Russian 'double reciprocals'

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1 Introduction

In my paper I analyze a special type of Russian reciprocal constructions which I call 'double reciprocals'. In these constructions, two reciprocal markers: the suffix -sja and the reciprocal pronoun drug druga in the instrumental case are used simultaneously. Contrary to standard constructions, which were described in detail, for instance, in Knjazev 2007, Knjazev 2007a, this construction has never been a subject of a separate linguistic research.

I will examine the contexts of use of this construction in order to show that its semantic and pragmatic properties are different from those of 'standard' reciprocal constructions. I will demonstrate that this difference cannot be accounted for by the standard notion of reciprocity. Moreover, a thorough analysis of the reciprocal marker *drug druga* is necessary to explain some relevant properties of the 'double reciprocal' construction.

In Section 2, I sketch the main relevant properties of Russian markers of reciprocity -sja and drug druga. Section 3 is concentrated on the contexts of use of the double reciprocal construction. Finally, in Section 4 I propose an explanation for specific semantic properties of the construction under analysis.

2 Russian reciprocal markers

According to Knjazev 2007, 2007a – the most detailed linguistic research of Russian reciprocals – Russian has the following markers of reciprocity:

- 1. the suffix -sja
- 2. the pronoun *drug druga*
- 3. the pronoun odin drugogo

4. the adverb *vzaimno*, the prefix *vzaimo*- and the adjective *vzaimnyj*

Here I do not consider the adverb *vzaimno* and the prefix *vzaimo*-which are best compatible with adjectives and nouns, not with verbs.

2.1 Suffix -sja

The suffix -sja is the only verbal morphological marker in Russian. However, this marker is mainly used in the reflexive or anticausative meaning: cf. razbit'-sja 'break (intransitive)' of razbit' 'break (transitive)' (anticausative) and brit'-sja 'shave (oneself, intransitive)' of brit' 'shave (transitive)'. The reciprocal use is restricted to a small group, including celovat' 'kiss', obnimat' 'hug', etc., that is, the group of 'inherent reciprocals' in terms of (Kemmer 1993):

All verbs modified by -sja are basically transitive and become intransitive after the derivation, irrespectively of their meaning (reflexive / reciprocal / anticausative).

2.2 Pronoun drug druga

The pronoun *drug druga* is the most productive of Russian reciprocal markers. In contrast to *-sja*, is not restricted to any lexical class: *drug druga* is compatible with all semantic and syntactic classes of predicates, including dynamic and stative verbs (2), adjectives (3) and adverbs (4):

- (3) Oni večno nedovol'n-y drug drug-om they_{NOM} always angry_{NOM.PL} rec rec_{INS} 'They are always angry with each other.'
- (4) Teatr- \emptyset i kafe by-l-i blizko drug ot drug-a. Theatre_{NOM} and caffee_{NOM} be_{PST.PL} close rec fom rec_{GEN} 'The theatre and the caffee were close to each other.'

The first part of *drug druga* is always in the form *drug*. In contrast, the case marking of the second part corresponds to the case of the object.

Both -sja and drug druga behave like canonical anaphors in terms of (Ross 1967): normally they are bounded inside the clause and are coreferent to the overb subject or PRO.

2.2 Types of reciprocity expressed with -sja and drug druga

Examples (1)-(4) represent the most prototypical type of reciprocal which means that a reciprocal relation occurs between any two of the participants:

'for any two participants if A kisses B than B kisses A'

For instance, if *Pete and Mary kiss*, this roughly means that 'Pete kisses Mary' and 'Mary kiss Pete'.

However, there exist other subtypes of the reciprocal meaning which are considered, among others, by Evans (2005) and Maslova (2000). They are called *chaotic reciprocal* and *chain reciprocal*. In Russian, these semantic subtypes can only be expressed with the pronoun *drug druga*.

The *chain reciprocal* denotes a situation which can be represented as 'A Ps B & B Ps C & C Ps D and so on'. For instance, in (5) each century replaces the previous one and is replaced by the following one:

(5) Vek-a smen'aj-ut drug drug-a. century_{PL} replace_{3SG,PRS} rec rec_{ACC} 'Centuries replace each other.' (i.e., 'Centuries go one after another').

In (5), we can by no means speak of a prototypically reciprocal situation: if the century A replaces the century B it means automatically that the century B does not replace the century A. The reciprocal pronoun can be used here to express the *chain reciprocal* meaning.

The *chaotic reciprocal* denotes that the elementary situation takes place several times, but the precise set of participants of each elementary situation is irrelevant. What is important is the fact that there the same situation is repeated for several times and the agents and the patients of each elementary situation are different:

(6) V metro vs-e tolkaj-ut-sja. in underground all PLNOM push_{3PLREC} 'In the underground all people push each other.' The sentence (6) do not say anything about who pushes whom; the main thing is that there are multiple situations of pushing which have different agents and different patients.

3 The double reciprocal

3.1 Formal properties of the construction

In most cases, the reciprocal construction includes either the suffix -sja and the pronoun drug druga. If a given verb, such as celovat' 'kiss' admits both variants there is a slight semantic difference: for instance, the morphological reciprocal celovat'-sja 'kiss (each other)' presupposes that the participants kiss each other simultaneously, whereas the construction celovat' drug druga 'kiss each other' allows for contexts of successive 'kissing' where A kisses B and afterwards B kisses A.

However, some examples represent a more complicated case: they include both the suffix -sja in the reciprocal reading and the pronoun drug druga:

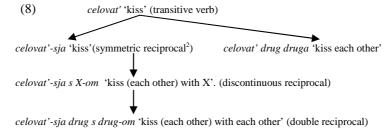
(7) Soveršenno ne znakomyje ljud-i na ulic-e absolutely not familiar people_{NOM} on street_{LOC} celova-l-i-s' drug s drug-om.

kiss PAST.PL.REC rec with rec_{INS}

'People which were unacquainted to each other kissed (with) each other in the streets.'

In (7), the verb *celovat'-sja* 'kiss (each other)' already includes the suffix *-sja*. Nevertheless, the same sentence also contains the pronoun *drug druga* marked with the instrumental case.¹

First of all, let us discuss the derivation that leads to the construction like (7) (see (8)).



¹ The explanation that in (7) the suffix -sja does not have the reciprocal meaning is incorrect, because the verb *celovat*' 'kiss' takes this suffix in the reciprocal use only.

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² The terms are borrowed from Nedjalkov 2007.

First, the transitive verb *celovat*' 'kiss' is reciprocalized in one of the two possible ways. Then, a discontinuous construction can be formed with the same reciprocal verb. Finally, a new reciprocal is formed on the basis of this discontinuous construction.³ Behrens (2007) shows that many European languages, e.g. German, do not have double reciprocals of this type. Outside Europe, e.g. in Adyghe (West Caucasian) or Turkic languages double reciprocals are also organized in another way: roughly speaking, the two reciprocal markers are attached simultaneously, and not successively, as in Russian:

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Adyghe:
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(9) te zə-m zə-r te-zere-\lambdae_Wə. we one-ERG one-ABS 1PL-REC-see 'We see each other.'(Letuchiy 2007:
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In (9), the reciprocal prefix $z \rightarrow$ and the reciprocal pronoun are both attached 'simultaneously' to the transitive verb $\lambda e \kappa_w \rightarrow n$ 'see'. No morphological or syntactic criteria prove that the prefix or the pronoun is attached first.

Leaving aside the fact that the two reciprocal markers in the Russian construction under analysis can in principle be a simple pleonasm we want to analyse its contexts of use. It turns out that the double reciprocal, indeed, is used in special contexts which we divide into three subclasses:

- 1. syntactic
- 2. pragmatic
- 3. semantic

Each type of contexts will be addressed in the following subsection.

3.1 Syntactic contexts

Sometimes the double reciprocal construction is used to make some syntactic operations possible which are prohibited for the 'single' reciprocal construction. I speak primarily of object coordination (cf. (9)):

(10) Grupp-y katolik-ov i protestant-ov dra-l-i-s' group_{PL.NOM} catholic_{PL.GEN} and protestant_{PL.GEN} fight_{PAST.PL.REC} drug s drug-om i s policij-ej. rec with rec_{INS} and with police_{SG.INS} 'Groups of catholics and protestants fought with each other and with police.'

³ Dimitriadis (2005) argues that the discontinuous construction in the languages of the world is not derived from the symmetrical construction; here we do not address this question.

The reciprocal verb *drat'-sja* 'fight' with the reciprocal suffix cannot itself participate in the coordinate construction like (9). Russian coordination, as well as similar constructions in many other languages, require the coordinated fragments of the structure to be parallel: thus, if the second part of (9) contains a comitative *s*-phrase, the first part must contain the same phrase.

3.2 Pragmatic contexts

In the pragmatic type of contexts, double marking of reciprocity emphasizes the fact that the reciprocal situation occurs between participants which are not prototypical for this type of event.

(11) Devušk-i celova-l-i-s' drug s drug-om. girl_{PL.NOM} kiss_{PST-PL-REC} rec rec_{ACC} 'The girls kissed (with) each other.'

In (11), the addition of *drug s drug-om* designates that girls prototypically do not kiss with each other, but kiss boys. The longer reciprocal marker serves here as an intensifier, in accordance with the iconicity principle. According to Ljutikova 2002, this is also the case in Russian reflexive construction: though *sebja* 'oneself' is the most frequent reflexive marker, a heavy marker *sam sebja* lit. 'self oneself' can be used when the speaker wants to emphasize the non-prototypical co-reference of the arguments:

(12) Začem ty sam-omu seb-e vred-iš. why you_{NOM} self_{DAT} self_{DAT} injure_{PRS.3SG} 'Why do you injure yourself?!'

Of course, we do not discuss here the difference between the formal properties of 'double reciprocal' and 'heavy reflexive'.

3.3 Semantic contexts

Now we turn to the case which is the main focus of our paper. In the type of contexts which we call 'semantic' the double reciprocal is neither an intensifier, as in the pragmatic type, nor a purely syntactic marker, as in the syntactic type. It is this use which lets us regard the double reciprocal as a separate construction with its particular function and semantics, cf. (13) and (14):

(13) Jemu predstavi-l-o-s' kak zavtra vse gorožan-e.

He_{DAT} imagine_{PST-N-DEC} as tomorrow all_{NOM} townman_{NOM.PL}

self_{DAT} injure_{PRS,3SG}

'He imagined that tomorrow all townpeople will kiss (with) each other.'

We can easily prove that in (13) and (14) the context is neither syntactic nor pragmatic: first of all, the double reciprocal does not participate in a coordinate construction (there is not syntactic motivation for the use of *drug s drugom*). Second, the hugs among the group of townspeople are not contrasted to any other type of hug (for instance, between a man and a

To examine this special function in detail, we used the data of Google search.

woman) and are not considered to be pragmatically strange.

3.4 Data

The data of Google is rather illustrative. What was tested was the combinations of perfective and imperfective verbs with double reciprocals. Table 1 shows that the overall proportion of imperfective verbs in the double reciprocal construction is higher for almost all verbs except *videt'-sja'* see each other' than their proportion in *sja-*construction:

Verb	Double reciprocal		sja-reciprocal	
	HCB	СВ	НСВ	СВ
obnimat'-sja 'hug'	4370 (100 ⁴)	520 (43)	110000	174000
Celovat'-sja 'kiss'	1040 (130)	223 (28)	396000	156000
Objedin'at-sja 'unite'	433 (60)	369 (56)	111000	1130000
videt'-sja 'see each other'	3350 (205)	350 (35)	848000	57900
vstrečat'-sja 'meet'	16600 (546)	4610 (487)	2410000	3190000
drat'-sja 'fight'	6510 (400)	904 (82)	357000	538000

For instance, verbs *obnimat'-sja* 'hug', *vstrečat'-sja* 'meet', *drat'-sja* 'fight' and *objedin'at'-sja* 'unite' are generally more frequent in the per-

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⁴ I give the real number of different examples in parentheses.

fective variant, but with the double reciprocal the tendency is reverse. *celovat'-sja* 'kiss' is generally more frequent in the imperfective form but this tendency is much stronger for the double reciprocal construction.

Thus, we conclude that the construction under analysis is somehow related to the imperfective aspect. Three variants of analysis are theoretically possible:

- 'aspectual': the double reciprocal is related to the imperfective itself;
- 'plurality': the double reciprocal is related to plurality of events which is mostly denoted by imperfective forms;
- 'other component': the double reciprocal is related to another semantic parameter.

The aspectual hypothesis, being formally true, does not really explain the distribution of forms. In Russian, both perfective and imperfective aspect have a huge number of meanings, and we do not know a particular meaning ascribed to the double reciprocal construction.

The plurality hypothesis proves to be false, since not all contexts which denote plurality of events admit the double reciprocal. If a reciprocal event is repeated several times without a change of participants, for this situation a double reciprocal is unnatural:

The adverb *často* 'often' in (15) shows that the situation is repeated. However, addition of *drug s drugom* makes the sentence awkward (though grammatical). Thus, the plurality itself does not account for the distribution of double reciprocals.

I conclude that the acceptability of the double reciprocal construction is related to a semantic component, other than plurality of situations. I call it 'plurality of situations with change of participants'.

3.5 Plurality of situations with change of participants

The semantic component 'plurality of situations with change of participants' means that several reciprocal situations take place, and the set of participants of each situation is different from that of any other situation. Thus, (15) does not contain the participant change component: though several reciprocal situations take place, all of them have the same set of participants: Petia and Masha.

Note that the same component is irrelevant for simple reciprocals marked with *drug druga* or *-sja*: see, for instance, (1) and (4). *-sja* is used with verbs which often denote a situation or relation including two participants (e.g., 'kiss', 'hug'), whereas *drug druga*, as we have shown, is the main reciprocal marker for most Russian verbs, irrespectively of the number of participants. Moreover, as (4) shows, *drug druga* can denote a state including two participants where there is no sense to speak of plurality of situations.

Therefore, the meaning of participant change is an inherent property of the double reciprocal construction which does not follow from properties of any simple reciprocal marker. However, below we will show that this meaning component is certainly related to the semantics of *drug druga*.

3.6. Change of participants and semantics of drug druga

Above we have taken for granted that both -sja and $drug \ druga$ are genuine reciprocal markers – i.e., they denote that the situation P occurs twice (or many times) 'in different directions'.

However, this view does not explain the meaning of double reciprocals (change of participants). If *drug druga* marks reciprocity than its use in (13)-(14) is pleonastic: the verb form already denotes reciprocity. In this case we cannot explain the tie between double reciprocal and participant change. We consider that *drug druga* is a marker of *plurality of situations with participant change*. It creates a complex situation including several elementary events with different participants.

When *drug druga* marks reciprocity, as in (2)-(4), we deal with the simples subtype of participant change: *drug druga* creates two or more subevents which have different subjects and different objects. This can be expressed with the following formula:

(16)
$$\forall x \forall y (\exists p(x,y) \rightarrow \exists p(y,x) \& x \neq y)$$

The chain meaning (5) also requires that all subevents have different subjects and objects: 'A replaces B, B replaces C, C replaces D and so on':

(17)
$$\forall x(\exists p(x,y)\&\exists p(z,x) \& z \neq y \neq x)$$

The case of chaotic reciprocals is a bit more complicated: subjects or objects of *some* subevents can coincide; however, it is impossible that *all* subevents have the same subject or the same object. If a person pushes all people around him / her or, to the contrary, everyone pushes one person we cannot call this situation 'people push'.

(18)
$$\exists x (\exists p(x,y) \& \exists p(z,x) \& z \neq y \neq x)$$

The double reciprocal construction differs strongly from the simple reciprocal one: reciprocity is already marked with the suffix -sja. Thus, the marker drug s drugom has no access to participants of the non-reciprocal situation, such as 'hug' in (13). Drug s drugom modifies reciprocal situations, but denotes the same component of participant change. It creates a plural reciprocal situation, where the set of participants of each separate reciprocal situation is different from that of any other situation:

(19)
$$\forall pp (x \leftrightarrow y) \exists pp(x \leftrightarrow z) \& (z \neq y)$$

The adopted hypothesis makes the analysis of double reciprocals simpler and explains why the marker *drug druga* does not add here any reciprocity to the semantics of situation. But the same hypothesis is more plausible for analysis of chain and chaotic reciprocals than the traditional one. If *drug druga* is not a genuine reciprocal marker, but a marker of participant change, it is not surprising that it can denote situations which are rather different from the canonical reciprocal meaning.

The meaning of double reciprocals is a problem for the *strong meaning hypothesis* (SMH) proposed by Dalrymple et al. (1998). It says that for any reciprocal construction the strongest ('the most reciprocal') available interpretation is chose. The strongest of all reciprocal readings is the canonical reading where each participant is in the reciprocal relation with any other one. For instance, in (19) the canonical reading is chosen. In (20), the canonical reading is not available: if a girl A stands on a girl B, B cannot stand on A. This is why in (20), a weaker interpretation (chain reciprocal) is chosen:

- (20) The girls know each other = 'Every girl knows every other girl'.
- (21) The girls stand on each other \neq 'Every girl stands on every other girl'.

In fact, this hypothesis would yield the canonical interpretation for situations like 'hug' or 'kiss': they admit the strongest reciprocal meaning when each person hugs each other person. However, this is not the case: sentences (19) and (20) are chaotic, rather then canonical. We suppose that the canonical reciprocal reading with two participants is inaccessible for double reciprocal construction (the same as for *-sja* in (1) because of an independent 'no co-reference' condition:

(22) The marker -sja cannot be co-referent to the pronoun drug druga in the same sentence.

3.7 The verb vstrečat'-sja 'meet'

A special case is represented by the verb *vstrečat'-sja* 'meet'. It often occurs in the double reciprocal construction. Moreover, in contrast to verbs like *celovat'-sja* and *obnimat'-sja*, the double reciprocal with *vstre-čat'-sja* can denote a situation with only two participants.

Our data show that for this verb, the distribution of the 'simple' and the 'double' reciprocal is not accidental either. For instance, our informants regard (23a) as more grammatical than (23b), whereas (23c) is entirely ungrammatical:

- (23) a. Sultan-Ø Brunej-a i Dalaj-Lam-a Sultan NOM.SG Brunei GEN.SG and Dalai-Lama NOM.SG nikogda ne vstreča-l-i-s' drug s drug-om. never not meet PST-PL-REC rec with rec_{INS} 'The sultan of Brunei and the Dalai-Lama have never met (with) each other.'
 - b. On-i rassta-l-i-s' i nikogda bol'she ne century_{PL} replace_{3SG.PRS} rec rec_{ACC}
 vstreča-l-i-s' drug s drug-om.
 meet_{PST-PL-REC} rec with rec_{INS}
 'They parted and have never met (each other) afterwards.'
 - c. Zavtra Petj-a i Maš-a vstrečaj-ut-sja tomorrow Petia_{NOM.SG} and Masha_{NOM.SG} meet_{PRS.3PL-REC} (*drug s drug-om) na Kazansk-om vokzal-e. rec with rec_{INS} on Kazan_{INS.SG} railway.station_{LOC.SG} 'Tomorrow Petia and Masha meet (*each other) in the Kazan Railway station.'

Note that examples (23a-c) all denote a situation with two participants – thus, the number of subject referents is not crucial here. What is really important is the relationship between the participants. The more they are autonomous from each other, the more acceptable is a double reciprocal construction.

Thus, in (23a) the Sultan and the Dalai-Lama are not connected by any relationship. The situation which does not occur in reality is regarded as two independent subevents: Dalai-Lama's actions and Sultan's actions. In (23b) the participants are not entirely independent, but not fully dependent on each other either. Finally, in (23c) the subject referents are directly related to each other: their meeting is a result of mutual agreement, not of their independent actions. This makes *drug druga* absolutely impossible.

The opposition of (23a) and (23c) is reminiscent of English oppositions analyzed by Asudeh (2002):

(24) They think they are taller than each other

#'They have the same opinion: that each of them is taller than the other one.' (taller > each other)

'Each of them thinks he is taller than the other one.' (each other > taller)

In (24), the standard narrow scope reading of the reciprocal construction is prohibited for semantic reasons: it is impossible that each of the two people is taller than the other one. The reciprocal marker has a wide scope, above the predicate 'taller' – otherwise it would make the semantic relation 'be taller' reciprocal, which is impossible.

Let us suppose that the difference between (23a) which can be used with *drug s drugom* and (23c) where *drug s drugom* is impossible also results from scope differences. The two situations denoted by these examples correspond to two variants in (25)

- (25) a. 'Vasja and Masha meet (each other) at the railway station to-morrow': 'tomorrow' > 'each other'
- b. 'The Sultan of Brunei and the Dalai-Lama have never met (each other)': 'each other' > 'never'

In (25a) corresponding to (23c) the temporal adjunct has a wide scope above the reciprocal marker. The situation is inherently reciprocal: this means that it is first modified by the reciprocal meaning component, and all adjuncts modify the reciprocal situation.

In contrast, in (25b) the reciprocal marker is attached *after* the temporal adjunct never. The situation means literally 'The Sultan has never met Dalai-Lama, and the Dalai-Lama has never met the Sultan'. Thus, the reciprocal marker has a wide scope above other modifiers. The situation is not inherently reciprocal which makes the use of *drug s drugom* possible.

3.8 Additional evidence for the 'participant change' component

An additional piece of evidence for the 'participant change' component in the meaning of *drug s drugom* comes from constructions with the marker *meždu soboj* 'between oneself'. It is normally used with verbs already denoting reciprocal events which made Nedjalkov and Geniušienė (2007) call it 'adverbial modifier':

(26) Et-i stran-y vojuj-ut meždu soboj. this_{NOM.PL} country_{NOM.PL} carry.war_{PRS.3PL} between self._{INS} 'These countries are at war.'

There are constructions where both markers – $me\bar{z}du$ soboj and drug s drug-om – are used to contrast two alternative readings:

(27) Vladel'c-y klub-ov i xokkeist-y vstret-l-i-s'

soboj. self_{INS}

oneselves, not with each other' (= 'players met with players, and owners met with owners').

In (27), *meždu soboj* introduces an interpretation where the reciprocal relation occur inside the classes of players and owners. *Drug s drugom* designates the relation between the two classes.

This fact can be regarded as another manifestation of the participant change semantics. However, this time *drug s drugom* denotes not the change of participants of the reciprocal relation, but the change of the set which the participants belong to:

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(28) me\check{z}du\ soboj: \forall x \in X\ (\exists p'(x,y) \to y \in X)

drug\ s\ drug\ om: \forall x \in X\ (\exists p'(x,y) \to y \notin X\ \&\ y \in Y\ \&\ X \neq Y)

So far we cannot explain formally how this difference is related to
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So far we cannot explain formally how this difference is related to the other cases of participant change (see 3.6).

4 Conclusions

In our paper we analyzed a special reciprocal construction in Russian which we call 'double reciprocal' because it contains two reciprocal markers. We have shown that the use of two markers is not just a pleonasm – the construction is used in special syntactic, pragmatic and semantic conditions.

While the syntactic and pragmatic use is predictable from the syntactic properties of Russian reciprocal constructions, the semantic use is rather unexpected. It reveals a tie between the double reciprocal and a semantic component we called 'change of participants.' This fact is not predicted by the traditional hypothesis saying that *drug druga* is a genuine reciprocal marker: in examples like (13), this marker does not add a reciprocal component to the verb meaning.

We had to adopt another hypothesis, namely that *drug druga* marks a more general component: *plurality of situations with participant change*. This allowed us to account for the meaning of the double reciprocal construction, as well as for the chain and chaotic meanings of the simple reciprocal construction. Perhaps, a similar analysis can be proposed for chain and chaotic reciprocals in other languages.

On the other hand, the verb *vstrečat'sja* 'meet' demonstrates another distribution of simple and double reciprocals. We argue that the crucial factor here is the scope of the reciprocal component which is narrow in

the case of inherent reciprocals where the participants are related to each other but wide in the case when the participants are independent.

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