On the evolution of Russian subject reference

Internal factors

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Personal pronouns in Russian have replaced verbal inflection forms as the main reduced referential devices marking subject. Some possible internal scenarios of this process are examined, namely the present perfect reconstruction in Old Russian and the semantic similarity between Old Russian present nominal clauses and present verbal ones. Further testing of both hypotheses is based on the detailed chronological survey on 50 Old Russian texts (about 2000 relevant verbal clauses) from the 11th till the 17th century with the help of statistical methods (Student's t-test and Lilliefors test). The diachronic study of Old Russian documents disproves the hypothesis of initial perfect tense destruction but admits the possibility of semantic factors as a trigger to the subject reference alternation.

Keywords: Old Russian; subject reference; personal pronouns; perfect tense; statistical methods

1. Introduction

Reference to entities is a central linguistic phenomenon. The manner in which different languages mark reference has been a matter of significant research from different viewpoints (e. g. Lyons 1977; Givon 1983; Padučeva 1985), yet there remain many peculiarities that have not received enough attention. The distribution of reduced referential devices marking subject[1] (namely personal pronouns and verbal inflection forms, depending on the language) are one such issue. For example, in contrast to most Indo-European languages, modern East Slavic languages use two methods of subject reference: a personal pronoun accompanied by verbal inflection and pro-drop with verbal inflection. This fact distinguishes East Slavic (in this study I will take Russian

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1. For purposes of this paper I use the term "subject" with a traditional meaning (see e.g. Keenan 1976 for more details).

as a typical example) from West and South Slavic languages,[2] which are considered to be canonical null-subject ones, using verbal inflection as the basic reduced referential device[3] (e. g. Lindseth 1998):

(1) Russian
(Я) *верн-у-сь*
(*Ja*) *vern-u-s'*
(I) return-FUT.1SG-REFL
'I will come back'

(2) Czech:
Vrátí-m   se
return-FUT.1SG REFL
'I will come back'

(3) Polish:
Wróc-ę
come.back-FUT.1SG
'I will come back soon'

(4) Croatian:
Vrati-t   ć-u   se
return-INF be-FUT.1SG REFL
'I will come back'

At the same time, the East Slavic referential system differs from the Standard Average European (SAE)[4] languages (exemplified particularly by Germanic and North Romance group). Unlike East Slavic languages, which allow both a pro-drop and a non pro-drop subject pattern with verbal inflection (see e.g. (1)), Germanic languages only employ the second pattern, even when this would be unambiguous (e. g. Dahl 1990; Haspelmath 2001):

(5) English:
I will come back

(6) German:
Ich   komm-e   zurück
I   come-PRS.1.SG back
'I will come back'

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2. Sorbian and Cassubian, which are exceptional and have undergone a pervasive influence of German (Stone 1993a, b; Lindseth 1998:84–90), are not taken into account in this study.

3. I follow Kibrik (2013) in applying the term "referential system" to discuss the system of reduced referential devices for subjects in a particular language.

4. The term belongs to Benjamin L. Whorf (see Whorf 1956:138).

(7) Swedish:
    Jag kommer tillbaka
    I   come.PRS back
    'I will come back'

The "conundrum" (Kibrik 2013) of the modern East Slavic referential system, which seems to be quite exotic in relation to other Indo-European languages, is also reflected in Old Russian data. Old Russian faithfully followed the referential pattern of verbal inflection alone (Borkovsky & Kuznecov 2006[1963]: 332; Zaliznjak 2004 [1995]: 170; Lindseth 1998: 67; Eckhoff & Meyer 2011) and this remains intact in most West and all South Slavic languages. However, the modern Russian referential system has significantly shifted towards the Germanic pattern although it still bears some "traces" of an old archaic Slavic system. The question of what could have caused such an evolution is the focus of this paper.

Different possible internal and external scenarios of reference evolution are conceivable. However, internal factors provide a more promising path for investigation. This claim is based on two principal facts. First, the most intensive contact with German languages (which hypothetically could have influenced East Slavic referential system as well), were established only by the XV century, when the archaic Old Slavic system was already partially replaced by a new pattern (see Eckhoff & Meyer 2011 inter alia). Second, the information on language contact between the Slavic and Germanic groups is not that rich. It is well known that Vikings explored the Russian territory in the 8th century and then played an important role in the foundation of the Russian state; up to the 10th century the Russian upper-class was most likely Scandinavian. Nevertheless, detailed linguistic studies of Scandinavian influence upon the eastern languages barely mention any traces of Germanic on Russian apart from some lexical borrowings (e. g. Koivulehto 2002). The apparently limited influence of Germanic could be a result of the nature of social interaction between Slavs and Scandinavians (the latter ones usually belonged to the elite, while the former were ordinary people). At present it appears unlikely that substantial bilingualism and resulting grammatical borrowings could have occurred in such conditions.

Therefore, we assume for purposes of this paper that internal language factors were responsible for the changes in the system of Old Russian subject reference. The structure of the paper is as follows. In Part 2 I will present the referential system of modern Russian more in detail and in Part 3 I will focus on two linguistic hypotheses dealing with possible internal scenarios of its evolution. In Part 4 I will discuss the results of my diachronic statistical study of 50 works of literature (approximately 2000 relevant clauses) that support certain points discussed in Part 3 and disprove some of them as well. In Part 5 I will draw the conclusion and show that the process of Russian subject reference reconstruction represents a complex phenomenon where different syntactic and semantic factors were consequently involved.

2.   "Tense split"

As was outlined above, the Russian referential system, which formerly belonged to the type "inflection alone", has undergone a massive expansion of subject pronouns over centuries and now is quite similar to the Germanic pattern with both personal pronouns and verbal inflection (see Dryer 2011 inter alia).

Table 1. Parallel extracts from "The tail of Igor campaign" (XII)

№	Source	Text
1.	Old Russian	*Яръ туре Всеволодъ!* | *Ø **Стоиши** на борони,* | *ø[5] прыщеши на вои стрњлами,* | *ø гремлеши о шеломы мечи харалужными.*
	Modern Russian (Tvorogov)	*Яр-Тур Всеволод!* | ***Стоишь ты*** *всех впереди,* | *осыпаешь ø воинов стрелами,* | *гремишь ø по шлемам мечами булатными.*
	English (Nabokov)	*Fierce Bull Vsevolod!* | ***You stand*** *your ground,* | *you spurt arrows at warriors,* | *you clang on helmets with swords of steel.*
	German (Müller)	*Wieder Stier Wsséwolod!* | ***Du stehst*** *auf der Wehr,* | *du spritzest auf die Krieger mit Pfeilen,* | *du donnerst gegen die Helme mit stählern Schwertern.*
2.	Old Russian	⟨…⟩ *Высоко **ø плаваеши** на дњло въ буести,* | *яко соколъ на вњтрехъ ширяяся,* | *хотя птицю въ буйствњ одолњти.*
	Modern Russian (Tvorogov)	⟨…⟩ *Высоко **летишь ты** на подвиг в отваге,* | *точно сокол, на ветрах паря,* | *стремясь птицу в дерзости одолеть.*
	English (Nabokov)	⟨…⟩ *On high **you soar** to deeds in your turbulence,* | *like the falcon that rides the winds* | *as he strives in* turbulence | *to overcome the bird.*|
	German (Müller)	⟨…⟩ *Hoch **schwebst du** zur Tat in Kühnheit,* | *wie ein Falke auf Winden sich breitet,* | *wenn er die Vögel mit Ungestüm schlagen will.*|

This evolution can be seen in "The tail of Igor campaign" (XII) in the original Old Russian variant and three translations into modern Russian, English and German (taken from parallel corpus on ⟨http://nevmenandr.net/slovo/zvenja.html⟩). Table 1 presents the parallel verbal clauses where relevant zero and personal pronoun forms are underlined.

The modern Russian referential system is more complicated. It employs different referential devices in the past and non-past tenses, a heterogeneity that Kibrik (2013)

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5.   This kind of zero appears to be purely syntactic (coordination) and therefore is not that relevant.

characterizes as a "tense split". Thus, in non-past forms modern Russian verbs follow the old Indo-European pattern, "according to which person-number inflection is fused with the grammatical meaning of tense" (Kibrik 2013). This can be seen in (1) where the inflection *-u-* in *vernus'* is employed for marking both person and tense. However, in modern Russian past tense forms we come across another type of verbal inflection, which does not indicate person but marks gender instead. Consider (8), the past counterpart of (1):

(8) Russian:
    (*Я*)   *верну-л-ø-ся*
    (*Ja*)   *vernu-l-ø-s'a*
    (I.NOM) return-PST-M.SG-REFL
    'I came back'

In this example we no are longer dealing with marking for person but a suffix that identifies gender and number (a *-ø-* morpheme in this instance). This kind of tense split has nothing in common with the Germanic pattern where person inflection does not depend on tense form. However, modern Russian is not similar to the Old Russian pattern either. Namely, in the ancient period person marking was reflected in the endings of copular verb "to be", which has gradually disappeared. As a result, the ancient past participles, which formed an indivisible complex of old perfect[6] tense together with copular verbs, were subsequently reanalyzed by native speakers as the new past verb forms. The evolution of old Russian copular perfect tense towards the modern past can be viewed via a comparison of (9) and (10) (an extract from "A journey beyond the three seas" by Afanasy Nikitin, XV):

(9)   Old Russian:
    Пошё-л-ø   **ес-ми**   **за**   **мор-е**   **индѣиск-ое**
    Poshë-l-ъ   *jes-mi*   *za*   *mor-e*   *indѣjsk-oje*
    go-PTCP-M.SG be.PRS-1SG beyond sea-N.LOC Indian-N.LOC

(10)   Modern translation   (1999):
    Пошёл   *я*   *за*   *мор-е*   *Индийск-ое*
    Poshë-l-ø   *ja*   *za*   *mor-e*   *Indijsk-oje*
    go-PST-M.SG I.NOM beyond sea-N.LOC Indian-N.LOC
    'I have gone beyond the Indian sea'

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6.   Strictly speaking ancient past participles together with a copular verb formed old Russian pluperfect forms as well. Owing to their rarity in old Russian (about 1% of all verb forms, see [Černyx 1952:228] inter alia), as well as their early decline, pluperfect forms are not taken into account in this study.

The gradual loss of copulas, according to Borkovsky & Kuznecov (2006 [1963]); Zaliznjak (2004 [1995]); and Kibrik (2011), seems to be one of the key processes in the evolution of Russian referential system. This phenomenon sharply distinguishes the history of East Slavic system from the pattern of other Slavic languages which have preserved archaic verbal copulas almost intact[7] and where no subject pronoun expansion was established.

In the next part of the paper I will present two hypothesis about the evolution of the Russian reference reconstruction. The loss of copulas plays a key role in both of them, but its role in the overall process in the development of the reference system differs.

3.   Hypotheses

According to a number of Russian Slavonic scholars (Borkovskij & Kuznecov 2006 [1963]: 324; Gorškova & Xaburgaev 1981: 310; Zaliznjak 2004 [1995]: 172) the first impulse which triggered a reconstruction of the referential system lies in subject pronouns themselves. From this point of view, subject pronouns primarily expanded the domain of their use, which gradually made verb copulas redundant. The most extensive study concerning this is Zaliznjak (2004 [1995]) where the author conducts an in-depth analysis of the Novgorod birchbark letters (XI–XV). Zaliznjak finds that subject pronouns first substituted for verb copulas in nominal clauses and then subsequently expanded their distribution into verbal clauses:

(11)   (XII)
     a   *не*   *сѣстр-а*   ꙗ[little yus]
     a   *ne*   *sъstr-a*   ꙗ[little yus]
     and not sister-NOM.SG I.NOM

     в-амо (instead of *а не сѣстра **есмь** вамо*)
     v-amo
     you-DAT
     '(Then stop thinking) I am your sister'

(12)   (Beginning XIII)
     ꙗ[little yus] *поруцен-е*   *отец-еве*
     ꙗ[little yus] *porucen-e*   *otec-eve*
     I.NOM   guarantor-NOM.SG father-DAT.SG

     тво-ему   *по* *Иванок-а*
     tvoj-emu   *po* *Ivanok-a*
     your-M.DAT.SG for Ivanko-ACC.SG
     'I am a guarantor for Ivanko to your father.'

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7.   See below about a particular case of zero copula in 3rd person.

(13)　(Beginning XIII)

    ᴁ[little yus]　*оу т-ебе*　　*слыш-оу*　　*це-то*
    ᴁ[little yus]　*u　t-ebe*　　*slysh-u*　　*ce-to*
    I.ɴᴏᴍ　　　　at　you-ɢᴇɴ　hear-ᴘʀѕ.1.ѕɢ　what-ɴᴏᴍ

    т-ы　　　*молов-ише*
    t–y　　　*molov-ishe*
    you-ɴᴏᴍ　say-ᴘʀѕ.2.ѕɢ
    'I hear what you are saying'

This conclusion is supported by Borkovskij and Kuznecov (2006 [1963]: 381), who take other texts into account which use a formal style of Russian. They show the same priority of nominal clauses in witnessing the use of pronouns for subject reference. According to all these data, the elimination of linking verbs in verbal clauses is considered to be a result of an analogical leveling with nominal clauses, where by the 13th century subject personal pronouns had completely replaced verb copulas.

However neither of these studies provides any rationale for this phenomenon. It should be noted that from a typological point of view the development path appears to be an "unlikely" and "unmotivated" process (Kibrik 2013) and is not found in other languages.

An alternative scenario is proposed in Jakobson (1971 [1935]) and Kibrik (2013), see also (Lindseth 1998: 65). This second hypothesis suggests that verb copula elimination is the starting point of a transformation to the subject-reference system. The process of copula loss, unlike subject pronoun expansion, is "cross-linguistically common" (Kibrik 2013) and "appears too often in different languages all over the world to be explained in terms of a simple local language contact" (Kopotev 2011: 14). In Russian, copula loss seems to have provoked subject pronoun expansion (Kibrik 2013).

As is well known, even in the ancient Old Russian manuscripts a copula in the 3rd person of perfect tense is often omitted (see Xaburgaev 1978: 44; Borkovsky & Kuznecov 2006 [1963]: 283 inter alia). The informal language style of that period, such as that used in the birchbark letters, "does not have any evidence of 3rd person copulas in Old Russian perfect at all" (Zaliznjak 2008: 257). This is also true in many pro-drop West and South Slavic languages, including Czech, Polish and Bulgarian (Linseth 1998: 66), where no further referential reconstruction has occurred.

However in the case of East Slavic languages (but not in any other Slavic ones) the absence of the 3rd person copula has provoked the global change in the whole perfect paradigm. Namely, "the next evolutionary step" (Kibrik 2013: 9) taken by Old Russian was the gradual loss of copulas in all perfect forms (Borkovskij & Kuznecov 2006 [1963]: 323; Gorškova & Xaburgaev 1981: 311), which reshaped the old perfect pattern into the modern simple past one (see part 2). Notably, in modern Russian the subject pronoun pattern is more often used in the past tense than in the present (see a corpus

study of Pavlova 2010, statistical analysis of Levshina 2012 inter alia). Taking into account the very ancient instances of zero copula in the 3rd person (perfect tense), as well as today's situation where subject pronouns are more common in the past tense developed from the former perfect, Kibrik (2013) assumes that "the formation of the new referential pattern started in the past tense clauses" (Kibrik 2013: 10).[8]

This point of view seems more plausible than the first one discussed, particularly owing to the typologically widespread phenomenon of copula loss. Nevertheless, in contrast to the previous hypothesis, here no diachronic study has ever been undertaken, and thus all the facts stated still need a further verification using the concrete data found in Old Russian texts. In this connection the instances from the Novgorod birchbark letters cited in (Zaliznjak 2004 [1995]: 172) appear quite remarkable. Consider some examples of verbal clauses, both past and present, where the subject pronoun has emerged in a non-contrastive position. For the sake of ease, the pronouns are underlined.

(14) (End XII)

a	*нынѣ*	*т-ы*	*рек-л-е*
a	*nyne*	*t–y*	*rek-l-e*
and	now	you-NOM	say-PST-M.SG

'And now you said'

(15) (End XII)

Ѧ[little yus]*зо*	*сол-ю*	4	*дворѧн-о*	*по*
Ѧ[little yus]*zo*	*sol'-u*	4	*dvorѧn-o*	*po*
I.NOM	send-PRS.1.SG	4	people-GEN.PL	DISTR

гривен-е	*сьбр-а*
grivn-e	*cьbr-a*
hryvnia-DAT.SG	silver-GEN.SG

'I send 4 people for a hryvnia[9] of silver'

(16) (Beginning XIII)

a	*про*	*се-и*	*человек-о:*	*мы*
a	*pro*	*se-i*	*chelovek-o*	*my*
and	about	this-GEN.M.SG	man-GEN.SG	we.NOM

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8. See also Jakobson (1971 [1935]), where the same theory is proposed : "La perte des formes du présent du verbe auxiliaire et du verbe-copule exigeait qu'on introduisît dans des propositions telles que *dal* (< *dal esi*), *mal* (<*mal est'*) un pronom personnel pour exprimer le sujet (*ty dal* – tu as donné, *on mal* – il est petit). Cette construction a été généralisée. D'après le type *ty dal* on a normalisé le type *ty daёš* (tu donnes)." (1971: 21).

9. Old Russian unit of monetary system.

> *его   не   зна-емо*
> *ego   ne   zna-emo*
> he.ACC   not know-PRS.1.PL
> 'As for this man: we do not know him'

According to these examples the argument of past tense priority in subject pronoun expansion encounters a particular difficulty because the data do not rule out the initial priority of subject pronouns in the present tense (see Examples (13) and (15) in particular). The second theory, although also hypothetical at the moment, could challenge the theory supported by (Jakobson 1971 [1935]) and (Lindseth 1998). In the case of its validity the primary character of present clauses in Russian reference evolution also could slightly call into question the global hypothesis of (Kibrik 2013) on copula-drop as a priority to pronoun expansion, despite all the plausibility of the latter theory.

As far as data from modern Russian is concerned, they do not give rise to doubts in today's past tense priority for subject pronouns. Nevertheless the scenario relating modern data directly to the hypothetical ones of Old Russian, with a disparity in more than 700 years and without taking into account any possible intermediate processes, seems quite problematic and not that convincing. For this reason detailed diachronic text research was undertaken to answer some of controversial questions raised and thus clarify the internal process of Russian reference reconstruction.

In the next section I will present the results of the statistical analysis made on my study of 50 Old Russian works (XI–XVII) which provides the necessary diachronic dimension to the question of the evolution of the referential system in Russian.

4.   Empirical and statistical results

This study represents a detailed chronological analysis of 1981 relevant pro-drop and non pro-drop clauses taken from a continuum of Old Russian texts from the 11th to the 17I[th] century. The data analyzed included texts of both formal and informal register:[10]

1.   Novgorod, single Pskov, Tver, Polotsk and Zvenigorod birchbark letters (XI–XV)
2.   Texts of international and domestic treaties signed by Russian government (XI–XVII)

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10.   The full list of Old Russian text sources used in the current study is presented in the appendix.

3. Private letters, decrees, single juridical acts written in Novgorod, Pskov, Polotsk, Kiev and Moscow region (XI–XVII)
4. Private correspondence between Russian tsar Ivan Grozny and his oprichnik Vasily Griaznoy (XVI)
5. The Russian part of Russian-Low German phrase books (*Ein Rusch Boeck*; *Tonnies Fenne's Low German Manual of Spoken Russian Pskov*) written by young Hanseatic traders during a year period of contacts with their colleagues in northwestern Russia (XVI–XVII)
6. Chronicles and historical records written in Novgorod, Pskov, Polotsk, Kiev and Moscow region (XI–XVII).

The first stage of the research involved a manual processing of Old Russian texts, where all relevant clauses were initially extracted and registered in a parallel database and then calculated by means of Microsoft Excel. At the same time all special semantic and syntactic contexts, such as contrastiveness, clause coordination and the presence of certain conjunctions where the usage of personal pronoun was obligatory (Zalianjak 2008: 242) were filtered out. All texts analyzed in the current study were classified into four periods of time:

1. Before XIII
2. XIII – 1st half of XIV
3. 2nd half of XIV – XV
4. XVI – 1st half of XVII

Texts created later than the 1st half of the XVII century were not taken into account in this study because, according to Zalianjak (2008: 255) and Eckhoff & Meyer (2011), the referential system of that period does not differ substantially from the modern one.

After manual processing of the texts, the empirical values were subjected to a statistical analysis (t-test). To confirm the past tense priority for the expansion of subject pronouns, the correspondence of language data to the formula in (17) was considered as sufficient:

(17) $(PRS - PAST) < 0$

In this formula *PRS* marks the difference between the proportion of non- pro-drop and pro-drop clauses among all present clauses; *PAST* marks the same difference among the past clauses.

The overwhelming majority of tokens found in Old Russian texts show (especially for the second, third and forth time periods) the priority of present clauses for subject pronoun expansion:
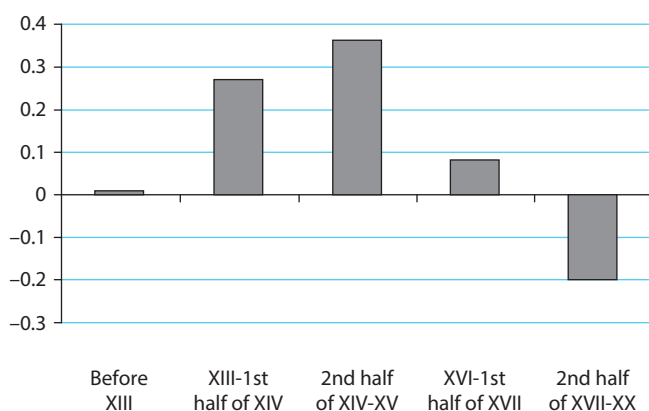
Diagram 1. Empirical results of the difference between PRS and PST in old and modern Russian over centuries (proportion of the total)

A second statistical analysis was carried out after manual calculations in order to be certain of the results. For this purpose the software package MATLAB initially tested the hypothesis of a normal distribution for the sample of each chronological period with the help of Lilliefors test. After a positive answer (each sample fit a normal distribution) a t-test was applied. By virtue of this test a confidence interval for the mean value of the whole population was calculated for each period with the significance level 0.0.5.

The statistical data demonstrate a remarkable priority of present clauses for the subject pronoun expansion – in contrast to the assumption discussed above – for the periods from the 13th to the 1st half of the 14th century and from the 2nd half of the 14th century to the 15th century. The results of the earlier period were not considered to be significant because of their small quantity (despite the empirical positive values corresponding to formula (14), the early Old Russian text data still cannot be marked off as disproving the general hypothesis). Only the results of the last period support the hypothesis with significant data (consider Table 2 laying out the main figures on each chronologic period).

Table 2. The results of the t-test applied to empirical texts data

Period	The result of hypothesis test	p-value	Confidential interval
1. Before XIII	accepted (not significant)	0.1045	[−0.0882, 0.5517]
2. XIII – 1st half of XIV	declined	4.7173e−04	[0.2983, 0.5137]
3. 2nd half of XIV – XV	declined	0.0179	[0.0847, 0.7047]
4. XVI – 1st half of XVII	accepted	0.2230	[−0.1639, 0.6139]

Graphically the reconstructed reference evolution in verbal closes is presented in diagram 2:
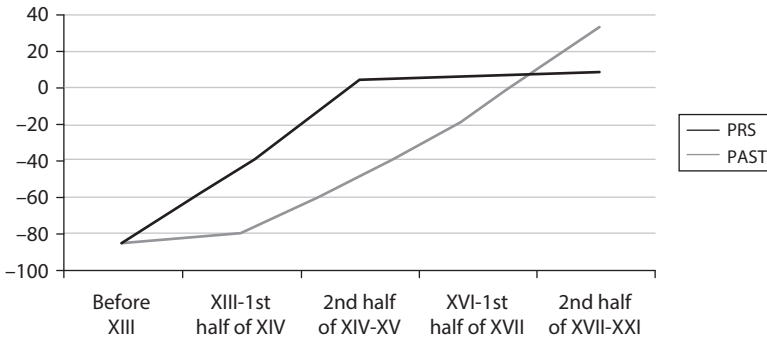
Diagram 2. The diachronic process of Russian referential evolution in verbal clauses

Therefore, we can assert that personal pronoun expansion started in the present tense, where it prevailed over the past up to the XVI century, and only then extended the domain of its use to the clauses with former perfect, where afterwards the quantity of non pro-drop clauses has "surpassed" the same one in present. The very fast tempo of the last stage of pronoun expansion and copular loss in past clauses, in relation to quite a slow character of the primary reference reconstruction in the present tense, is confirmed by the empirical evidence of Zaliznjak (2008: 255) and Echoff and Meyer (2011). Their data were based on the study of other pieces of literature, but the results achieved depict a very similar situation.

However, taking into consideration the initial priority of present clauses for subject pronoun expansion, we can no longer be that sure that copula loss occurred there before the expansion of subject pronouns. The past construction could have borrowed the pronoun pattern as well. In this connection such a "subscenario" does not seem inexplicable, as it was when discussed the referential reconstruction on the whole (see Part 2).

For this reason, the hypothesis of Lindseth (1998) and Kibrik (2013) on the initial copula disappearance as a trigger of all referential evolution loses one of its major arguments: the observed initial priority of subject pronouns with the verb in present does not support the theory of the initial character of copula at all. However, we cannot disprove it either. For this, we need to carry out a much more detailed study, tackling nominal clauses too.

The first-viewed pronoun expansion in present verbal forms also needs an explanation. What kind of factors could motivate such a process? The previously considered hypothesis assumed priority of the past tense on the analogy of nominal clauses,

where, according to Zaliznjak (2004 [1995]) the copula was lost. However, in the case of verbal present tense, we can also draw a parallel with nominal clauses, this time not a syntactic but a semantic one. Old Russian data analyzed in Borkovsky and Kuznecov (2006 [1963]) and Zaliznjak (2004 [1995]) show that copula loss is first seen in nominal clauses, but it is well-known that the disappearing verb copula in Old Russian nominal clauses belonged to the present tense (see e.g. (11)–(12)). The gradual subject pronoun expansion in nominal clauses could have triggered the corresponding referential reconstruction in verbal clauses in the present tense, implicitly regarded by native speakers as similar variants of one present construction.

5.   Conclusion

In this article I have observed the exotic character of modern East Slavic referential system. In contrast to most of other Slavic languages, Russian uses both a pattern of a personal pronoun with verbal inflection and a pattern of inflection alone (the latter is found in Old Russian and is still maintained in almost all West and Slavic languages). I have examined two well-known competing hypotheses based on internal changes to the language.

   The diachronic statistical study of 50 Old Russian literature works from XI to XVII has established that subject pronoun expansion in Russian was found first in the present tense and only in XVI century was extended to the past tense, though later the past tense use of the subject pronoun has surpassed its use in present clauses. Consequently, the well-known hypothesis of copular verb loss (Jakobson 1971 [1935]: 21; Lindseth 1998: 65; Kibrik 2013) as a trigger to the referential reconstruction on all language levels has lost one of its arguments. Nevertheless, taking into consideration that the phenomenon of copular verb loss is typologically common, in contrast to the pronoun expansion (Kopotev 2011: 14), we can state that it was the process of copula loss which initially caused a subject pronoun expansion in nominal clauses (Kibrik 2013). But then semantic factors have entered into the process, with the result that new nominal non- pro-drop clauses were assimilated with present verbal clauses. Consequently, at the next stage personal pronouns have spread to present verbal clauses and not to past verbal ones, despite the copula being syntactically present in both nominal clauses and past verbal ones.

   The facts established via this diachronic study have also demonstrated that the evolution of the Russian referential system represents a complicated multifactored phenomenon which cannot be explained in terms of copular loss and subject expansion alone. In this connection semantics should also be taken into account (particularly when trying to explain the causes of the pronoun pattern borrowing from nominal clauses to present verbal ones).

Abbreviations

1 = first person, 2 = second person, 3 = third person, ᴀᴄᴄ = accusative case, ᴅᴀᴛ = dative case, ᴅɪsᴛʀ = distributive, ꜰᴜᴛ = future tense, ɢᴇɴ = genitive case, ʟᴏᴄ = locative case, ᴍ = masculine gender, ɴ = neuter gender, ɴᴏᴍ = nominative case, ᴘʟ = plural, ᴘʀs = present tense, ᴘsᴛ = past tense, ʀᴇꜰʟ = reflexive, sɢ = singular.

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Appendix

The full list of analyzed Old Russian texts:

Informal style

"Ein Rusch Boeck…": ein Russisch-Deutsches anonymes Wörter- und Gesprächsbuch aus dem XVI. Jahrhundert. In Falowski, Adam. 1994. *Bausteine zur Slavischen Philologie und Kulturgeschichte*, Reihe B, Editionen, Neue Folge; Bd. 3(18). Köln: Böhlau.

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