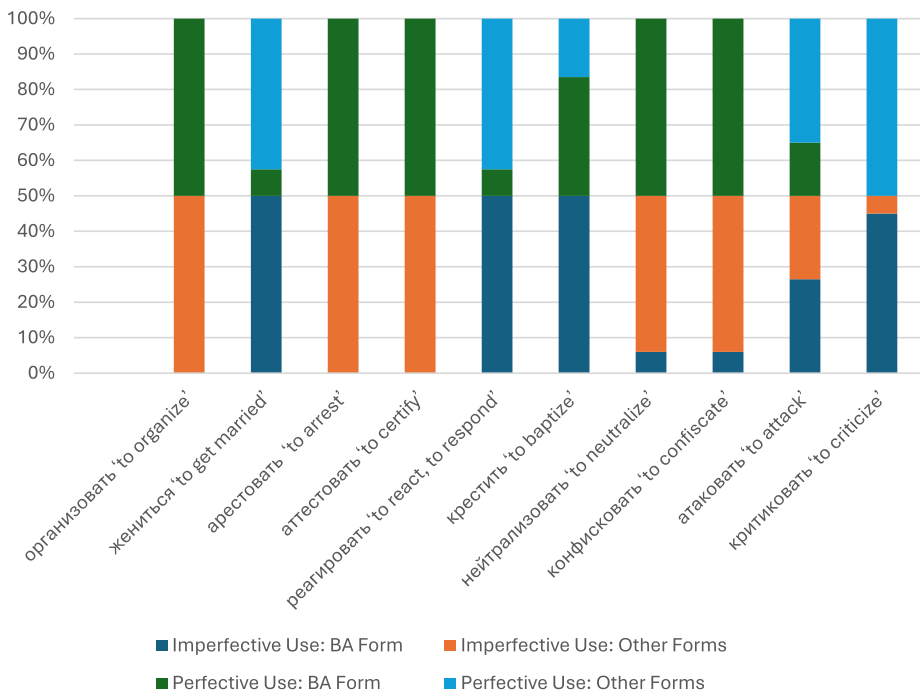
Bi-aspectual verbs	Imperfective use	Perfective use
	<i>Examples (Number of responses)</i>	<i>Examples (Number of responses)</i>
организовать 'to organise'	организовывали (30) 3PL <i>to organise</i> -IMP	организовал (30) 3SG <i>to organise</i> -PERF
жениться 'to get married'	женились (30) 3PL <i>to get married</i> -IMP	жениться (5) / пожениться (25) 3PL <i>to get married</i> -PERF
арестовать 'to arrest'	арестовывала (30) 3SG <i>to arrest</i> -IMP	арестовали (30) 3PL <i>to arrest</i> -PERF
аттестовать 'to certify'	аттестовывали (30) 3PL <i>to certify</i> -IMP	аттестовали (30) 3PL <i>to certify</i> -PERF
реагировать	реагировала (30) 3SG <i>to react, to respond</i> -IMP	реагировала (5)/ отреагировала (25) 3SG <i>to react, to respond</i> -PERF
'to react, to respond'		
крестить 'to baptise'	крестит (30) 3SG <i>to baptise</i> -IMP	крестили (20)/ покрестили (10) 3PL <i>to baptise</i> -PERF
нейтрализовать 'to neutraye'	нейтрализовали (4)/ нейтрализовывали (26) 1PL <i>to neutralise</i> -IMP	нейтрализовать (30) <i>to neutralise</i> INF-PERF
конфисковать 'to confiscate'	конфисковали (4)/ конфисковывали (26) 3PL <i>to confiscate</i> -IMP	конфисковали (30) 3PL <i>to confiscate</i> -PERF
атаковать 'to attack'	атаковать (16)/ атаковать (14) 3PL <i>to attack</i> -IMP	атаковало (22) / атакировало (8) 3SG <i>to attack</i> -PERF
критиковать 'to criticise'	критиковали (27) / критицировали (3) 3PL <i>to criticise</i> -IMP	раскритиковали (5)/ покритиковали (25) 3PL <i>to criticise</i> -PERF

Fig. 4 Responses of heritage speakers

- (13) В детстве родители меня постоянно *критиковали*<sub>imp</sub>.  
'In my childhood, my parents used to criticize me all the time.'

Other tested bi-aspectual verbs *критиковать* 'to criticise', *жениться* 'to get married', *реагировать* 'to react, to respond', and *крестить* 'to baptise' were perceived in heritage speakers as imperfective variants and were used with different prefixes as perfective markers *po-* (*no-*), *ot-* (*om-*), and *ras-* (*pac-*), cf. the forms *пожениться*, *покрестить*, *отреагировать*, *раскритиковать*, *покритиковать*, and examples (14–17).

- (14) Прошлым летом мои друзья решили *пожениться*<sub>perf</sub>.  
'Last summer, my friends decided to get married.'
- (15) На моё приглашение подруга еще не *отреагировала*<sub>perf</sub>.  
'My friend has not responded to my invitation yet.'
- (16) Они *покрестили* ребенка на сороковой день<sub>perf</sub>.  
'They baptised the baby on the fortieth day.'



**Fig. 5** Heritage speakers: the use of bi-aspectual verbs

- (17) Фильм сразу же после выхода на экран *покритиковали* vs *раскритиковали*<sub>perf</sub> за отсутствие вкуса.<sup>14</sup>  
 'The film was criticised immediately upon release for its lack of taste.'

The use of perfectivisation prefixes demonstrates, in turn, a broader spectrum of variation in the creation of the perfective aspect in comparison to the imperfective. In this relation, heritage speakers demonstrate a homogeneous vs heterogeneous use of the imperfective vs perfective aspect, respectively. Furthermore, borrowed German verbs were also integrated into heritage Russian by imperfectivisation. This seems to be the most usual method of adaptation, cf. an example from our interview corpus (example 18).

- (18) Я *кундиговала* договор.  
 'I have cancelled my contract.'

However, this non-canonical hybrid form was created from the German borrowed verb *kündigen* 'to terminate, to cancel a contract' shows that aspectual contrasts tend to lose their relevance in the oral communicative code of diaspora rather than express the perfective meaning through an imperfectively marked form.

In addition to these strategies of integration of clear opposition between bi-aspectual verbs, other trends were observed in our data. A resistance strategy, i.e. the usage of the same form for both aspects, was recorded as the dominant trend for *крестить* 'to baptize'

<sup>14</sup>In this study, we do not address fine nuances linked to the chosen prefix and, consequently, to the expressed lexical aspects (*Aktionsart*). It will be, however, useful to examine whether and, if so, to what extent heritage speakers are aware of that.



**Fig. 6** The use of bi-aspectual verbs in heritage speakers and monolinguals

and *атаковать* ‘to attack’, and as a marginal trend for *нейтрализовать* ‘to neutralise’, *реагировать* ‘to react, to respond’, and *жениться* ‘to get married’.

The most clearly distinguished aspectual contrasts were documented in *организовать* ‘to organise, *арестовать* ‘to arrest’, and *аттестовать*; the most diffused in *атаковать* ‘to attack’. Non-canonical forms were also recorded: for the creation of both perfective and imperfective aspects for the verb *атаковать* ‘to attack’, cf. *атакировать*<sub>imp</sub> (14 responses) and *атакировало*<sub>perf</sub> (8 responses), and of the imperfective aspect for verb *критиковать* ‘to criticise, cf. *критизировать* (3 responses). As shown above, the documented non-canonical forms find their counterparts in our corpus of interviews and previous corpus-based studies (Zemskaja, 2001; Glovinskaja, 2001; Ždanova, 2012; Warditz, 2021).

We can primarily conclude that the integration of bi-aspectual verbs in heritage speakers occurs by different patterns. While discussing documented non-canonical forms, we do not evaluate the “correctness” of the responses. Moreover, the consequent (and apparently typical) usage of imperfectivised bi-aspectual verbs in heritage speakers such as *нейтрализовывать* ‘to neutralise’, *аттестовывать* ‘to certify’ can be viewed as non-mandatory normative as opposed to an idealised use of bi-aspectual verbs or in comparison with highly proficient monolingual use. Furthermore, our study has confirmed that imperfectivisation should be seen as the main method in the integration of bi-aspectual verbs in basic aspectual pairs (Timberlake, 2004; Janda, 2007a).

In summary, when comparing the data of our experimental and control groups, two main trends have been identified. Heritage speakers show a broader spectrum of variations in their use of bi-aspectual verbs, especially by building imperfective pendants to bi-aspectual verbs, which they perceived as being perfective. However, these (partly contact-affected) variations occur against the background of the predominant mainstream, namely, of the integration of bi-aspectual verbs in aspectual pairs, analogous for monolinguals as well as for heritage speakers.

In the graphic visualisation below (Fig. 6), the use of tested bi-aspectual verbs in both groups is presented contrastively, demonstrating similarities and differences in monolinguals and heritage speakers.

## 7 Discussion

The study examined the use of bi-aspectual verbs in Russian heritage speakers against the background of monolingual use. Starting from the instability of bi-aspectual verbs and their consequent integration in baseline Russian, we focused on the corresponding dynamics in heritage Russian. We have shown that, following the main monolingual trend, heritage speakers tend to express aspectual distinctions of bi-aspectual verbs by integrating them in opposed aspectual pairs using (im)perfectivisation patterns and, in so doing, they distribute bi-aspectual verbs between the basic aspectual variants (*Hypothesis 1*). The integration of bi-aspectual verbs by distribution between the regular aspect oppositions occurs, therefore, in line with internal systemic regularities of Russian in both mono- and multilingual settings. However, this observation is not without limitations as it applies to the highly proficient heritage speaker group and not to the whole heritage speakers' continuum. Heritage speakers with low proficiency would be more likely to demonstrate other trends in the use of bi-aspectual verbs. When further examining the use of Russian bi-aspectual verbs, we expect fewer differences between highly proficient heritage speakers and monolinguals than within the heterogeneous continuum of heritage speakers. At the same time, in a larger data set, we also expect more remarkable differences in the use of bi-aspectual verbs in heritage speakers and monolinguals. These predictions should be verified in future corpus-based studies.

As hypothesized (*Hypothesis 1*), the documented main trend in the use of bi-aspectual verbs has been supported by the language proficiency of the experimental group and the predominance of intrinsic properties of the language system in language change (Dediu & Cysouw, 2013). Our experimental results, therefore, align with previous studies on the use of aspect, particularly bi-aspectual verbs, in Russian heritage speakers (Laleko, 2011; Mikhaylova, 2019; Pavlova, 2017), as well as with comparative corpus-based descriptions of heritage and baseline Russian (Ždanova, 2012; Mečkovskaja, 2004; Glovinskaja, 2001). In so doing, our results confirmed that highly proficient heritage speakers share significant language competencies with Russian monolinguals, even while exhibiting more nuanced language use in multilingual settings, as discussed below.

*Hypothesis 0* stated a rather improbable cross-linguistic support in the acquisition of Russian-style aspect in a German-dominant environment (Gladrow, 1998; Müller & Hulk, 2001). Moreover, as a language without a grammaticalised verbal aspect, German as a societal language was expected to promote attrition or loss of Russian-style aspect in heritage speakers (Weinreich, 1953; Thomason & Kaufman, 1988; Odlin, 1989; Wei, 2003). Russian bi-aspectual verbs, which lack morphologically marked aspectual contrasts, were therefore expected to exhibit resistance to the baseline trend of integration into the basic perfective vs. imperfective pairs. Based on our data, *Hypothesis 0* has not been confirmed. This can in turn be attributed to two already mentioned factors: to the dominance of internal mechanisms of language change and to the high proficiency of the experimental group. We assume that testing the heritage speakers with low proficiency and advanced language attrition may reveal another picture, i.e. the use of bi-aspectual verbs lacking morphological contrasting aspectual marking as a regular trend, mirroring the trend among heritage Croatian speakers (Stoffel, 1988). This statement should be also proven in future studies.

Further effect of the German-dominant environment was expected in the emergence of a new (mixed) system in the use of bi-aspectual verbs in heritage speakers (*Hypothesis 2*), analogous to other parts of heritage Russian. This trend was not observed to a decisive extent in the tested group of heritage speakers. This could be attributed to the limited number of participants and tested verbs, as well as to the (necessary but yet unrealized) long-term effects of contact-induced variations in core parts of languages. The non-canonical forms such

as *атакировать* ‘to attack’ or *критикизировать* ‘to criticise’ used alongside the canonical forms *атаковать* ‘to attack’ and *критиковать* ‘to criticise’ do not explicitly indicate that Russian aspect is being restructured in favour of a mixed system containing both Russian and German patterns of aspectual expression. However, the documented main trend in the use of bi-aspectual verbs, which corresponds with analogous alignments within a language system in monolingual settings (Timberlake, 2004; Janda, 2007a; Piperski, 2018), also conforms to the simplification of contact-affected grammar in multilingual settings (Bakker et al., 2011; Aboh, 2017). Thus, this trend can be interpreted as an additional effect of language contact in a multilingual environment. Nevertheless, this statement requires validation through a larger number of comparative studies investigating language change in heritage and baseline languages.

Even though we identified the same main trend in the use of bi-aspectual verbs in heritage and baseline Russian, the respective systems displayed certain peculiarities. Unlike heritage speakers, monolinguals demonstrate less variation in imperfective creations and usage of hybrid forms. Instead, they prefer to use describing strategies to express the aspectual contrasts of bi-aspectual verbs. The non-canonical forms used in heritage Russian can be deemed qualitative deviations, and the more uniform tendency to the secondary imperfectivisation in heritage speakers should be viewed as a possible indication of the quantitative dimension of language change in multilingual settings. This trend, which follows the mechanisms of analogical change that become more prominent in multilingual settings, can in turn be linked to the trend of simplification of weaker languages in contact situations. This has already been documented for other parts of heritage languages (for an overview, see Warditz, 2020). However, due to the limited number of tested speakers and tested verbs, this observation remains to be proved in future research.

By comparing the bi-aspectual verbs used in baseline and heritage speakers, our study further contributes to the discussion about the interplay of internal (systemic) and external (language contact) mechanisms in language change. Based on the same dominant trend in the mono- and multilingual use of bi-aspectual verbs, we have identified a dominant impact of internal mechanisms of language dynamics against the background of the external causes, such as language contact. Furthermore, the analysis of the experimental production data confirmed the theoretical background of *Hypothesis 1*: There are more common than specific trajectories of language evolution in heritage and baseline Russian (Mečkovskaja, 2004; Glovin-skaja, 2001). This evidence corresponds with the more general observation about analogous language evolution in mono- and multilingual settings, navigating primarily by language-internal mechanisms (Heine & Kuteva, 2008: 81; Dediu & Cysouw, 2013). Moreover, our case study of the bi-aspectual verbs in heritage and baseline Russian has shown that the change caused by language contact is expected to be a relatively rare phenomenon in the core parts of the language system, especially in the core domains of grammar (Meisel et al., 2013).

Furthermore, our study has confirmed that heritage speakers should be considered as part of a native speaker continuum (Wiese et al., 2022); heritage languages therefore offer a testing ground for the investigation of language dynamics in monolingual settings, especially in grammar.

## 8 Conclusion

Our study underscores the critical role of multilingual practices in understanding language change, particularly in the context of heritage languages. By focusing on the use of Russian



bi-aspectual verbs in heritage speakers, we have illuminated the complex dynamics of language contact and its effects on grammatical structures, interacting with internal mechanisms of language change.

Our findings reveal that heritage speakers tend to align their use of bi-aspectual verbs with the trends observed in monolingual contexts, particularly through the integration of these verbs into opposed aspectual pairs. This supports the notion that internal mechanisms play a significant role in guiding this integration, even amid the complexities introduced by multilingualism. However, our results also highlight the limitations of this trend, as it predominantly reflects the language use of highly proficient speakers, suggesting that lower proficiency may yield different patterns. The qualitative deviations noted in heritage Russian underscore the nuanced impact of language contact. The observed trends suggest that although heritage speakers exhibit variations, they still operate within the broader structural confines of the Russian language, aligning more closely with internal systemic regularities than with external influences.

Overall, our paper contributes to the understanding of language dynamics in multilingual settings and reinforces the idea that heritage languages offer a fertile ground for examining language change. By positioning heritage speakers within a continuum of native speakers, we illuminate the ongoing evolution of linguistic practices influenced by both internal and external factors. Moreover, our study contributes to the broader discourse on the interplay between primary and secondary mechanisms of language change in multilingual settings. By highlighting the instability of bi-aspectual verbs in the heritage context, we emphasise the need for further research into the less stable parts of Russian grammar and their evolution through contact. In conclusion, our research opens avenues for future investigations into the grammatical features of heritage languages, encouraging scholars to consider the implications of multilingualism on language systems more broadly.

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## Declarations

**Competing interests** The author declares no competing interests.

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