

Semantics of Russian reciprocal pronouns and Russian ‘double reciprocals’

ALEXANDER LETUCHIY

1 Introduction

In my paper I analyze a special type of Russian reciprocal construction which I call ‘double reciprocals’. In this construction, 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 the subject of 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 concentrates on the contexts of use of the double reciprocal construction. Finally, in Section 4 I propose an explanation for the specific semantic properties of the construction under analysis.

2 Russian reciprocal markers

According to Knjazev 2007, 2007a – the most detailed linguistic research on 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 most 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' as described by Kemmer (1993):

- (1) a. Petj-a i Maš-a celuj-ut-sja.
 Petia_{NOM.SG} and Masha_{NOM.SG} kiss_{3PL.REC}
 'Petja and Masha kiss (each other).'

All verbs modified by *-sja* are basically transitive and become intransitive after the derivation, irrespective 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*, it 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):

- (2) My davno ne vide-l-i drug drug-a.
 we_{NOM} long.ago not see_{PAST-PL} rec rec_{ACC}
 'We have not seen each other for a long time.'

- (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-Ø i kafe by-l-i blizko drug ot drug-a.
 Theatre_{NOM} and café_{NOM} be_{PST.PL} close rec fomrec_{GEN}
 'The theatre and the café 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 as canonical anaphors in terms of (Ross 1967): normally they are bound inside the clause and are co-referent to the overt subject or PRO.

2.2 Types of reciprocity expressed with *-sja* and *drug druga*

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

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

For instance, if *Pete and Mary kiss*, this roughly means that 'Pete kisses Mary' and 'Mary kisses 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 are mainly expressed with the pronoun *drug druga*, but sometimes also with the suffix *-sja*.

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')¹.

In (5), we can by no means speak of a prototypically reciprocal situation: if century A replaces century B it implies that century B does not replace

¹ In example (5), *drug druga* cannot be changed to *-sja*, but similar examples exist also with *-sja* (I am grateful to the anonymous reviewer for bringing my attention to this fact).

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 the same situation is repeated for several times and the agents and the patients of different elementary situations may be, and mostly are, different:

- (6) V metro vs-e tolkaĵ-ut-sja.
in underground all_{PL.NOM} push_{3PL.REC}
‘In the underground all people push each other.’

The sentence (6) which is also possible with *drug druga* does not say anything about who pushes whom; the main idea is that there are multiple situations of pushing which have different agents and different patients.

The distinction between chain and chaotic reciprocals is not a rigid opposition: many of examples illustrating chain reciprocity can be reinterpreted to denote chaotic reciprocity which is less restrictive semantically. For instance, (5) is interpreted as a chain reciprocal because of the nature of the time sequence; in fact, the chaotic interpretation could theoretically be possible for this sentence.

3 The double reciprocal

3.1 Formal properties of the construction

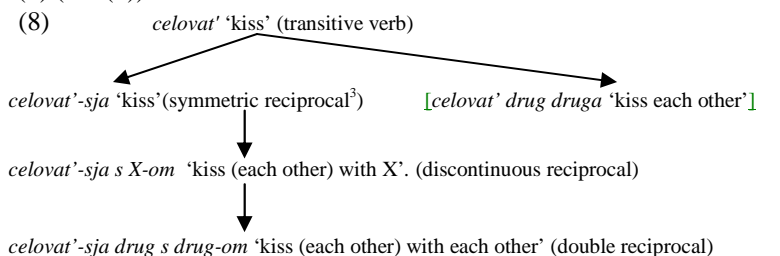
In most cases, the reciprocal construction includes either the suffix *-sja* or the pronoun *drug druga*. If a given verb, such as *celovat* ‘kiss’, admits both variants it seems that there is a slight semantic difference: for instance, the morphological reciprocal *celovat*’-sja ‘kiss (each other)’ 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, this is subject to future research.

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}
 'Completely unacquainted people were kissing 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.²

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



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.⁴ 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:

Adyghe:

- (9) te z□-m z□-r te-zere-λe□_w□.
 we one-ERG one-ABS 1PL-REC-see
 'We see each other.' (Letuchiy 2007).

² The hypothetical 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.

³ The terms are borrowed from Nedjalkov 2007.

⁴ 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.

In (9), the verb has a reciprocal prefix *z□re-*; the reciprocal pronoun is also present in the sentence. However, it is also possible to use only the prefix *zere-* or only the pronoun *z□m z□r*. Note that the pronoun does not change its form when it occurs together with a morphological marker of reciprocity, whereas in Russian, the pronoun is always in the instrumental form when used together with *-sja*. All this means is that no morphological or syntactic criteria can help us to choose one of the two variants:

- (i) first the verb takes the reciprocal prefix, then the pronoun is added;
- (ii) first the pronoun is used, then the verb takes the reciprocal prefix.

In contrast, in Russian the form of the pronoun *drug druga* lets us say that it is attached to the verb “later” than the suffix *-sja*.

Leaving aside the possibility 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 context will be addressed in the following subsection.

3.1 Syntactic contexts

Sometimes the only function of the double reciprocal construction seems to be 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.’

The reciprocal verb *drat’-sja* ‘fight’ with the reciprocal suffix cannot itself participate in coordinate constructions 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) Devuš*k*-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 Lyutikova 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'⁵.

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):

⁵ An alternative variant is that in (11) the pronoun *drug druga* is used to facilitate the reciprocal reading, as opposed to the antipassive one ('girls kissed (with) someone, it is irrelevant with who'). I thank the anonymous reviewer for this alternative explanation.

- (13) Jemu predstavi-l-o-s' kak zavtra vse gorožan-e.
 He_{DAT} imagine_{PST-N-DEC} as tomorrow all_{NOM} townsman-
 NOM.PL
 bud-ut celova-t'-sja drug s drug-om
 be_{PRS.3PL} kiss_{INF-REC} rec with rec_{INS}
 'He imagined that tomorrow all of the townspeople would kiss (with)
 each other.'
- (14) V pomeščeni-i klub-a gost-i.
 in_{DAT} room_{PST-N-DEC} club_{SG.GEN} guest_{PL.NOM}
 obnima-l-i-s' drug s drug-om
 hug_{PST-PL-REC} rec with rec_{INS}
 'In the room of the club the guests hugged (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 woman) and are not considered to be pragmatically strange.

To examine this special function in detail, we used the data of [a](#) Google search.

3.4 Data

The data from 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		<i>sja</i> -reciprocal	
	IMPERF	PERF	IMPERF	PERF
<i>obnimat'-sja</i> 'hug'	4370 (100 ⁶)	520 (43)	110000	174000
<i>Celovat'-sja</i> 'kiss'	1040 (130)	223 (28)	396000	156000
<i>Objedin'at-sja</i> 'unite'	433 (60)	369 (56)	111000	1130000
<i>videt'-sja</i> 'see each other'	3350 (205)	350 (35)	848000	57900
<i>vstrečat'-sja</i> 'meet'	16600 (546)	4610 (487)	2410000	3190000

⁶ I give the real number of examples which do not coincide in parentheses; the numbers before parentheses denote include many identical examples. All verbs were searched in 3 PL PST (e.g. *oni vstretilis' / oni vstrečalis'* 'they met')

<i>drat’-sja</i> ‘fight’	6510 (400)	904 (82)	357000	538000
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For instance, verbs *obnimat’-sja* ‘hug’, *vstrečat’-sja* ‘meet’, *drat’-sja* ‘fight’ and *objedin’at’-sja* ‘unite’ are generally more frequent in the perfective variant, but with the double reciprocal the tendency is reversed. *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 forms have a huge number of uses. We do not know a particular semantic component which is responsible for high frequency of imperfective forms.

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, a double reciprocal is unnatural:

- (15) Pet’-a i Maš-a často celuj-ut-sja.
 Petja_{SG.NOM} and Masha_{SG.NOM} often kiss_{3PL-REC}
 ‘Petja and Masha often kiss (each other).’

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.

The component which I propose explains the greater frequency of imperfective forms in the double reciprocal construction. Though both imperfective and perfective forms can in principle denote multiple situations, this is much more typical for imperfective forms (see Padučeva 1996 on the range of meanings of imperfective and perfective forms). For instance, all adverbs of repeated action, such as *často* ‘often’, *postojanno* ‘permanently’ require the imperfective form of the verb. Therefore, the idea of ‘plurality of situations with change of participants’ explains why double reciprocal constructions mainly contain imperfective forms.

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, irrespective 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, then 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 *drug druga* 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 prototypical reciprocity, as in (2)–(4), we deal with the simplest subtype of participant change: *drug druga* creates two or more subevents which have different subjects and different ob-

jects. This can be expressed with the following formula, basing on the formalizations proposed by Partee (2009):

$$(16) \lambda X \lambda E [(\forall y \leq X \exists z \leq X \exists e \leq E z \neq y \ \& \ \text{kiss}'(e, y, z)) \ \& \ (\forall y \leq X \forall z \leq X (\exists e \leq E \text{kiss}'(e, y, z) \rightarrow \exists e' \leq E \text{kiss}'(e', z, y)))]$$

In other words, we have a set of participants X and a set of events E . For any participant, there is a co-participant of the same elementary event such as 'kiss'. Moreover, for any elementary event where the participant y is the subject and z is the object there is an 'opposite event' where z is the subject and y is the object – this is why we call it a reciprocal situation. It is the last component of the formula which is responsible for the 'change of participants': for any elementary event there is an 'opposite event' with another subject and another object.

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':

$$(17) \lambda X \lambda E [\forall y \leq X \exists! z \leq X \exists e \leq E \text{kiss}'(e, y, z) \ \& \ \forall y \leq X \exists! v \leq X \exists e' \leq E \text{kiss}'(e', v, y) \ \& \ z \neq v \ \& \ \neg \exists v \leq X \exists e'' \leq E \text{kiss}'(e, v, v) \ \& \ \neg \exists d \leq X (\exists e \leq E \text{kiss}'(e, y, d) \ \& \ \exists e' \leq E \text{kiss}'(e', d, y))]$$

(17) means that there are no mutual kisses: if a participant kisses another participant, the opposite situation does not take place. The 'change of participants' component manifests itself here in that all situations have different 'objects' and different 'subjects' (for instance, if *Centuries replace each other* that each elementary situation includes a different 'subject' which replaces another century and a different 'object' which is replaced. Note that the formula (17) does not require the situation to be a prototypical chain: it can be, for instance, an endless chain. However, I do not want to make (17) more precise for lack of place.

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' – thus, there are at least two different subjects and two different objects (this means that this type of reciprocity also contains the idea of 'participant change'):

(18) $\lambda X \lambda E [\exists y \leq X \exists y' \leq X (\exists z \leq X \exists e \leq E \text{ kiss}' (e, y, z) \& \exists p \leq X \exists e' \leq E \text{ kiss}' (e', y', p) \& y \neq y' \& \exists a \leq X \exists a' \leq X (\exists b \leq X \exists e'' \leq E \text{ kiss}' (e'', b, a) \& \exists c \leq X \exists e''' \leq E \text{ kiss}' (e''', c, a') \& a \neq a'))]$

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) $\lambda X \lambda E^2 [\exists E \leq E^2 \exists F \leq E^2 ((\exists a \leq X) (\exists b \leq X) (\exists e \leq E \text{ kiss}' (e, a, b) \& \exists e' \leq E \text{ kiss}' (e', b, a))) \& ((\exists c \leq X) (\exists d \leq X) (\exists f \leq F \text{ kiss}' (f, c, d) \& \exists f' \leq F \text{ kiss}' (f', d, c))) \& a \neq c \vee b \neq c \vee a \neq d \vee b \neq d \& a \neq b \& c \neq d)]^7$

In other words, we have a set of participants X and a set E^2 which includes reciprocal situations, for instance, E and F . E and F , in turn, contain elementary non-reciprocal situations e, e', f and f' . The crucial condition for use of the double reciprocal construction is that there are at least two different reciprocal situations which include different participants: the first one includes a and b , the second one includes c and d (this is the component which we call ‘change of participants’).

The adopted hypothesis makes the analysis of double reciprocals simpler and explains why the marker *drug druga* can be used with *sja*-forms which already denote reciprocity. 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 chosen. 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 (20) the canonical reading is chosen. In (21), the canonical reading is not available: if a girl A stands on a girl

⁷ The way these formulas fit into the syntax of the double reciprocal construction is outside the scope of the present paper.

(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’.

(22) The marker *-sja* and the pronoun *drug druga* in the same sentence cannot have the same antecedent.

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 *vstrečat'-sja* can denote a situation with only two participants.

(23) a. Sultan-Ø Brunej-a i Dalaj-Lam-a
 Sultan_{NOM.SG} Brunej_{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 (will) 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 whether the participants are connected by any relations (for instance, they are friends or they know each other) existing before the moment of speech. 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: the Dalai-Lama's actions and the Sultan's actions. In (23b) the participants are not entirely independent (because the speaker says that they parted; therefore, they used to know each other in a way), 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.

In my view, 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 (will) meet (each other) at the railway station tomorrow’: ‘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. The problem which occurs with the predicate *vstrečat’-sja* is that it is inherently reciprocal (if the Dalai-Lama meets the Sultan this automatically means that the Sultan also meets the Dalai-Lama); no analogous non-reciprocal structure with the same verb can be proposed. Thus, I suppose that some additional semantic tests are necessary to prove the analysis in (25).

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 an ‘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 the two markers – *meždu soboj* and *drug s drug-om* – are used to contrast two alternative readings:

- (27) *Vladel’c-y klub-ov i xokkeist-y vstreči-l-i-s’*

owner _{NOM.PL} club _{GEN.PL} and hockey.player _{NOM.PL} meet _{PST.PL.REC} vo vtornik-Ø no uže ne drug s drug-om a među in Tuesday _{ACC} but already not rec with rec _{INS} and between	soboj. self _{INS}
‘The hockey players and the owners met on Tuesday, but between themselves, not with each other’ (= ‘players met with players, and owners met with owners’).	

In (27), *među soboj* introduces an interpretation where the reciprocal relation occurs 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:

- (28) *među soboj*: $\lambda X \lambda E (\forall x \in X (\exists e \in E(e, x, y) \rightarrow y \in X))$
drug s drugom: $\lambda X \lambda E (\forall x \in X (\exists e \in E(e, x, y) \rightarrow y \notin X \ \& \ y \in Y \ \& \ X \neq Y))$ ⁸

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 – double reciprocals can be treated compositionally, and each marker has its own semantic function.

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

⁸ Note that this difference manifests itself mainly in the context where both markers co-occur. In all other cases *drug druga* and *među soboj* are used in similar contexts.

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. It would be natural to look for a unified approach for *vstrečat'sja* and other verbs, but this question is outside the scope of the present paper.

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