

Ljubov' drug k drugu or ljubov' k drug drugu?
A corpus study of primary prepositions as endoclitics
and proclitics with the reciprocal pronoun *drug druga*
in Modern Russian

Alice Bondarenko

1. Introduction

The Russian bipartite pronoun¹ *друг друга* expresses reciprocity, or mutual action. When used with a prepositional clitic, the preposition is placed endoclitically, as in (1), while in non-normative Russian the preposition is sometimes placed fronted, as a proclitic, as in (2).

- (1) Они смотрели друг на друг-а
they looked REC at REC
'They looked at each other.'
- (2) Они смотрели на друг друг-а
they looked at REC REC
'They looked at each other.' REC

The example in (1) is frequently seen as nothing more than a marginal, careless mistake. However, the proclitical preposition construction in (2) is more common than previously recognized and is not restricted only to colloquial registers, as will be shown here.

The aim of this paper is to examine the frequency and usage of the proclitical preposition construction based on data from a web corpus, Internet articles and the search engine Google scholar. The phenomenon is discussed as a gradual loss of endocclisis in the larger context of grammaticalization processes of reciprocal markers. Cross-linguistically, bipartite reciprocal pronouns commonly undergo grammaticalization from a two-part syntactic phrase to a more morphological structure. A shift in the position of the preposition from endoclitical to proclitical, or from embedded between the two elements to

¹ In Russian linguistic tradition, *друг друга* is called a *взаимно-возвратное местоимение* 'reflexive-reciprocal pronoun' (e.g. Janko-Trinickaja, 1975). In English language articles and grammars of Russian (e.g. Wade, 2011: 167), the term 'reciprocal pronoun' is typically used and will be used here.



fronted, is a step in this grammaticalization process (Nedjalkov, 2007a: 156). It can thus be suggested that proclitic placement of a preposition used with *друг друга*, as in (2), is a sign of the further grammaticalization of *друг друга* in Modern Russian.

The following sections are organized as follows. In Section 2, the Russian reciprocal pronoun *друг друга* is described, and its interaction with prepositions is brought up in Section 3. Loss of endoclitisis as evidence of grammaticalization is discussed in Section 4. Section 5 presents frequency data of *друг друга* with proclitics. Different factors affecting the positioning of the clitical preposition are discussed in Section 6, and a summary is given in Section 7.

2. *The Russian bipartite pronoun друг друга*

The Russian reciprocal pronoun¹ *друг друга* consists of an iteration of *друг*. *Друг* is diachronically the short form of the adjective *другой* ‘another’ (Buslaev, 1863: 177), but synchronically it is homophonous with *друг* ‘friend’ and possibly interpreted as such by speakers (Knjazev, 2007: 694). *Друг друга* is highly productive and there are few restrictions on its usage (Knjazev, 2007). Only the first syllable of the second part is stressed and the stress pattern is thus that of a single word: [drug ‘drugə]. The lack of devoicing of the /g /in the first element is also noteworthy, since Russian obstruents typically devoice in word-final position. Phonologically, *друг друга* thus behaves as a single word.

In Modern Russian, only the second part declines, and only by case. In Old Church Slavonic and Old East Slavic, both parts agreed in gender with the subject, as shown in example (3). In Modern Russian, the masculine form of both parts have been generalized. According to Kulikov (2014), this loss of gender agreement shows that the Russian reciprocal pronoun has undergone the same grammaticalization process evident in other Indo-European reciprocal pronouns.

- (3) Old East Slavic (Uspensky Codex 289a:30–32, cited in Kulikov, 2014: 148)
 ... и щѣбѣтаху сѣдаще друга к друзѣ
 ... and twitter:IMPF:3P sitting other:NOM.SGF towards other:DAT.SGF
 ‘... and they (birds, fem.) twittered, sitting, one towards the other.’

Друг друга is hence highly grammaticalized as a reciprocal pronoun, as evident in loss of gender agreement, high paradigmaticization (integration in the pronominal system), nonrestriction of usage and unified stress pattern.

Bipartite reciprocal markers are found in languages all over the world but are especially common in languages spoken in Europe: French *l’un l’autre*, Italian *l’uno l’altro*, Spanish *el uno [prep] el otro*, Greek *o enas ton alon*, Finnish *toinen toise* (Evans, 2008: 47). Such markers typically consist of a first part meaning ‘each’, ‘one’ or ‘other’ and a second part meaning ‘other’ (Evans, 2008: 46). It has been suggested that a polyptotic (involving iteration of the first element) reciprocal pronoun was present in proto-Indo-European (Kulikov, 2014:123). The wide spread of reciprocal pronouns in the form of bipartite noun phrases in Europe has also been explained as a result of calquing into different languages from Bible translations (Evans, 2008: 47).

In the Slavic language family, many languages have equivalents of Russian *друг друга*, often etymologically related to Russian *один другого* ‘one another’ or *один одного* ‘one

another'. Polish *jeden drugiego*, Bulgarian *един друг*, Ukrainian *один одного* and Belarusian *адзін аднаго* all show a richer inflectional behavior in that the first element declines by gender (Wiemer, 2007; Penchev, 2007; Bahmut, 1980; Atrachovič, 1982). 2007; Penchev, 2007; Bahmut, 1980; Atrachovič, 1982).

Bipartite reciprocal markers differ in degree of independence of the two parts. In some languages, such as modern Greek, the two elements can take different cases, hence displaying the behavior of a syntactical phrase rather than a single word. In other languages, the two elements have fused and are now recognized as a single word. This is the case of Dutch *elkaar* 'each other', diachronically formed from *elk* 'each' + *ander* 'other' (de Vaan, 2017: 222) and Swedish *varandra* 'each other', from *var* 'each' + *annan* 'other' (SAOB, 1893).

3. Interaction of *друг друга* with prepositions

In languages where the bipartite pronoun displays a high degree of fusion, this is also evident in that a morpheme, such as a preposition, cannot be inserted between the two parts. Thus, when the preposition is placed outside of the pronoun, this points to a high degree of fusion, which corresponds to a high degree of grammaticalization of the reciprocal pronoun (Nedjalkov, 2007a: 156). This is the process that most of the Germanic languages have undergone, where the two elements have come to be treated as one unit in prepositional phrases (Evans, 2008).

The placement of the preposition first with Russian *друг друга* is typically viewed as a violation of the norm, or as a feature of spontaneous, spoken speech. Es'kova (1989: 215) classifies fronted primary prepositions as non-normative. In 1975, Janko-Trinickaja (1975) noted that *друг друга* is frequently found with proclitic prepositions in both written and spoken discourse. The example in (4), cited in Janko-Trinickaja (1975: 70), is one of the examples from written, published text that Janko-Trinickaja uses to argue for the unity of *друг друга*.² To reflect the unity of the two parts, she even recommends using a hyphen to connect the two parts: *друг-друга*.

- (4) Вообще, думается, что критики излишне часто соединяют Кафку, Джойса и Пруста в любом сочетании, а то и всех трех как какой-то единый признак модернизма. Пожалуй, единственное действительно общее у них — это непохожесть ни на то, что было, ни на друг друга.
 'I think in general that critics lump together Kafka, Joyce and Proust too often, in any combination or all three of them, as some united sign of modernism. Perhaps, the only thing they really have in common is that they are different, both from what used to be, and from each other.'
 (Д.А. Гранин. Несколько слов о «Кентавре» Джона Апдайка. 1965.)

Viellard (2012) also discusses proclitic prepositions with *друг друга*. He points out that the phenomenon of fronted prepositions is not new, as it is also found in older texts (Viellard, 2012: 602). It is not clear if these should be analyzed as isolated mistakes or not.

² This and further translations are the author's own.

It is important to note that in Russian, primary prepositions behave differently than secondary prepositions. Primary prepositions are not derived from other word-classes and function only as prepositions. They are always placed between the two elements of *друг друга* in literary Russian. Examples of primary prepositions are *без* ‘without’, *в* ‘in’, *для* ‘for’ and *на* ‘on’. Secondary prepositions are words from different word-classes, such as adverbs, that have grammaticalized into prepositions. Since these are less firmly established as prepositions, there is a greater variety of usage. Specifically, the position of the preposition is more varied (Es’kova, 1989; Gajnutdinova, 2011). There is some disagreement on exactly what construction should be considered the norm for each secondary preposition, with different sources giving different answers. It is clear that this is an area of ongoing change worthy of examination. This paper concerns itself with primary prepositions.

4. *Loss of endocclisis as evidence of grammaticalization*

Russian prepositions behave as clitics; something intermediate between a word and affix in terms of both syntactic and phonological behavior as well as diachronic development (Croft, 2002: 255). A clitic is a form that has (some) morphosyntactic properties of a word, but is phonologically dependent on a host (Haspelmath and Sims, 2010: 196–197). Unlike affixes, clitics can attach to a wider variety of hosts, and attach to entire clitic groups (Zwicky and Pullum, 1983).

Arkadiev (2016) notes that Russian primary prepositions are affix-like in that they participate in processes typical of bound morphemes, such as voicing assimilation (*/в/* is pronounced as [v] in the phrase *в доме* ‘in the house’, but as [f] in *в траве* ‘in the grass’) and phonologically and lexically conditioned allomorphic alternations (for example *о/об/обо* ‘about’). On the other hand, Russian prepositions also have some characteristics of word forms. For example, they attach to whole noun phrases and not to individual words, and have a syntactic role in the phrase (i.e. govern case of dependent noun phrase). Arkadiev (2016) concludes that Russian prepositions fulfill the criteria of clitics outlined in Spencer and Luis (2012), and this is also the view adopted here.

Recognizing Russian prepositions as clitics also leads to recognizing the interpositioned preposition in the reciprocal pronoun *друг друга* as an endoclititic, given an interpretation of the units as one word, and not as a syntactic unit (Arkadiev, 2016). Plungian (2003: 31) also points out that the Russian grammatical term *разорванная словоформа* ‘split word form’, used by Zaliznjak (1967: 53), to describe *друг друга* presupposes an implicit analysis of the preposition as an endoclititic. Endocclisis is generally thought to be rare in languages of the world and has been the subject of great debate (Smith, 2013; Harris, 2010).

While the clitic behaviour of prepositions seems uncontroversial (see also Gouskova, 2019), the analysis of the reciprocal pronoun as a word is not as clear-cut. In some ways it acts as a word; the first part does not inflect and is morphologically bound to the second. At the same time, as Arkadiev (2016: 330) points out, the possible interpositioning of some secondary, nonclitic prepositions such as *относительно* ‘regarding’ (see Es’kova, 1989: 217) is an argument against their word status. *Друг друга*, in this sense, acts simultaneously as one word, and as a syntactic unit consisting of two parts.

According to Zimmerling (2018), such ambivalent structures, that combine features of both morphological and syntactical structures, are the type of units capable of hosting endoclititics. *Друзь друзья*, having features of both a syntactic phrase and a single word form at least diachronically, is exactly the type of host that is capable of triggering endocclisis of otherwise proclitic prepositions.

In Modern Russian however, *друзь друзья* has more similarities with a word than with a phrase. While the concept of ‘word’ is complex and there is no conclusive test for wordhood, there are several criteria that are commonly used. Morphological and phonological cohesion is one. In *друзь друзья*, only the first syllable of the second part is stressed and the stress pattern is thus that of a single word. It also displays morphological cohesion in that the preposition takes both parts as its domain. That is, it is not possible to use different prepositions with different parts of the reciprocal pronoun.

With further grammaticalization in the form of fusion of the two elements of *друзь друзья*, we would expect to see a gradual loss of endocclisis, since the ambivalence that triggered endocclisis in the first place would be lost. Loss of endocclisis is also exactly what we find as a variant form in modern Russian. We turn to these questions in the following sections.

5. Frequency of *друзь друзья* with primary prepositional proclitics

The sections below discuss frequency and normativity of primary prepositional proclitics used with *друзь друзья*. Section 5.1 deals with meta-linguistic discussions on the phenomenon and their implications. Section 5.2 investigates the frequency of prepositional proclitics in Google scholar and Section 5.3 compares the different prepositions in the Web corpus Araneum.

5.1 Normativity and meta-linguistic discussions

As pointed out earlier, primary prepositions as proclitics with *друзь друзья* can be found in older texts. Example (5) is from a letter by Aksakov in the 19th century. Most available data on proclitical primary prepositions and *друзь друзья* are from the past few decades, with very few examples from the nineteenth century or earlier.³ Given the lack of comparative data on *друзь друзья* from earlier time periods, it is not clear if examples such as (5) should be interpreted as occasional mistakes or not.

- (5) Но есть что-то благородное и прекрасное в этой доверчивости к друг другу и к богу...
 ‘But there is something noble and beautiful in this blind faith in each other and in God.’
 (И. С. Аксаков. Письма к родным. 1849–1856.)⁴

Nevertheless, proclitical placement of primary prepositions with *друзь друзья* is often mentioned as a common “mistake”, one that is implied to be made by uneducated speakers. A few examples of such meta-linguistic discussions are presented below.

³ The main corpus of the Russian National Corpus includes two examples of “к друг другу” from the nineteenth and eighteenth centuries.

⁴ http://az.lib.ru/a/aksakow_i_s/text_0160.shtml

The online news source Newslab.ru writes about fronted prepositions under the heading *Работа над ошибками* ‘Correction of mistakes’ and notes that “Эта ошибка не самая заметная” ‘this mistake is not the most noticeable’.⁵ The book *Знаем ли мы русский язык?* ‘Do we know Russian?’ observes that many speakers are reluctant to split up *друг друга* which results in “errors” such as *к друг другу*. The author considers the mistake to be almost unnoticeable (“ошибочка вроде незаметная, однако ухо, приученное к грамотной речи, режет” ‘this mistake is kind of unnoticeable, but grates the ear that is accustomed to literate speech’).⁶ A workbook in Russian for eighth-graders includes an exercise to find grammatical mistakes, where *к друг другу* is included.⁷ A reader asks on the question column of the site Gramota.ru whether the prepositions *с* and *к* should be fronted or interpositioned with *друг друга*, adding that she hears both variants in daily speech.⁸

The above examples, which are far from exhaustive, show that the usage of fronted primary prepositions is widespread. Typically, the prepositions *к* and *с* are mentioned. They also show that many speakers do not immediately recognize these constructions as “wrong.”

5.2 Frequency in Google scholar

It would be easy to assume that non-normative language mostly surfaces in colloquial, spoken language. Spontaneous speech data is difficult to obtain, and therefore there is no data on the frequency of fronted primary prepositions in different registers. Proclisis of prepositions used with *друг друга* is attested in the Spoken Corpus of the Russian National Corpus, but not with enough frequency to investigate fronted prepositions in colloquial registers.⁹ It is possible, however, to look at the other end of the formality spectrum, Academic Russian.

Google scholar is a search engine for scholarly literature. The results are mostly from scientific journals, although some unpublished materials, theses, books, and conference papers are also indexed (Martín-Martín et al., 2018). Searches were carried out in May 2021. Table 1 shows the frequency of four selected prepositions fronted with *друг друга* in Google Scholar. Larger frequencies are rounded off by the search engine and are not as exact. Citations were excluded in the search to avoid including duplicate results. As seen in the table, proclitical *с* ‘with’ and *к* ‘towards’ (the search strings *к друг другу* and *с друг другом*) are fairly frequent in published scholarly articles, which in most cases have been peer-reviewed and proofread. This suggests that while fronted primary prepositions may not be normative, they belong to a gray area that is not always perceived as “wrong”, even

⁵ <https://newslab.ru/article/310530> (retrieved in April 2021)

⁶ <https://www.litres.ru/mariya-aksenova/znaem-li-my-russkiy-yazyk-21614936/chitat-onlayn/page-3/> (retrieved in April 2021)

⁷ https://books.google.se/books?id=zVZpAAAAQBAJ&dq=Рабочая+тетрадь+по+русскому+языку.\+8+класс.&source=gbs_navlinks_s (retrieved in April 2021)

⁸ <http://new.gramota.ru/spravka/buro/search-answer?s=с+друг+другом> (retrieved in April 2021)

⁹ For example, “к друг другу” appears 16 times in the corpus, while “с друг другом” only appears once and “в друг друга” does not appear at all (as of June 2022).

by educated language users. This also shows that it is not a phenomenon only of colloquial language.

	– 2010			2011 –		
	#Proclisis	#Endocclisis	%Proclisis	#Proclisis	#Endocclisis	%Proclisis
между	55	59	48%	1030	204	83%
к	996	34300	3%	4060	33600	11%
по отношению к	210	11900	2%	898	17700	5%
с	250	58300	0%	1480	57500	3%
в (+ACC)	120	15800	1%	338	19500	2%
на (+ACC)	22	26300	0%	196	33200	1%

Table 1: Occurrences of fronted primary prepositions in the Google scholar search engine

It appears that the usage of fronted prepositions has become more common in the last ten years. Both proclitic *к* ‘towards’ and proclitic *с* ‘with’ have become considerably more frequent in articles published in 2011 or later. *Между* ‘between’ also appears to have become more frequently fronted in recent years.¹⁰

5.3 Frequency in the Araneum corpus

Earlier mentions of proclitic prepositions with *друг другом* have discussed the influence of the preposition itself. To investigate the proportional frequency of different prepositions, the Web corpus Araneum Russicum Russicum Maius (Araneum), (Benko, 2014), available through the interface Sketch Engine (Kilgarriff et al., 2014) was used. The corpus was chosen to capture a large variety of genres and registers, including colloquial language. Although the language of the Internet may not be representative of spoken discourse, it is representative in the sense that it showcases a great variety of a language. Available spoken corpora of Russian are relatively small and contain only occasional examples of the construction.

The corpus contains a total of 1,2 billion (1,200,000,258) tokens collected from the .ru and .рф domains on the Internet. Searches in the corpus were limited to the primary prepositions that occur most frequently together with *друг другом* in the corpus, and their corresponding case forms. The prepositions were found by searching for the string in (6), then sorting by frequency of word forms. 25 prepositions that all occurred with *друг другом* at least 20 times in the corpus were included.

(6) [word="друг"][tag="S.*"][word="друг.*"]

Table 2 shows the 25 prepositions and the proportional frequency of fronted preposition, i.e. their frequency as proclitics compared to endoclitics. The table is sorted by proportional frequency of the proclitic construction. The first line in the table compares the frequency of the string *между друг другом* compared to *друг между другом*, and so on.

¹⁰ The status of *между* ‘between’ as a primary preposition can be questioned, given its etymology from another word class, from of Church Slavonic *межда* ‘border’ (Fasmer, 2004). Here, it is classified as a primary preposition, in line with modern Russian grammars.

Preposition	Case	Endoclititic	Proclitic	Total	Proportional frequency of proclitic preposition
между	INST	23	52	75	69.3%
про	ACC	44	3	47	6.4%
с	GEN	63	4	67	6.0%
перед	INST	513	32	545	5.9%
через	ACC	52	3	55	5.5%
в	LOC	536	20	556	3.6%
в	ACC	1769	58	1827	3.2%
из	GEN	64	2	66	3.0%
к	DAT	14023	369	14392	2.6%
до	GEN	41	1	42	2.4%
под	ACC	97	2	99	2.0%
на	LOC	308	6	314	1.9%
о	LOC	974	13	987	1.3%
у	GEN	1704	20	1724	1.2%
для	GEN	1034	11	1045	1.1%
под	INST	108	109	1	0.9%
за	ACC	649	4	653	0.6%
над	INST	528	3	531	0.6%
с	INST	22384	116	22500	0.5%
без	GEN	404	2	406	0.5%
о	ACC	514	2	516	0.4%
на	ACC	8693	32	8725	0.4%
от	GEN	21029	25	21054	0.1%
за	INST	1952	2	1954	0.1%
по	DAT	67	0	67	0.0%

Table 2: Proportional frequency of fronted prepositions in the Araneum Russicum Russicum Maius corpus

The frequency of fronted prepositions varies greatly depending on preposition and even between homophonous prepositions. For example, *c* + GEN ‘from’ occurs as a proclitic proportionally more often than *c* + INST ‘with’. *Между* stands out as an exception in that it is a primary preposition that occurs fronted in a majority of cases. This goes against earlier claims of *между* only occurring endoclitically (Gajnutdinova, 2012: 143).

Overall, the results show that proclitical positioning of prepositions with *дыз дыза* is not a marginal phenomenon, but a tendency worthy of investigation. Additionally, it is not only a feature of spoken discourse, since it appears so often in published, academic writing (as shown in Google scholar). In this data, the proportion of proclitical primary prepositions ranges from a few tenths of a percent to a few percents. The differences between prepositions may not be significant and the explanation for the placement of the preposition may lie outside the preposition itself. The next questions are: Why is there a growing tendency towards proclitical placement of the preposition with *дыз дыза* and what factors play a role in determining the positioning of the clitical preposition? The next section will attempt to answer these questions.

6. Factors determining the clitic position

From a cognitive perspective, the placement of the preposition depends on two competing motivations. The standard language tendency to place primary prepositions between the two elements of *дыз дыза* on one hand, and the unwillingness to split up highly

entrenched constructions on the other hand. Since in a large majority of cases the preposition is interpositioned, the tendency of proclisis “wins” in most cases.

Viellard (2012) suggests that longer prepositions are more likely to be used as proclitics. This is discussed in Section 6.1. Viellard (2012) also argues that proclitic prepositions are sometimes preferred when there are two prepositions, or a combination of an adverb and a preposition. Analogy as a factor is discussed in Section 6.2.

Gajnutdinova (2012) identifies a few factors that predispose to fronting of primary prepositions. The first is calquing from other languages in translations, e.g. Russian translations of English at each other. This factor can be dismissed as it applies only to a very small amount of examples. Further, she suggests that sometimes proclitical prepositions are connected to lexical-semantic factors, specifically case governing of dependent words. Such prepositional case constructions are discussed in Section 6.3. Finally, grammatical-semantic aspects of reciprocity that relate to *друг друга* are explored in Section 6.4

6.1 Correlation with number of syllables

Longer prepositions have been claimed to occur more commonly as proclitics. In the Araneum corpus, some disyllabic prepositions such as *между* ‘between’, *перед* ‘in front of’ and *через* ‘through’ frequently occur as proclitics, seemingly confirming Viellard's (2012) claims.

The data in Table 3 compares the proportion of proclisis in prepositions grouped by number of syllables. *Между* ‘between’ is excluded in order not to skew the results, since it behaves very differently. The table yields a chi-square value of $\chi^2 = 411.48$, $p = <0.0001$, pointing towards a statistically significant effect of number of syllables. However, in this case it is necessary to determine the strength of the association, due to the very large sample size. Cramer's V measure is $V=0.0449$, indicating a very small or non-existent effect size (Cohen, 1977:224-225). Accordingly, the relationship between preposition length and positioning cannot be proven statistically with the data at hand. For now, it can be noted that some disyllabic primary prepositions frequently occur as proclitics, as do most polysyllabic secondary prepositions. Ease of pronunciation may have an effect on positioning in that longer prepositions that bear their own stress are less likely to be used as endoclitics.¹¹

	Endocclisis	Proclisis	Total	% proclisis
Asyllabic	38712	563	39275	1%
Monosyllabic	38213	129	38342	0%
Disyllabic	565	35	600	6%

Table 3: Comparison of asyllabic, monosyllabic and disyllabic prepositions in the Araneum Russicum Russicum Maius corpus

¹¹ A reviewer points out that rising sonority may also be a factor in ease of pronunciation. See Katz (2006) for a discussion on Russian consonant cluster restraints.

6.2 *Syntactic and paradigmatic analogy*

Analogy in language is a process involving similarity (Campbell, 2013: 91). A generalization is extracted from one pattern and extended to another, often represented as “A is to B as C is to D” (Blevins and Blevins, 2009: 2-3). In other words, a pattern present in one part of language is applied to another part of language. In syntactic analogy some pattern is extended to another segment while in paradigmatic analogy a pattern is generalized to another construction.

Since the overwhelmingly dominant pattern in Russian is preposition + NP, it would not be surprising to see this pattern extended to prepositional phrases with *друг друга*, especially in the immediate vicinity of a proclitic prepositional phrase. In (7) *в друг друга* ‘in each other’ is immediately preceded by the prepositional phrase *в природе* ‘in nature’. Accordingly, there are two prepositional phrases with the same preposition (and case governing) following each other. It seems likely that the first prepositional phrase then reinforces the pattern preposition + NP, which is extended to the second prepositional phrase. Two other examples are shown in (8-9).

- (7) Умейте видеть в природе и в друг друге самое светлое и красивое.
‘Learn to see the most light and beautiful in nature and in each other.’
(Araneum)
- (8) В 2013 г., как Вам известно, исполнится 50 лет как мы расстались с училищем и с друг другом.
‘In 2013, as you know, it will be 50 years since we said goodbye to school and to each other.’
(Araneum)
- (9) После службы все молящиеся подходят к священнику который держит в руках крест, целуют крест и христосоются [sic] с ним, а потом и с друг другом.
‘After the service all people who are praying will approach the priest, who will hold a cross in his hands, and kiss the cross and exchange three Easter kisses with him, and then with each other.’
(Araneum)

There are also examples where the preposition governs two noun phrases, as in (10-11). If the preposition would be placed endoclitically with *друг друга* in this case, it would have to be repeated before the second noun phrase. Proclitical placement of the preposition is therefore the more effective strategy, to avoid repetition.

- (10) От вас же ждём уважения к друг другу и сайту, на котором общаетесь вы и другие читатели.
‘From you we expect respect towards each other and the site, where you and other readers communicate.’
(Araneum)
- (11) Сотрудникам придётся идти на контакт с тренером и друг другом, чтобы выполнить сложные задания.
‘Employees will have to connect with the trainer and with each other in order to solve difficult tasks.’
(Araneum)

To test this factor quantitatively, a sample consisting of 200 random occurrences of *с друг другом* and *друг с другом* respectively and 100 random occurrences of *к друг другу* and

друг к другу from the Araneum corpus was used. Sample size was dependent on available data. The sample was manually examined for contexts giving rise to syntactic analogy. Such contexts were defined as containing a prepositional phrase with the same preposition (in the same syntactic function) or cases where one preposition governs several noun phrases. If syntactic analogy predisposes to proclisis, we should see a higher frequency of such contexts in the sample group with proclisis.

Table 4 shows the results. In the data set with proclitic *к*, 18 cases of possible syntactic analogy were found, compared to 6 in the data set with endoclititic *к*. The difference is significant at $\chi^2 = 5.36$, $p = 0.0206$ and the effect size is small but reportable at a Cramer's V statistic of $V=0.1263$.

	Endoclititic	Proclitic
к	6/200	18/200
с	9/100	8/100

Table 3: Frequency of syntactic contexts with analogy

No such effect was found for *с*. It appears, at least for *к*, syntactic analogy predisposes to proclitic placement of the preposition, although this factor cannot explain all cases of proclitic prepositions with *друг друга*.

Paradigmatic analogy with secondary prepositions may also play a role in the positioning of the preposition. Interpositioning, or endocclisis, of primary (non-derived) prepositions with *друг друга* is the prescriptive norm, while secondary (derived) prepositions show some variation in placement, including fronted positions. This distinction is better described as a continuum than as a dichotomy. Diachronically, certain words from other word classes, mainly adverbs, grammaticalize into prepositions. This is a gradual process of bleaching of the original meaning and function. Some secondary prepositions, such as *близ* 'close', *возле* 'near', *после* 'after', *против* 'against' are integrated as prepositions in the language and behave as primary prepositions (Es'kova, 1989: 217), including triggering an epenthetic *н*: *возле него* 'near him', *после них* 'after them'. On the other end of the spectrum there are prepositions that are less integrated in the Russian prepositional system and are not used with the epenthetic *н*, such as *благодаря* 'thanks to, due to' (from the gerund *благодаря* 'thanking') and *навстречу* (from the adverb *навстречу*). *Благодаря* occurs exclusively fronted in the corpus and *навстречу* occurs interpositioned in 5 out of 592 occurrences (1%). Finally, in the middle of this spectrum there are secondary prepositions such as *вокруг* 'around', which function as something between secondary and primary preposition. *Вокруг* occurs as an interpositioned almost as often as it occurs as a proclitic with *друг друга* (23 fronted and 17 interpositioned examples in the corpus). Thus, Gajnutdinova (2012: 154-155) sees the positioning of the preposition as a litmus test for how well a secondary preposition has been integrated as a preposition. The overall tendency of the language is that secondary prepositions gradually grammaticalize and, by analogy with primary prepositions, are sometimes placed between the two elements of *друг друга*. For frequency data on secondary prepositions, see Xolodilova (2013: 53).

Nevertheless, the analogical process may sometimes go the other way, i.e. primary prepositions being fronted by analogy of secondary prepositions. Putting diachrony aside, in the synchronic situation there is a great variety in the placement of prepositions with *друг друга*. Judging by the fact that some secondary prepositions have varied positions, and by the many discussions online on exactly what placement is correct with each different preposition, it seems likely that the rule of obligatory interposition of primary prepositions are by no means ingrained in all speakers, nor is the distinction between primary and secondary prepositions. It is therefore possible that the pattern preposition + *друг друга* is enforced by (some) secondary prepositions and then extended to primary prepositions.

6.3 *Prepositional case constructions*

In some cases, it can be suggested that proclitic prepositions with *друг друга* occur as a result of an unwillingness to split up highly entrenched constructions. A construction is here defined as a systematic pairing of form and meaning in the sense of Croft (2001: 18-19), and entrenchment is used to refer to a linguistic structure becoming stored as a single unit with frequent use (Langacker, 1987: 59-60). Constructions can be more or less entrenched, with a high type frequency being associated with a high degree of entrenchment (Croft and Cruse, 2004: 309)

For example, some nouns frequently occur with the preposition *к* followed by a pronoun in the dative. Some examples are *уважение* ‘respect’, *доверие* ‘trust’, *любовь* ‘love’, *ненависть* ‘hate’, *интерес* ‘interest’, *внимание* ‘attention’, and *нежность* ‘fondness, tenderness’. A schematic view of the construction is found in (12).

- (12) FORM: NP *к* PRON-DAT ↔ MEANING: NP towards PRON-DAT
доверие к себе ‘confidence in oneself’, *любовь к ней* ‘love for her’, *уважение к ним* ‘respect for him’

In corpus linguistics, such constructions can be described as noun + preposition + pronoun collocations. The frequency of the combination is greater than would be expected by chance alone. The high type frequency of the construction NP *к* Pron.-DAT means that it also has a high degree of entrenchment (Croft and Cruse, 2004: 292–295). Unwillingness to split up an entrenched construction sometimes leads to the preposition staying attached to the noun, even when the Pron-DAT slot is filled with the dative reciprocal pronoun *друг другу*. *Друг друга* is well established as a pronoun in Russian (Janko-Trinickaja, 1975) and it appears in contexts where other pronouns typically show up. Table 5 shows the proportion of proclitical *к* with a few nouns occurring immediately before *друг друга* from the Araneum corpus. The proportional frequency of proclisis in these constructions is markedly higher than the corpus-wide proportional frequency of proclisis of *к* with *друг друга*, which is 2,6%.

	Endoclititic	Proclitic	%Proclitic
<i>ненависть</i> ‘hate’	13	3	18.8%
<i>нежность</i> ‘fondness, tenderness’	10	2	16.7%
<i>внимание</i> ‘attention’	27	3	10.0%
<i>интерес</i> ‘interest’	64	4	5.9%
<i>уважение</i> ‘respect’	113	7	5.8%
<i>доверие</i> ‘trust’	54	3	5.3%
<i>любовь</i> ‘love’	81	4	4.7%
<i>отношение</i> ‘relation, attitude’	166	7	4.0%

Table 5: Proportion of proclisis for some prepositional case constructions

Thus, it seems some constructions promote proclisis, even though this effect is not dramatic. A similar suggestion is made by Gajnutdinova (2012), who notes that fronted prepositions mainly occur together with a noun or a verb that frequently occurs with a specific preposition. The idea is that the noun or verb “pulls” the preposition along (Gajnutdinova, 2011: 147).

The expression *по отношению к* ‘in regards to’ consists of the expression *по отношению* ‘regarding’ and the preposition *к* and is often analyzed as a compound preposition. There is some variation in how *по отношению к* behaves in combination with *друг друга*. The forms found in the corpus are presented in Table 6. In the majority of cases, *к* is placed as an endoclititic between the two elements of *друг друга*. Sometimes, the preposition *к* “sticks” to the preceding *по отношению* and fails to be interplaced with *друг друга*, i.e. the expression behaves as a compound preposition. In other cases the whole construction *по отношению к* is placed between the two elements of *друг друга*.

	Number of occurrences	% Percent of total occurrences
по отношению друг к другу	707	95.5%
друг по отношению к другу	20	2.7%
по отношению к друг другу	21	2.8%

Table 6: Frequency of different constructions with *по отношению к*

Vsevolodova (2010) describes all three variants in Table 6 as possible, and notes that the behavior of compound prepositions should be examined further.

6.4 Grammatical semantics

Друг друга is typically described as having reciprocal meaning. A prototypical reciprocal situation is when two or more participants of an event perform identical semantic roles (e.g., agent and patient) and these roles can be reversed without any change in meaning (Nedjalkov, 2007b: 6–7). The two elements of *друг друга* can hence be seen as iconic, representing the two participants. However, in some contexts with multiple participants, the line between reciprocal (A does to B what B does to A) and reflexive meaning (A acts upon A and B acts upon B) is blurred. This is likely because the semantic domains of reciprocity and reflexivity are very close, and both involve participants playing two distinct roles in a situation (Maslova and Nedjalkov, 2013). In other words, one and the same situation can be construed both as reflexive or as reciprocal, depending on what aspects of the situation are emphasized. Maslova (2008) discusses “multiple-participant

reflexivity”, where there are several interpretations of a situation with a plural agent. The members of a group can either be construed as individualized entities where each and every member acts on themselves, or they can be construed as a group acting on itself. The second meaning is close to reciprocal meaning, since it can also include reciprocal sub-events; one member of the group acting on another.

The similarity of reciprocity and reflexivity is also reflected in the fact that reciprocal and reflexive meanings are encoded with the same marker in many languages, and the grammaticalization path from reflexive to reciprocal is well attested cross-linguistically (see e.g. Maslova, 2008; Heine and Miyashita, 2008). In Russian, the postfix *-ся* expresses both reflexive and reciprocal meaning (e.g. *мыть-ся* ‘to wash (one self)’ and *обнимать-ся* ‘to hug (each other)’).

Друг друга, typically thought of as a reciprocal marker, can also be reflexive in the sense that it refers back to the group as a whole rather than specifies relationships within the group. If the two elements of *друг друга* are seen as iconic of the reciprocal semantics, the merging of the two elements should correspond to a lower degree of individuation of the referred entities.

Givon (1995: 51) formulated the Proximity Principle as:

- (13) Entities that are closer together functionally, conceptually, or cognitively will be placed closer together at the code level, i.e. temporally or spatially.

While it does not seem feasible to test this quantitatively, some examples with proclisis in the corpus do lend themselves to a more reflexive reading, even though such semantic differences are subtle and difficult to quantify. In (14), *друг друга* refers to a whole group of colleagues, contrasted with their business partners. The exact relations within the group are not important and the pronoun refers back to the group as a whole rather than specifies relationships within the group. In the literature on reciprocity, such situations are called ‘weak’ reciprocity, or collective reflexivity. The proclitic prepositions seem to intensify this meaning by grouping the two elements of *друг друга* together. The immediate vicinity of another prepositional phrase also strengthens this reading.

- (14) Мы несём одинаковую ответственность за обещания по срокам и объёмам работы как перед друг другом, так и перед нашими партнёрами.
‘We carry the same responsibility to both each other and to our partners.’
(Araneum)

This can be contrasted with (15), where *друг друга* clearly specifies the relation between two distinct groups, girls and boys.

- (15) Парни и девушки, мы все стараемся отлично выглядеть друг перед другом, но вы должны понять, что рост не так уж и важен.
‘Boys and girls, we all try to look good in front of each other, but you have to understand that height is not really that important.’
(Araneum)

In conclusion, several factors appear to play a role in the predisposing to proclitic position of prepositions with *о́пыз о́пыза*.¹² None of these factors are explanatory on their own, nor are they always easy to quantify. It can be suggested that proclisis of the preposition is the result of an interplay of grammatical and semantic factors that find their common ground in that *о́пыз о́пыза* is interpreted as one unit.

7. Conclusion

In this paper, I have shown that primary prepositions occur in a proclitic position with the reciprocal pronoun *о́пыз о́пыза* more frequently than previously recognized. The construction is found in written language on the Internet and even in written academic prose. This points towards the construction being sufficiently established in spoken discourse that it has started spreading into the written language. Metalinguistic discussions and a high frequency of usage in academic prose show that the construction should not be dismissed as marginal or colloquial.

Further, I have shown that the construction is not a result of carelessness or of lack of language proficiency, but rather the result of an interplay of factors related to syntax, cognitive processing of language and possibly even semantics.

Additionally, evidence from other languages shows bipartite reciprocal pronouns tend to grammaticalize. Gradual merging of the two parts, as is evident in the placement of the preposition, is one step in such a grammaticalization process. Russian prepositions behave as clitics and can only attach endoclitically to ambivalent clitic hosts that combine features of words and syntactic phrases. As the pronoun *о́пыз о́пыза* grammaticalizes further, and becomes more word-like, endocclisis of prepositions is lost.

Language change is a gradual process that begins with variant forms co-existing in the language. While definite language change can only be ascertained in hindsight, today's largescale corpora give the opportunity to study real-time language variation and the continually evolving system of language use. The behavior of *о́пыз о́пыза* is subject to change in Modern Russian, reflecting universal processes of language change.

8. Abbreviations

ACC	Accusative
DAT	Dative
F	Feminine
IMPF	Imperfect
NOM	Nominative
PL	Plural
PRON	Pronoun
REC	Reciprocal
SG	Singular

¹² Another factor, not explored here, is ease of pronunciation.

9. References

- Arkadiev, Peter. M. (2016). "K vorposu ob éndoklitikax v rusском jazyke." In *Arxitektura klauzy v parametričeskix modeljax: sintaksis, informacionnaja struktura, porjadok slov*, edited by Ekaterina Lyutikova and Anton V. Zimmerling, 325–331. Moscow: Jazyki slavjanskoj kul'tury.
- Atraxovič, Kondrat (Kandrat) Krapiva. 1982. *Russko-beloruskij slovar'*. Minsk: Izdatel'stvo "Beloruskaja sovetskaja énciklopedija" imeni Petrusja Brovki.
- Bahmut, Josyp .A. (red.) (1980). *Rosijs'ko-ukraïns'kyj slovnyk: Russko-ukraïnskij slovar'*. (2. vyd., vypravlene). Kyïv: Holovna red. Ukraïns'koï radjans'koï encyklopedii.
- Benko, Vladimír. (2014). "Aranea: Yet another family of (comparable) web corpora." In *International Conference on Text, Speech, and Dialogue*, 247-256. Springer, Cham. https://doi.org/10.1007/978-3-319-10816-2_31
- Blevins, James. P. and Juliette Blevins. (2009). *Analogy in Grammar : Form and Acquisition*. Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199547548.001.0001>
- Buslaev, F. I. (1863). *Istoričeskaja grammatika russkogo jazyka, čast' 2*. Available at <http://books.e-heritage.ru/book/10075851> , 2 edition (retrieved in February 2021)..
- Campbell, Lyle. (2013). *Historical Linguistics*. Edinburgh: Edinburgh University Press.
- Cohen, Jacob. (1977). *Statistical Power Analysis for the Behavioral Sciences*. New York: Academic Press.
- Croft, William. (2001). *Radical construction grammar: Syntactic theory in typological perspective*. New York: Oxford University Press on Demand. <https://doi.org/10.1093/acprof:oso/9780198299554.001.0001>
- Croft, William. (2002). *Typology and universals*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511840579>
- Croft, William. and Alan D. Cruse. (2004). *Cognitive linguistics*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511803864>
- de Vaan, Michiel. (2017). *The Dawn of Dutch: Language contact in the Western Low Countries before 1200*. Amsterdam: John Benjamins Publishing Company. <https://doi.org/10.1075/nss.30>
- Es'kova, Natal'ja A. (2011 [1989]). "Formal'nye osobennosti nekotoryx predložnyx sočetanij s mestoimennymi slovami." In *Izbrannye raboty po rusistike. Fonologija. Morfonologija. Morfologija. Orfografija. Leksikografija*, edited by Natal'ja A. Es'kova, 2010–2019. Moscow: Jazyki slavjanskix kul'tur.
- Evans, Nicholas. (2008). "Reciprocal constructions: Towards a structural typology." In *Reciprocals and Reflexives: Cross-linguistic and Theoretical Explorations*, edited by Ekkehard König & Volker Gast, 33–103. Berlin: Mouton de Gruyter.
- Fasmer, M. (2004). *Étimologičeskij slovar' russkogo jazyka*. <https://lexicography.online/etymology/vasmer/> (retrieved in February 2021).
- Gajnutdinova, Aida, F. (2011). "Funkcional'nye osobennosti vzaimno-vozvratnogo mestoimenija 'drug druga'". *Filologija i kul'tura*, 25(3):158–162.
- Gajnutdinova, Aida, F. (2012). "Vozvratnye mestoimenija v sovremennom rusском jazyke (funkcional'nyj aspekt)." PhD thesis, Kazan University, Kazan.
- Givon, Talmy. (1995). "Isomorphism in the grammatical code: Cognitive and biological

- considerations." In *Iconicity in Language*, edited by Raffaele Simone, 47–76. Amsterdam/Philadelphia: John Benjamins Publishing, <https://doi.org/10.1075/cilt.110.07giv>
- Gouskova, Maria. (2019). "Phonological Words in the Syntax and in the Lexicon: A Study of Russian Prepositions." *Journal of Slavic Linguistics*, 27(2): 161-212. <https://doi.org/10.1353/jsl.2019.0009>
- Harris, Alice, C. (2010). "Explaining typologically unusual structures: the role of probability." In *Rethinking Universals: How Rarities Affect Linguistic Theory*, edited by Jan Wohlgemuth and Michael Cysouw, 91-103. Berlin: De Gruyter Mouton. <https://doi.org/10.1515/9783110220933.91>
- Haspelmath, Martin. and Andrea Sims. (2010). *Understanding morphology*. London: Hodder Education.
- Heine, Bernd, and Hiroyuki Miyashita. (2008). "The intersection between reflexives and reciprocals: A grammaticalization perspective." In *Reciprocals and Reflexives: Cross-linguistic and Theoretical Explorations*, edited by Ekkehard König & Volker Gast, 169–224. Berlin: Mouton de Gruyter.
- Janko-Trinickaja, Nadija, A. (1975). "O mestoimennoj prirode 'drug druga'". *Russkij jazyk v škole*, 1: 68–71.
- Katz, Jonah. (2006). "Russian consonant clusters." Unpublished ms., MIT.
- Kilgarriff, Adam, Vít Baisa, Jan Bušta, Miloš Jakubíček, Vojtěch Kovář, Jan Michelfeit, Pavel Rychlý, and Vít Suchomel. 2014. "The Sketch Engine: ten years on." *Lexicography*, 1(1): 7-36. <https://doi.org/10.1007/s40607-014-0009-9>
- Knjazev, Jurij. P. (2007). "Reciprocal constructions in Russian." In *Reciprocal Constructions*, edited by Vladimir P. Nedjalkov, Emma Š. Geniušienė, and Zlatka Guentchéva, 673–708. Amsterdam: John Benjamins Publishing Company. <https://doi.org/10.1075/tsl.71.22knj>
- Kulikov, Leonid. (2014). "Grammaticalization of reciprocal pronouns in Indo-Aryan: Evidence from Sanskrit and Indo-European for a diachronic typology of reciprocal constructions." *Journal of South Asian Languages and Linguistics*, 1(2): 117–156. <https://doi.org/10.1515/jsall-2014-0008>
- Langacker, Ronald. W. (1987). *Foundations of Cognitive Grammar. Vol. 1, Theoretical Prerequisites*. California: Stanford University Press.
- Martín-Martín, Alberto, Enrique Orduna-Malea, Mike Thelwall, and Emilio Delgado López-Cózar. (2018). "Google Scholar, Web of Science, and Scopus: A systematic comparison of citations in 252 subject categories." *Journal of Informetrics*, 12(4): 1160-1177. <https://doi.org/10.1016/j.joi.2018.09.002>
- Maslova, Elena. (2008). "Reflexive Encoding of Reciprocity: Cross-linguistic and Language-internal Variation", In *Reciprocals and Reflexives: Cross-linguistic and Theoretical Explorations*, edited by Ekkehard König & Volker Gast, 225–258. Berlin: Mouton de Gruyter. <https://doi.org/10.1515/9783110199147.225>
- Maslova, Elena. and Vladimir P. Nedjalkov. (2013). "Reciprocal constructions." In *The World Atlas of Language Structures Online*, edited by Matthew S. Dryer & Martin, Haspelmath. Leipzig: Max Planck Institute for Evolutionary Anthropology.

- Nedjalkov, Vladimir P. (2007a). "Encoding of the reciprocal meaning." In *Reciprocal Constructions*, edited by Vladimir P. Nedjalkov, Emma Š. Geniušie". né, and Zlatka Guentchéva, 147–207. Amsterdam: John Benjamins Publishing Company.
<https://doi.org/10.1075/tsl.71.08ned>
- Nedjalkov, Vladimir P. (2007b). "Overview of the research." In *Reciprocal Constructions*, edited by Vladimir P. Nedjalkov, Emma Š. Geniušienė, and Zlatka Guentchéva, 3–114. Amsterdam: John Benjamins Publishing Company.
<https://doi.org/10.1075/tsl.71.06ned>
- Penchev, Jordan. (2007). "Reciprocal and reflexive constructions in Bulgarian." In *Reciprocal Constructions*, edited by Vladimir P. Nedjalkov, Emma Š. Geniušienė, and Zlatka Guentchéva, 609–632. Amsterdam: John Benjamins Publishing Company.
<https://doi.org/10.1075/tsl.71.20pen>
- Plungjan, Vladimir A. (2003). *Obščaja morfologija: vvedenie v problematiku*. 2. edition. Moscow: URSS.
- SAOB (1893). *Ordbok över svenska språket*. Lund: Gleerupska universitetsbokhandeln.
- Smith, Peter W. (2013). On the Cross-linguistic Rarity of Endoclisis. In *Annual Meeting of the Berkeley Linguistics Society*, volume 39: 227–244.
<https://doi.org/10.3765/bls.v39i1.3883>
- Spencer, Andrew, and Ana R. Luís (2012). *Clitics: An Introduction*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781139033763>
- Viellard, Stéphane. (2012). "Les séquences duelles avec *drug drug[a]* et la question du désenclavement de la préposition." *Revue des études slaves*, 83 (2/3): 593–615.
<https://doi.org/10.3406/slave.2012.8214>
- Vsevolodova, Maja V. (2010). "Grammatičeskie aspekty russkix predložnyx edinic: tipologija, struktura, sintagmatika i sintaksičeskie modifikacii." *Voprosy jazykoznanija*, 4: 3–26.
- Wade, Terence. (2011). *A comprehensive Russian grammar*. 3 ed. Oxford: Wiley-Blackwell.
- Wiemer, Björn. (2007). "Reciprocal and reflexive constructions in Polish." In *Reciprocal Constructions*, edited by Vladimir P. Nedjalkov, Emma Š. Geniušienė, and Zlatka Guentchéva, 513–560. Amsterdam: John Benjamins Publishing Company.
<https://doi.org/10.1075/tsl.71.18wie>
- Xolodilova, Marija. A. (2013). "Pozicionnye svojstva mestoimenij v russkom jazyke." Master's thesis, Saint Petersburg University, Saint Petersburg.
- Zaliznjak, Andrey A. (1967). *Russkoe imennoe slovoizmenenie*. Moscow: Nauka.
- Zimmerling, Anton V. (2018). Tak im i nado: nužny li éndoklitiki dlja opisanija russkoj grammatiki? *Russkij jazyk v naučnom osveščeenii*, 2: 159–180.
<https://doi.org/10.31912/rjano-2018.2.9>
- Zwicky, Arnold M. and Geoffrey K. Pullum. (1983). "Cliticization vs. inflection: English n't." *Language*, 59 (3): 502–513. <https://doi.org/10.2307/413900>

author: Alice Bondarenko

affiliation: Stockholm University, Stockholm

email: alice.bondarenko@slav.su.se