



How Recently Borrowed Verbs in Russian Form Perfective Aspect: An Experimental Approach

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Образование глаголов совершенного вида от новейших заимствований в русском языке: экспериментальный подход

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Abstract

This article examines how Russian aspectual pairs from borrowed and colloquial verbs are formed. This question is relevant since the most common source languages of Russian loan verbs do not express the aspectual distinction (imperfective-perfective) morphologically. Seventeen new verbs, most of which belong to the technological sphere, were examined in an online experiment (N=120), in which native Russian speakers were asked to form perfective counterparts for a number of new verbs, such as *гуглить* 'to google' and *эсмэсить* 'to text, to SMS'. The results show that there is variation in the formation of these new verbs, but also that one form was chosen by most participants who formed a valid perfective. The most common perfectivizers in this experiment were the suffix *-ну-*, followed by the prefixes *за-*, *про-*, *от-* and *с-*. The suffix *-ну-* is especially productive in verbs denoting actions that can be carried out

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or finished in a short time but is also found in verbs denoting longer processes. This use of *-ну-* is characteristic for verbs in Russian slang.

Keywords

aspect, prefixation, suffixation, neologisms, loanwords

Резюме

В статье исследуется образование видовых пар новых и/или заимствованных глаголов в русском языке. Интерес к данному вопросу вызван тем фактом, что языки-источники заимствования не выражают морфологически видового значения «совершенности–несовершенности». 17 новых глаголов тематической группы «технологии» были исследованы в ходе онлайн-эксперимента, в котором приняли участие 120 носителей русского языка. Респонденты образовывали соответствующие глаголы совершенного вида для ряда новых глаголов, таких как *гуглить* и *эсмэсить*. Результаты эксперимента показывают, что не все участники солидарны в выборе способа перфективизации (выборе перфективирующего префикса или суффикса), однако в большинстве случаев один из глаголов совершенного вида доминирует. Наиболее распространенным способом образования совершенного вида глаголов, включенных в эксперимент, оказался суффикс *-ну-*, на втором месте — префикс *за-*, и меньшую популярность имели префиксы *про-*, *от-* и *с-*. Суффикс *-ну-* является особенно продуктивным в глаголах, выражающих действия, которые могут быть выполнены или совершены в течение короткого времени, но также в глаголах, выражающих длительные процессы. Это употребление суффикса *-ну-* характерно для глаголов в русском сленге и просторечии.

Ключевые слова

вид, префиксация, суффиксация, неологизмы, заимствования

1. Introduction

During the last decades, Russian has been enriched by many new verbs, and many of these verbs are related, in one way or another, to new technologies, for example *лайкать* ‘to like (show approval of a post on an internet forum)’, *апгрейдить* ‘to upgrade’, and *гуглить* ‘to google’. The formation of these verbs is relatively easy to describe: they all consist of a non-Russian root—*лайк* ‘like (noun)’, *апгрейд* ‘upgrade’ and *Гугл* ‘Google’—and a verbal suffix: *-а-ть* or *-и-ть*. However, all of these verbs are imperfective, and most Russian verbs have one (or more) corresponding perfective verb(s) which, together with the imperfective base verb, form so-called *aspectual pairs*. The formation of aspectual pairs lacks morphological regularity, and for this reason, the question of how perfective counterparts of new verbs are formed arises. The topic of this article is how native Russian speakers form perfective counterparts of borrowed or newly coined verbs from the past two decades.

This article is based on an experiment in which 120 native Russian speakers were asked to produce perfective counterparts of foreign or recently coined verbs from the last decades. Since the most common source languages of borrowed verbs into Russian do not express imperfective-perfective aspectual opposition morphologically, Russian speakers must decide which aspect a newly borrowed verb takes and, if needed, form a corresponding verb in the other aspect. Most new aspectual pairs are formed through prefixation, with an unprefixated, imperfective base verb and a prefixed perfective verb. There are no less than nineteen Russian prefixes¹ that can change the aspect of a verb [Кронгауз 1998: 111]. New aspectual pairs can also be formed via suffixation; productive suffixes are the imperfectivizing *-ыва-* and the perfectivizing *-ну-*. How do Russian speakers decide which aspectual affix to use when a new aspectual pair is formed?

The following part of this article, section 2, provides the theoretical background of verbal aspect and aspectual pairs in Russian. Section 3 describes the design of the experiment and its theoretical premises. Section 4 discusses the results of the experiment.

2. Verbal aspect in Russian

In the scholarly literature on aspectology and aspectual pairs in Russian, comparatively little attention has been given to the formation of aspectual pairs of borrowed verbs. Furthermore, most studies on this subject are about borrowed biaspectual verbs, whose infinitive end with *-овать* or *-евать* [Авилова 1968, Черткова, Чанг 1998, Хоригучи 2018, Olsson 2018]. The formation of aspectual pairs of other types of borrowed verbs has been studied by Gjervold [2013] and Соколова [2009]. Their findings suggest that the prefix *за-* is the most productive perfectivizer in modern colloquial Russian.

If borrowed verbs form aspectual pairs, they do so mainly through prefixation, for example with the abovementioned *за-*. By adding a prefix to an unprefixated imperfective verb, the verb becomes perfective, e.g. *гуглить-загуглить* ‘to google’. The perfective verb in a prefixed aspectual pair in this article shall be referred to as a *natural perfective*, as termed by Janda [2007].

The semantics of the prefixes used to form natural perfectives has been a subject of debates for decades. Traditionally, they have been called *чисто-видовые приставки* ‘purely aspectual prefixes’ [Тихонов 1964] or *пустые приставки* ‘empty prefixes’. These two terms seem to imply that these prefixes lack any meaning except the feature [+perfective aspect]. Another view is to deny that prefixed pairs are genuine aspectual pairs. According to this view, a prefix always alters the meaning of the base verb and only suffixed pairs are

¹ *в-, вз-, вы-, до-, за-, из-, на-, над-, о-, об-, от-, пере-, по-, под-, при-, про-, раз-, с-, у-*.

true aspectual pairs [Isačenko 1968: 362; Карцевский 1962: 229]. A third option—a middle way between the two former hypotheses, one could say—is the so-called *overlap hypothesis* [Janda et al. 2013: 1], which claims that the choice of aspectual (“empty”) prefix depends on the meaning of the verb and that the meanings of the verb and the prefix overlap. In the words of Zaliznjak et al. [Зализняк, Шмелев 2000: 81–82; Зализняк et al. 2015: 93], an “empty” prefix is a prefix that duplicates some semantic component already present in the base verb. This idea was introduced for Russian by van Schooneveld² [1958], and has been further studied and developed by the Exploring Emptiness research group at the University of Tromsø³ [Endresen et al. 2012; Janda et al. 2013].

Suffixed aspectual pairs, for example *показывать-показать* ‘to show’, have a clear morphological relationship: the affix *-ыва-* marks the imperfective aspect. Some scholars have claimed, as mentioned above, that the only “true” aspectual pairs are suffixed pairs, but this is a rather unpopular idea, and the author of this article does not share this view. Janda and Lyashevskaya [2011a] have investigated the hypothesis that suffixed and prefixed pairs behave differently, and their conclusion is that the grammatical profile (the distribution of forms, present, past, imperative, etc., for a given verb in a corpus) of prefixed aspectual pairs, such as *писать-написать* ‘to write’, is similar to that of suffixed aspectual pairs, such as *показывать-показать* ‘to show’. For this reason, the authors claim that prefixed pairs ought to be considered valid aspectual pairs (see also [Зализняк, Шмелев 2000; Зализняк et al. 2015]). Nonetheless, prefixed pairs are indeed more difficult to establish than suffixed ones, as all prefixes have other meanings beside the “purely aspectual” meaning and since the same prefix can be “empty” (used to form a natural perfective) in one verb but can alter the meaning of the base verb in another. For example, the prefix *на-* in *написать* ‘to write’ is used to form a natural perfective to *писать* ‘to write’, but in *нафотографировать* ‘to photograph much’ the prefix also adds the meaning ‘a lot’ to the imperfective base form *фотографировать* ‘to photograph’.

Borrowed verbs give us a good opportunity to test the abovementioned hypotheses. This article describes a novel, quantitative method of establishing aspectual pairs that is based on the intuition of a large number of native speakers. If Russian aspectual prefixes were semantically empty and there were no connections between the base verb and its prefix, we would expect a large degree of variation between the different speakers, and the distribution of aspectual affixes in aspectual pairs of new loan verbs to be random. If, on the other hand, most native speakers independently of each other use the same

² In Russian, the overlap hypothesis is known under the name *эффект Вей-Схоневельда* ‘the Vey-Schooneveld effect’.

³ See <http://emptyprefixes.uit.no/>

affix for the same verb to form a new perfective verb, the choice of affix cannot be random, and this means that the overlap hypothesis might be a plausible explanation. A third possibility is that one aspectual affix is the “regular form” in modern Russian and therefore used for all new aspectual pairs.

3. Method

The experiment this article is based on was carried out in January and February 2018. It was conducted on the internet with Webropol,⁴ and 120 Russian-speaking respondents answered the survey anonymously. Of these participants, 114 reported that Russian was their native language, and six answered that albeit Russian was not their native language, they speak Russian since childhood at near native level. If a respondent answered “no” to whether Russian was his or her native language, the survey would not go further. The majority of the participants were under the age of 40; the ages ranged from teenagers (5 participants), 20 to 39 (65), 40 to 69 (49), and older than 70 (1). The gender distribution was 39 (32.5%) males and 81 (67.5%) females.

The goal of the experiment was to find natural perfectives for a number of newly borrowed or coined verbs in Russian. In order to shed light on how the process of perfectivization works in modern-day Russian, the experiment used older verbs and aspectual pairs that have been in the language for a long time (e.g. *делать-сделать* ‘to do, to make’ or *ставить-поставить* ‘to put, to place’) for comparison. The participants read phrases such as *поставить лайк* ‘to click like’ and were asked to form a synonymous verb in the corresponding aspect with the root *лайк*. The following sections describe the method in detail.

3.1. Setup of the experiment

The fundamental idea behind the experiment is that many verbs that are formed from nouns and proper names can be derived using the following formula:

$$\text{Verb(N)} = [\text{Verb} + \text{Noun(N)}]$$

The left side of the formula (Verb(N)) is a verb with the same root as the noun on the [Verb + Noun(N)] side. The verb on the right side of the equal sign ([Verb + Noun(N)]) is a *light verb* [Wohlgemuth 2009: 102], which is a type of verb that can be combined with a number of other parts of speech, most often (but not necessarily) a noun. Furthermore, when the light verb is combined with a noun, the noun carries the bulk of the meaning of the whole verb phrase. Another term, which is more precise for my purpose but less often used, is *compensator verb*, translated from the Russian *глагол-компенсатор*

⁴ <https://www.webropolsurveys.com/>

[Золотова et al. 1998: 72]. Examples of constructions with compensator verbs in Russian include *вести наблюдения* ‘to make observations’ = *наблюдать* ‘to observe’, and *заниматься исследованием* ‘to carry out research’ = *исследовать* ‘to research’. The compensator verbs in these constructions are, respectively, *вести* (in *вести наблюдения*) and *заниматься* (in *заниматься исследованием*).

In the experiment, the participants were asked to read verbal phrases and write a synonymous verb, if they thought that such a verb exists, in the corresponding aspect for each of them. Examples of verbal phrases used in this experiment include *сделать скриншот* ‘to take (pf.) a screenshot’ and *написать твит* ‘to write (pf.) a tweet’. The words *скриншот* ‘screenshot’ and *твит* ‘tweet’ were italicized and the participants were asked to create a verb from these words. All verbs in the experiment are presented in section 3.2. This method, in order to establish aspectual pairs, can only be used when the verb in question is formed from another word, such as a noun or a name.

3.2. The verbs

The experiment contained nineteen perfective verbs—the targets of the experiment—and sixteen imperfective verbs as fillers (for example *делать гримасы* ‘make faces’), not relevant for the study. The chosen verbs were borrowed or coined recently, as the whole idea of the experiment was to see how new perfective verbs are formed. It is hard to date exactly when a verb enters a language, but these verbs, as explained in section 3.3, have not been widely used for more than approximately ten years, as of the beginning of 2020.

The experiment consisted of verbal phrases consisting of a verb (a compensator verb/light verb) and another word in *italics*. The participants were asked to form a verb from the word that was written in italics. They were also asked to notice the aspect of the verb, and to use a verb in the same aspect (perfective or imperfective). The relevant questions were perfective, the imperfective verbs were fillers with the aim to mask the real purpose of the experiment. The participants were free to write X if they were of the opinion that there is no such verb in Russian. The perfective verb phrases in the experiment (i.e. the relevant ones) were the following:

- написать *твит* — ‘to write a tweet’ (to tweet)
- поставить *лайк* — ‘to press “like”’ (to like)
- сделать *скриншот* — ‘to take a screenshot’ (to screenshot)
- выложить фото в *Инстаграм* — ‘to upload a photo on Instagram’ (to instagram)
- послать фото через *Снапчат* — ‘to send a photo via Snapchat’ (to snapchat)
- здать поиск в *Гугл* — ‘to make a search on Google’ (to google)
- здать поиск в *Яндекс* — ‘to make a search on Yandex’ (to yandex)

написать *хештег* – ‘to write a hashtag’ (to hashtag)
 сделать *репост* – ‘to make a repost’ (to repost)
 отправить *смс* – ‘to send an SMS’ (to text)
 сделать *бэкап* (жесткого диска) – ‘to make a backup (of a hard drive)’ (to back up)
 осуществить *инсталляцию* – ‘to carry out an installation’ (to install)
 сделать *селфи* – ‘to make a selfie’ (to selfie)
 сделать *копипаст* – ‘to make a copy-paste’ (to copy-paste)
 сделать *апгрейд* (компьютерной системы) – ‘to make an upgrade (of a computer system)’ (to upgrade)
 сделать *фейспалм* – ‘to make a facepalm’ (to facepalm)
 обработать фото в *Фотошопе* ‘to edit a photo in Photoshop’ (to photoshop)

Most of these verbs are related to computers, the internet, smartphones et cetera, so they are not used by people who do not have access to any of these devices. Since the experiment was conducted online, language users without a computer, a tablet or a smartphone could not answer the survey.

Some of the verbs have been derived from the names of popular internet sites or smartphone applications: *инстаграмить* ‘to instagram’, *гуглить* ‘to google’, *снэпчатить* ‘to snapchat’, *твитить* ‘to tweet’, *яндексить* ‘to yandex (to use the Russian search engine Yandex)’.

Other verbs are related to general computer and/or smartphone usage: *бэкапить* ‘to back up’, *скриншотить* ‘to take a screenshot’, *репостить* ‘to repost’, *апгрейдить* ‘to upgrade’, *селфиться* ‘to take a selfie’, *эсмэсить* ‘to text, to SMS’, *инсталлировать* ‘to install’, *копипастить* ‘to copy-paste’.

Another group of verbs denotes certain functions in applications and/or webpages: *хештежить* ‘to hashtag’, *лайкать* ‘to like’.

Some of the verbs can be found in the dictionary of computer terms and online slang *Словарь языка интернета.ru* [Кронгауз 2016], namely *копипастить* ‘to copy-paste’, *лайкать* ‘to like’, *гуглить* ‘to google’, *фейспалмить* ‘to facepalm’, *селфить* ‘to take a selfie’, *хештежить* ‘to hashtag’.

At last, there were also two slightly older perfective verbs included in the experiment, as a control group:

составить *прогноз* – ‘to make a prognosis’ (to prognosticate)
 вызвать *интерес* – ‘to arouse interest’ (to interest).

As these verbs were assumed to be sufficiently established in the language and in the minds of Russian speakers, all of the answers were assumed to be the same: *составить прогноз* ‘to make a prognosis’ would result in *спрогнозировать* and *вызвать интерес* ‘to arouse interest’ in *заинтересовать*.

The next section describes the theoretical foundations of the experiment and how the results should be interpreted.

3.3. Theoretical premises

Establishing aspectual pairs is not an easy task. All proposed methodologies ultimately rely on the intuition of native speakers, and this experiment is no exception, but this experiment used the intuition of 120 native Russian speakers instead of only one or a few.

I assume that the phrases used in the test and the verbs that the participants wrote mean the same thing. For example, *поставить лайк* ‘to click like (literally: ‘to put like’)’ and *лайкнуть* ‘to like’ bear the same meaning (albeit, perhaps, with different stylistic properties), and *лайкнуть* is a natural perfective to the imperfective *лайкать*. Therefore, if *лайкать* were in a dictionary, it should note *лайкнуть* as its natural perfective, just as dictionaries note the pairs *писать-написать* ‘to write’ and *делать-сделать* ‘to do, to make’. The line of reasoning, that *поставить лайк* is synonymous to *лайкнуть* and that this proves that *лайкнуть* is a natural perfective to *лайкать*, presupposes both that the imperfective *ставит лайк* is the same as *лайкать* and that *поставить* is the corresponding perfective verb for *ставит*. In dictionaries, such as the Oxford Russian Dictionary,⁵ *ставит* and *поставить* ‘to put’ are indeed regarded as an aspectual pair.

Since the goal of the experiment was to investigate how Russian speakers form perfective forms of new verbs, the term “new” needs to be clarified. It is often impossible to determine exactly when a word entered a language. When a verb is formed from a company name, it is possible to establish a theoretical year when the verb could have first come into existence, namely when the company was founded. Such verbs from this experiment include *гуглить* ‘to google’ (Google was founded in 1998), *инстаграмить* ‘to instagram’ (2010) and *твитить* ‘to tweet’ (2006). Most other verbs in the experiment are related to computer technology in general, for example *бэкапить* ‘to back up’, *инсталлировать* ‘to install’, *апгрейдить* ‘to upgrade’, *репостить* ‘to repost’, *копипастить* ‘to copy-paste’, and some of them might have been in use among IT specialists for decades, but for the population at large, these verbs have only been in use as long as the people have been using computers. According to FOM (Public Opinion Foundation⁶), in 2008 about 25% of the Russian population were using computers, and in 2011 it was almost 50% [Сидорова, Пeryхова 2011: 4]. It thus seems safe to assume that most verbs had begun to be used by a substantial part of Russia’s population around 2010 and that they had certainly not been widely used before the 2000s.

⁵ Read online on MOT Dictionaries: <http://www.motinfo.fi/en/>

⁶ http://bd.fom.ru/report/map/bntergum07/internet/_internet1133/vesna2011

4. Results

Below are nineteen tables, which show all the answers that the participants gave for each verb in the experiment. The first column in each table shows the imperfective base verb and its English translation. The answers that the participants gave are in boldface in column 2: the most common answers are at the top, and X (“no verb”) and irrelevant answers (verbs in the wrong aspect or verbs formed from a completely different root) are at the bottom. Column 3 shows the raw frequency, i.e. the number of participants who wrote this particular verb. Column 4 shows the percentage of each answer among all given answers, including X and irrelevant answers. The last column, column 5, shows the percentage of each perfective verb among all perfectives for this particular verb.

Note that the totals of all the percentages do not always add up to exactly 100%. This is due to errors in rounding up the figures. Another exception is that sometimes a participant wrote more than one verb, despite the instruction to provide only one. In these cases, I have included the extra verb in the numbers, and the total number of answers is above 120 (the number of participants in the experiment). Some participants had created a verb from a different root than the italicized word. This was, of course, unfortunate, but, at the same time, it was not sufficiently common enough to ruin the entire experiment, and in most cases, the participants did write a verb in the correct aspect or an X. Irrelevant answers such as these are found in the category “other”. Tables 1, 2, 3, 4 and 5 below show all verbs in which at least 50% of the participants produced the same answer.

Table 1. ‘to like’

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
лайкать 'to like'	лайкнуть	98	81.7%	98.0%
	залайкать	1	0.8%	1.0%
	отлайкать	1	0.8%	1.0%
	X (no verb)	7	5.8%	–
	other⁷	13	10.8%	–

⁷ In this row, I include verbs with other roots and imperfective verbs (in other words irrelevant answers). See also section 4.2 for a discussion on these answers.

Table 2. 'to tweet'

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
ТВИТИТЬ 'to tweet'	ТВИТНУТЬ⁸	79	65.8%	92.9%
	ЗАТВИТИТЬ	3	2.5%	3.5%
	НАТВИТИТЬ	2	1.7%	2.4%
	ОТВТИТИТЬ	1	0.8%	1.2%
	X (no verb)	22	18.3%	—
	other	13	10.8%	—

Table 3. 'to photoshop'

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
ФОТОШОПИТЬ 'to photoshop'	ОТФОТОШОПИТЬ	78	65.0%	90.7%
	ЗАФОТОШОПИТЬ	4	3.3%	4.7%
	СФОТОШОПИТЬ	2	1.7%	2.3%
	ОФОТОШОПИТЬ	1	0.8%	1.2%
	ОБФОТОШОПИТЬ	1	0.8%	1.2%
	X (no verb)	14	18.3%	—
other	20	10.8%	—	

Table 4. 'to install'

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
ИНСТАЛЛИРОВАТЬ 'to install'	ИНСТАЛЛИРОВАТЬ⁹	74	60.7%	77.9%
	ПРОИНСТАЛЛИРОВАТЬ	13	10.7%	13.7%
	СИНСТАЛЛИРОВАТЬ	4	3.3%	4.2%
	ОТИНСТАЛЛИРОВАТЬ	2	1.6%	2.1%
	НАИНСТАЛЛИРОВАТЬ	1	0.8%	1.1%
	ИНСТАЛЬНУТЬ	1	0.8%	1.1%
	X (no verb)	18	14.6%	—
	other	9	7.4%	—

⁸ Including the spelling variant *твитнуть* (perhaps a typo).

⁹ Including the spelling variants *инсталлировать* and *инсталлизировать* (perhaps typos).

Table 5. 'to repost'

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
репостить 'to repost'	репостнуть	65	54.2%	85.5%
	зарепостить	5	4.2%	6.6%
	отрепостить	3	2.5%	3.9%
	прорепоcтить	2	1.7%	2.6%
	нарепостить	1	0.8%	1.3%
	X (no verb)	14	11.7%	—
	other	30	25.0%	—

As seen above, the verbs *лайкнуть* 'to like', *твитнуть* 'to tweet', *отфотошопить* 'to photoshop', *инсталлировать* 'to install' and *репостнуть* 'to repost' were produced by more than half of all the participants. The verb *инсталлировать* 'to install' is biaspectual and can therefore be used in the perfective aspect, but the prefixed form *проинсталлировать* was reasonably popular as well, with 13.7% of all its perfective answers.

The next group of verbs, in Tables 6, 7, 8 and 9, are less established: between 25 and 50% of the participants produced one particular natural perfective.

Table 6. 'to SMS, to text'

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
эсэмэсить 'to SMS, to text'	эсэмэснуть ¹⁰	47	39.2%	87.0%
	отэсэмэсить	3	2.5%	5.6%
	заэсэмэсить	2	1.7%	3.7%
	проэсэмэсить	2	1.7%	3.7%
	X (no verb)	46	38.3%	—
	other	20	16.7%	—

¹⁰ Including the spelling variant *смснуть*.

Table 7. 'to google'

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
гуглить 'to google'	загуглить	42	34.7%	51.2%
	погуглить	27	22.3%	32.9%
	прогуглить	9	7.4%	11.0%
	вгуглить	1	0.8%	1.2%
	нагуглить	1	0.8%	1.2%
	огуглить	1	0.8%	1.2%
	отгуглить	1	0.8%	1.2%
	X (no verb)	7	5.8%	—
	other	32	26.4%	—

Table 8. 'to screenshot'

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
скриншотить 'to screenshot'	заскриншотить ¹¹	36	30.0%	70.6%
	отскриншотить	9	7.5%	17.6%
	скриншотнуть	5	4.2%	9.8%
	наскриншотить	1	0.8%	2.0%
	X (no verb)	52	43.3%	—
	other	17	14.2%	—

Table 9. 'to back up'

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
бэкапить 'to back up'	бэкапнуть	32	26.4%	59.3%
	збэкапить	12	9.9%	22.2%
	отбэкапить	4	3.3%	7.4%
	пробэкапить	3	2.5%	5.6%
	сбэкапить	3	2.5%	5.6%
	X (no verb)	49	40.5%	—
	other	18	14.9%	—

¹¹ Including the shorter spelling variant *заскринить*.

The verbs *эсмэснуть* ‘to text’, *загузить* ‘to google’, *заскрин(шот)ить* ‘to screenshot’ and *бэкапнуть* ‘to back up’ were produced by between 25 and 50% of all the participants.

The third group is the largest. In Tables 10, 11, 12, 13, 14, 15, 16 and 17, I present the least established perfective verbs, that is verbs for which no natural perfective was produced by more than 25% of the participants.

Table 10. ‘to copy-paste’

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
копипастить ‘to copy-paste’	копипастнуть	29	24.0%	46.0%
	скопипастить ¹²	27	22.3%	42.9%
	откопипастить	3	2.5%	4.8%
	закопипастить	2	1.7%	3.2%
	накопипастить	1	0.8%	1.6%
	перекопипастить	1	0.8%	1.6%
	X (no verb)	27	22.3%	—
	other	31	25.6%	—

Table 11. ‘to upgrade’

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
апгрейдить ‘to upgrade’	проапгрейдить	25	20.7%	47.2%
	апгрейднуть ¹³	20	16.5%	37.7%
	сапгрейдить ¹⁴	4	3.3%	7.5%
	заапгрейдить	3	2.5%	5.7%
	отапгрейдить	1	0.8%	1.9%
	X (no verb)	23	19.0%	—
	other	45	37.2%	—

¹² Including the spelling variant *скопипейстить*.

¹³ Including the shorter spelling variant *апнуть*.

¹⁴ Including the spelling variant *сьапгрейдить*.

Table 12. ‘to instagram’

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
инстаграмить ‘to instagram’	заинстаграмить ¹⁵	21	17.5%	65.6%
	инстаграмнуть ¹⁶	5	4.2%	15.6%
	отинстаграмить	2	1.7%	6.3%
	проинстаграмить	2	1.7%	6.3%
	выинстаграмить	1	0.8%	3.1%
	сынстаграмить	1	0.8%	3.1%
	X (no verb)	69	57.5%	—
other	19	15.8%	—	

Table 13. ‘to hashtag’

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
хештегить ‘to hashtag’	хештегнуть ¹⁷	24	20.0%	77.4%
	захештегить ¹⁸	3	2.5%	9.7%
	нахештегить	1	0.8%	3.2%
	отхештегить	1	0.8%	3.2%
	прохештегить	1	0.8%	3.2%
	схештегить	1	0.8%	3.2%
	X (no verb)	80	66.7%	—
other	9	7.5%	—	

¹⁵ Including the shorter spelling variant *заинстить*.

¹⁶ Including the shorter spelling variant *инстануть*.

¹⁷ Including the shorter spelling variant *тегнуть*.

¹⁸ Including the shorter spelling variant *затегать*.

Table 14. 'to take a selfie'

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
селфиться 'to take a selfie'	заселфить(ся)	11	9.2%	55.0%
	селфнуть(ся)	3	2.5%	15.0%
	селфануть(ся)	3	2.5%	15.0%
	населфиться	1	0.8%	5.0%
	оселфить	1	0.8%	5.0%
	селфировать	1	0.8%	5.0%
	X (no verb)	78	65.0%	—
	other	22	18.3%	—

Table 15. 'to snapchat'

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
снапчатить 'to snapchat'	снапчатнуть	9	7.5%	64.3%
	заснапчатить	2	1.7%	14.3%
	проснапчатить	2	1.7%	14.3%
	отснапчатиться	1	0.8%	7.1%
	X (no verb)	91	75.8%	—
	other	15	12.5%	—

Table 16. 'to facepalm'

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
фейспалмить 'to facepalm'	фейспалмнуть	9	7.5%	47.4%
	сфейспалмить	6	5.0%	31.6%
	зафейспалмить	4	3.3%	21.1%
	X (no verb)	82	68.3%	—
	other	19	15.8%	—

Table 17. ‘to yandex’

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
яндексить 'to yandex'	яндекснуть	6	5.0%	42.9%
	заяндексить ¹⁹	3	2.5%	21.4%
	пояндексить	3	2.5%	21.4%
	прояндексить	1	0.8%	7.1 %
	яндексировать	1	0.8%	7.1 %
	X (no verb)	87	72.5%	—
	other	19	15.8%	—

The “control group” of two older perfective verbs, Tables 18 and 19, received the following answers:

Table 18. ‘to interest’

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
интересовать 'to interest'	заинтересовать	101	84.2%	87.8%
	интересовать	12	10.0%	10.4%
	проинтересовать	1	0.8%	0.9%
	сынтересовать	1	0.8%	0.9%
	X (no verb)	5	4.2%	—

Table 19. ‘to prognosticate’

Impf. base verb and English translation	Pf. verbs formed by the participants	Raw frequency	% (of all answers)	% (of pf. verbs)
прогнозировать 'to prognosticate'	спрогнозировать	73	60.8%	62.9%
	прогнозировать	41	34.2%	35.3%
	запрогнозировать	1	0.8%	0.9%
	напрогнозировать	1	0.8%	0.9%
	X (no verb)	4	3.3%	—

¹⁹ Including the longer variant *заяндексировать*.

Unsurprisingly, the respondents agreed with these verbs to a much greater degree than with newer verbs, but the share of the expected answers (i.e. *заинтересовать* ‘to interest’ in the top of Table 18 and *спрогнозировать* ‘to prognosticate’ in the top of Table 19) did not reach 100%.

An unprefixed imperfective verb can sometimes have two or more natural perfectives. This phenomenon is called “prefix variation” [Janda, Lyashevskaya 2011b], and in this experiment all verbs, without exception, show some degree of variation. Two verbs were tied for the lowest degree of variation, that is three perfectives: *лайкать* ‘to like’, with *лайкнуть*, *залайка́ть* and *отлайка́ть* (Table 1) and *фейспальмить* ‘to facepalm’ with *фейспальмить*, *сфейспальмить* and *зафейспальмить* (Table 16). The highest degree of variation had *гуглить* ‘to google’ with seven different perfectives: *загуглить*, *погуглить*, *прогуглить*, *вгуглить*, *нагуглить*, *огуглить* and *отгуглить* (Table 7).

If we exclude possible nonce words, that is perfectives formed by only one participant, the range of variation goes from one: *лайкать* ‘to like’—*лайкнуть* in Table 1, to five: *бэкапить* ‘to back up’—*бэкапнуть*, *забэкапить*, *отбэкапить*, *пробэкапить*, *сбэкапить* in Table 9.

The main idea behind the overlap hypothesis is that the meanings of both the prefix and the verb overlap. We would therefore expect all semantically similar verbs to be affixed with the same prefix or suffix. This, however, was not always the case. Two verbs that denote the same action—to search for information on the internet, albeit on different search engines—are *гуглить* ‘to google’ and *яндексить* ‘to yandex’. For the first verb, *загуглить* was the most common natural perfective, and *яндекснуть* for the second. After *яндекснуть*, the forms *заяндексить* and *пояндексить* were also suggested, and *за-* and *по-* were the two most common aspectual prefixes for *гуглить* ‘to google’.²⁰ One can note that *-ну-* was never used to form a perfective verb of *гуглить* (Table 7), which implies that semantics is not the only relevant factor in the choice of aspectual affix. Phono-morphological factors also play a role: it is harder to pronounce the suffix *-ну-* after *гугл* than after *яндекс*, but this question is beyond the scope of this article.

4.1. The most common prefixes and suffixes

To summarize the findings found in Tables 1 through 19, the most frequent perfectivization method was the suffix *-ну-*, for 10 out of 19 verbs: *лайкнуть* ‘to like’ (Table 1), *твитнуть* ‘to tweet’ (Table 2), *репостнуть* ‘to repost’ (Table 5), *эсэмэснуть* ‘to text’ (Table 6), *бэкапнуть* ‘to back up’ (Table 9), *копипастнуть* ‘to copy-paste’ (Table 10), *хештегнуть* ‘to hashtag’ (Table 13),

²⁰ Instead of forming a perfective counterpart to *яндексить*, some participants wrote the verb *гуглить*, even for referring to the use of the Yandex search engine.

снэпчатнуть ‘to snapchat’ (Table 15), *фейспэлмнуть* ‘to facepalm’ (Table 16) and *яндэкснуть* ‘to yandex’ (Table 17). Verbs that end in *-нуть* in the infinitive constitute a conjugational class of their own and therefore it is possible that some of the *ну*-verbs from this article are the “base verb” in the aspectual pair, coined before their imperfective counterparts. The verb *лайкать* ‘to like’ for example might have been coined from *лайкнуть* ‘to like’ and not the other way around. However, questions regarding the direction of the morphological derivation (imperfective to perfective or perfective to imperfective) are beyond the scope of this article, which is concerned with the morphology of the perfective aspect of loan verbs.

The second most frequent was the prefix *за-*, with five verbs: *заинтересовать* ‘to interest’ (Table 18), *загуглить* ‘to google’ (Table 7), *заскриншотить* ‘to screenshot’ (Table 8), *заинстаграмить* ‘to instagram’ (Table 12) and *заселфить(ся)* ‘to take a selfie’ (Table 14). The prefix *за-* is a very common perfectivizer among different classes of verbs in modern Russian, and it is argued that it has developed an abstract “resultative” meaning that overlaps with the resultative meaning central to the perfective aspect, and which can explain its productivity in modern, colloquial Russian [Gjervold 2013: 45; Olsson 2018: 239].

The third most common perfectivizer was the prefix *про-*, with two verbs: *проапгрейдить* ‘upgrade’ (Table 11) and *проинсталлировать* ‘to install’ (Table 4, after the biaspectual *инсталлировать* ‘to install’). These verbs denote actions well known to computer users—‘install’ and ‘update’—which take some time to go through. “Through” is one of the most prominent meanings associated with *про-* [Janda et al. 2013: 106], making this prefix an appropriate choice for forming natural perfectives for both *апгрейдить* ‘to upgrade’ and *инсталлировать* ‘to install’.

The prefixes *с-* and *от-* shared the fourth position, with one verb each: *спрогнозировать* ‘to prognosticate’ (Table 19) and *отфотошопить* ‘to photoshop’ (Table 3).

To return to the suffix *-ну-*, the results show that *-ну-* seems to be much more productive in colloquial Russian than in the contemporary standard language, and it can even be used for verbs that do not express a momentary action. Examples of this include *бэкапнуть* ‘to back up’ and *апгрейднуть* ‘to upgrade’, as the actions these verbs denote usually take some time. This is an indication that *-ну-* has a wider range of meanings in contemporary non-standard Russian than just being a semelfactivity marker, which supports the findings of Sokolova [2015]. The verbs *лайкнуть* ‘to like’, *твитнуть* ‘to tweet’, *репостнуть* ‘to repost’, *селфнуть(ся)* ‘to take a selfie’, *фейспэлмнуть* ‘to facepalm’ and *яндэкснуть* ‘to yandex’ can, on the other hand, be interpreted as semelfactive verbs, that is such actions that can be carried out in a moment.

As discussed in section 4 above, phono-morphological factors are also relevant with regard to the possibilities of forming *ну*-suffixed verbs; *гуглить* ‘to google’, for example, received no *ну*-suffixed answers at all, but for the mostly synonymous *яндексить* ‘to yandex’, *-ну-* was the most common answer.

4.2. Irrelevant answers and their significance

The design of this experiment—free writing and no multiple-choice questions—did not guarantee that the participants always gave a relevant answer. As explained in section 4, sometimes participants formed a verb from a different root or gave another answer (one example of such an answer is *сделать селфи* ‘to take a selfie’ = *сфотографироваться* ‘to photograph oneself’). However, not all irrelevant answers are uninteresting. Most of the “irrelevant” answers (noted in the row “other” in each table) were, in fact, simplex imperfective verbs formed from the italicized word, for example *сделать*^[pf.] *селфи* = *селфиться*^[impf.]. Why is this answer more interesting than, for example, *сфотографироваться*? My interpretation of this finding is that if the same construction (*сделать селфи*) can result in both the imperfective *селфиться* and the perfective *заселфиться* (chosen by 11 participants), they must be sufficiently close in meaning to be called an aspectual pair.

As to why some participants chose a verb in the wrong aspect (as in *сделать*^[pf.] *селфи* = *селфиться*^[impf.]), I hypothesize that native Russian speakers do not necessarily “feel” the aspect of a verb automatically. Whether or not this hypothesis is legitimate, however, it is not applicable to the subject in this article.

5. Concluding remarks

The aim of this article was to investigate how Russian speakers form natural perfectives for a number of recently borrowed or coined verbs. The results show that using the suffix *-ну-* was the most common perfectivization method in the experiment and that it can be used even for non-semelfactives, such as *апгрейднуть* ‘to upgrade’. Among the prefixes, *за-* was the most productive, followed by *про-*, *с-* and *от-*.

All of the verbs show some degree of variation in the formation of perfectives, but in most cases, the majority of the participants who formed a valid perfective (row 5 in Tables 1–19) produced one specific perfective. The most popular verbs in the experiment are *лайкнуть* ‘to like’, *твитнуть* ‘to tweet’, *отфотошопить* ‘to photoshop’ and the biaspectual *инсталлировать* ‘to install’. Verbs with a higher degree of variation (i.e. verbs for which no perfective had more than 50% of all perfectives in the experiment) are *яндекснуть/пояндексить* ‘to yandex’, *сфейспалмить/фейспалмнуть* ‘to facerpalм’, *проапгрейдить/апгрейднуть* ‘to upgrade’ and *копипастнуть/скопипастить*

'to copy-paste'. It is too early to tell whether or not one of these forms will become standard or if these verbs will disappear from use.

The results of the experiment do not prove that prefixes are never semantically “empty”, but it is unlikely that the choice of prefix is random, as a majority of all perfective answers for most of the verbs were produced by more than 50% of those who produced a valid perfective. Since the overlap hypothesis postulates that the meanings of prefixes never disappear, it seems reasonable to assume that not all verbs are 100% synonymous. Exactly how every prefix and suffix influences the meaning of a base verb (if at all) must, however, be examined by other methods. For future research, the question of prefix variation—how, and if, different prefixes modify the meaning of a base verb in different ways—is an interesting subject that can lead to a deeper understanding of the meanings of verbal prefixes. The reasons behind the productivity of *-hy-* in new verbs is another topic which deserves further study.

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