В статье рассматриваются морфосинтаксические особенности русских конструкций с так называемыми малыми числительными (два/две, три и четыре) на фоне общей типологии (малых) числительных конструкций в языках мира. Наша задача – доказать, что с помощью диахронического анализа категории малого числа в истории русского языка, а также посредством сравнения этих словосочетаний с подобными структурами в других языках, можно найти более полное объяснение наличию данных конструкций в современном русском языке.

Ключевые слова: согласование, одушевленность, несогласование, генитив, малые числительные, число, паукальные конструкции, кванторы, русский язык.

I. Igartua, N. Madariaga

Russian lower numeral phrases in typological and diachronic perspective

This article discusses the morphosyntactic properties of Russian lower or paucal numerals (два/две «two», три «three», четыре «four») within a more general crosslinguistic view on (low) numeral constructions. We will show that the diachronic analysis of the processes resulting in the heterogeneous pattern triggered nowadays by these expressions and a comparison with other languages displaying similar morphosyntactic patterns can help us clarify more effectively the synchronic use of these constructions in Russian.

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Key words: agreement, animacy, disagreement, genitive case, lower numerals, number, paucal constructions, quantification, Russian.

1. Brief typological introduction to numeral constructions

The languages of the world make use of different morphological strategies with regard to numeral constructions or constructions including an overt numeral. According to Hurford [1994, 2003], for example, we find at least the following ways of forming a numeral construction crosslinguistically:

(1) a. Numeral + a noun in the singular (or a number-indifferent form)
   b. Numeral + a noun in the plural (or other non-singular value)
   c. Numeral + a classifier + a noun
   d. Numeral + a preposition + a noun
   e. Numeral + a noun in a certain grammatical case (most often, in dative, genitive, or partitive)

Many languages resort to more than one of these strategies, displaying what Corbett [1978, pp. 363–368] calls «split uses». In this case, we can observe in most cases a distinction between lower numerals (in this paper, we will call them «paucal» numerals or «paucals»), which usually behave in a more adjectival fashion and higher numerals, which are more noun-like. This contrast is clear in most Slavic languages, especially in their earlier stages (e.g. Old Church Slavonic and Old East Slavic / Old Russian).

Generally speaking, we can say that Intra-Slavic variation is a good representative of this variety of forms, as the Slavic group of languages makes use of virtually every strategy available crosslinguistically, represented in (1) above. As we see in (2), in the Slavic nominative/accusative environments, even if we limit ourselves to paucal or lower numerals, we can find patterns including nouns in the singular or plural, classifiers, and different grammatical cases:

(2) a. Languages with numerals associated with plural nouns: Czech, Slovak, Polish, Belarusian, and Ukrainian.
   b. Languages with singular, dual, and plural forms: Slovenian and Sorbian.
   c. Languages with numerals associated with genitive (singular and/or plural) nouns: Russian and Serbian/Croatian (at least in part).
   d. Languages with no declension but displaying an adnumerative form, at times analyzed as a classifier: Bulgarian and Macedonian.
It is a well-established fact that low number (dual, paucal) and low numerals in general often behave in a special way, and Russian is a good example. According to Corbett [2000], the dual number category is quite restricted and usually proceeds according to certain criteria, mostly related to individuation (i.e. the category is more prone to be realized in association with certain formal and semantic features of NP, such as person, animacy, and being a «countee» element, i.e. objects handled in small quantities and frequently counted, etc; cf. [Plank, 1996, p. 137]. The paucal category as a separate number category is even more restricted, representing in most cases an instance of «minor number», as for example in Avar, a Northeast Caucasian language in which only 89 words preserve paucal declension [Sulejmanov, 1985, pp. 115–117].

Another typological observation lies in the fact that lower numerals are more prominent than higher numerals, as the following properties evidence:

i) we find languages displaying only the numerals from 1 to 5, whereas higher numerals are just not used or are borrowed from surrounding languages (Awa Pit, Barasano, Gooniyandi, Hixkaryana, Kayardild, Mangarayi, Yakkha, and so on);

ii) other languages have underived forms only for the numerals «1» to «3–5» (sometimes also a word for «10»), the rest of numerals being created by the addition of low units (for example, in Imonda or Sandawe, in which «six» is just «5 + 1», «seven» is «5 + 2», etc.);

iii) there are languages in which only lower numerals have gender distinctions or declension, the higher ones being uninflected (Latin, Hopi, Taos, and so on);

iv) in some languages, low number and numerals just behave in a special way, displaying special morphology, agreement patterns, and the like (cf. Slavic languages, and the languages reviewed in Section 4 below).

A fact that has been noticed in the literature, as we will see a little later, is the special crosslinguistic incidence of animacy and individuation effects in lower numeral constructions. This is clear also in the case of Slavic paucal expressions: for example, in Bulgarian, Slovak, and Sorbian, there are special numeral forms for animate NPs associated with paucal numerals (2 through 5–6), as shown in (3). Note that the Bulgarian suffix -ma/-ima has been considered a kind of classifier [Cinque, Krapova, 2007, fn. 1]:

(3) Bulgarian

a. dvama / *dva učenici
   «two disciples» [Scatton, 1993, p. 209]

b. dva grada
   «two towns»
As for Russian paucal constructions, we observe a clear-cut differentiation between paucals (два, три, четыре) and higher numerals: first, they are the only ones showing animacy effects (вижу [два стола]. NOM/ACC «I see two tables» vs. вижу [двух студентов]. GEN/ACC «I see two students»), even in the case of regular paucals as compared to compound paucals (вижу [трёх студентов]. GEN/ACC «I see three students» vs. вижу [двадцати трёх студентов]. NOM/ACC «I see twenty-three students»); the modifiers (determiners, adjectives) combined with lower numerals very often show nominative plural morphology, unlike higher numerals, always associated with the genitive case (we will see below that this effect is commonly found with dual number crosslinguistically); finally, the morphology of the numeral itself, as well as that of the associated noun, is special, with grammatical gender being one of the formal features that determines different aspects of the pattern (parallels to this are also found crosslinguistically, for example, in Somali and Scottish Gaelic; cf. [Saeed, 1999, p. 71; Corbett, 2000, p. 212]).

Russian paucals have been analyzed in the literature from several points of view [cf. i.a. Corbett, 1978, 1993, 1996; Mel’čuk, 1980, 1985; Babby, 1987; Bailyn, Nevins, 2008; Pereltsvaig, 2010, 2013; Pesetsky, 2013], but in this paper we would like to take another look at the phenomenon from a somewhat unusual standpoint: on the one hand, by introducing some historical data and, on the other, by comparing the relevant patterns with other languages displaying similarities in this kind of construction.

2. The puzzle: Russian paucal constructions in subject function

The most irregular morphosyntactic pattern of Russian quantification is without doubt the one displayed by paucal constructions in subject (or inanimate object) function. Compare the different morphological patterns triggered by Russian numerals in (4):

(4) a. Paucal masculine / neuter subjects:

Lower numeral (2–4) – Adjective_{GEN.PL} – Noun_{GEN.SG}

Paucal feminine subjects:

Lower numeral (2–4) – Adjective_{NOM.PL/%GEN.PL} – Noun_{GEN.SG}

Higher numerals (of any gender) in subject function:

Numeral 5 or higher – Adjective_{GEN.PL} – Noun_{GEN.PL}

Oblique cases (of any gender and with any numeral):

Numeral_{OBL} – Adjective_{OBL} – Noun_{OBL}
These four constructions are illustrated in the examples in (5):1

(5) a. Žili u babusi dva vesëlyx gusja. (=4a)
lived.PL at grandma two happy.GEN.PL goose(M).GEN.SG
«Granny had two happy geese».

b. Dve dobrye / %dobryx babusi deržali two good.NOM.PL / good.GEN.PL granny(F).GEN.SG had.PL
gusej. (=4b)
geese
«Two good grannies had geese».

c. Žili u babusi desjat’ vesëlyx gusej. (=4c)
lived.PL at grandma ten [happy geese](M).GEN.PL
«Granny had ten happy geese».

Pesnjao dvux / desjati vesëlyx gusjax song about two.PREP / ten.PREP happy.PREP.PL geese(M).PREP.PL / babusjax. (=4d)
/ grannies(F).PREP.PL
«A song about two/ten happy geese/grannies».

Before going on with more peculiarities of the paucal constructions in Russian, let us state clearly an initial assumption: it has been widely shown in the literature of virtually every linguistic orientation that the apparent genitive singular form on the noun in examples like (5a-b) is not a real genitive form, but a special numerical form. The reader may be referred here to Isačenko [1962], Dingwall [1969], Corbett [1978], Mel’čuk [1985], Klimonov [1987], Andersen [1997], Isakadze [1998], Bailyn, Nevins [2008], and Pereltsvaig [2010, 2013].2 This form has received several names (numerative, adnumerative, dual, and so forth), but we will call it «paucal», as a cover term including dual number and the numeral «two», as well as the other two low numerals. This is in fact the term most often used with regard to Russian in recent works.

The previous explanations about this irregular pattern can be conventionally divided into two types: first, purely PF-accounts, such as Bailyn, Nevins [2008]. These authors propose a uniform syntax for all the elements included in a paucal construction and explain their heterogeneous

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1 The interlinear glosses in this paper are in accordance with the Leipzig Glossing Rules (https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf).

2 Not all authors agree with this assumption, though. The most representative opponent of this idea is Pesetsky [2013]. For a review including some criticism of this, see for example, Bailyn [2014].
morphological realization as a series of impoverishment processes tied to several case-insertion rules, which would be responsible for rendering the final morphological exponent on each element. However, the second and most frequent type of explanations are those accounting for this irregular pattern from a strict syntactic point of view [Franks, 1994; Isakadze, 1998; Pereltsvaig, 2006, 2010, 2013; Bošković, 2006].

Both kinds of accounts face several problems, namely the existence of syntactic effects (in the case of purely PF-like accounts) and, in the case of the syntactic accounts, the indeterminacy of the semantic component allegedly associated with the different syntactic structures, on the one hand, and the arbitrariness of certain morphological effects not covered by a syntactic explanation, on the other. Let us see some of these effects:

(a) The syntactic effects disregarded by a pure PF-account affect several areas of agreement phenomena, but here let us comment only on verbal agreement, which is the most salient one (cf. also [Worth’s, 1959] riddle on similar effects on postponed adjectival agreement): in principle, every Russian numeral can trigger plural or default agreement on the verb, as shown in (6), but lower numbers involve an additional effect (7): while masculine/neuter and feminine paucal expressions including a genitive plural adjective (7a-b) follow the alternating pattern in (6), feminine constructions with a nominative plural adjectival variant block default agreement, and must always agree with a plural verb (7c). This effect was noted by [Suprun, 1957, pp. 76–77; Corbett, 2006, pp. 196–197]:

(6) Pjat’ studentov/studentok prišlo/prišli segodnja na zanjatie.
five students(M).GEN.PL/(F) came.N.SG/PL today to lesson
«Five (male/female) students came to class today».

(7) a. Na stole ležali/ležalo dva krasnyx karandaša.
on table lied.PL/N.SG two red.GEN.PL pencils(M).PAUC
«There were two big pencils lying on the table».

(b) The purely syntactic accounts, on the contrary, face a different type of problem: there is no clear-cut semantic contrast between both syntactic variants related to different types of verbal agreement in many cases. Speakers can perceive, as Pereltsvaig [2006] notes, that the agreeing plural variant
in (8) biases the interpretation of the elements included in the paucal expression as individualized, i.e. elements with individual reference, an interpretation rendered, according to Pereltsvaig, by the presence of a DP-layer. This would be why the subject of an agreeing verb is able to bind the lower anaphora, while the subject of a default verb has allegedly no DP-layer and therefore cannot bind the anaphora (this last structure would render a group reading of the elements in the subject, according to Perelstvaig):

(8) Pjat’ studentov ??*posmotrelo/posmotreli na sebja five students(M),GEN.PL looked.N.SG/ PL at self
v zerkalo.
in mirror
«Five students (group vs. individuated) looked at themselves in the mirror».

But there is much more than this to these constructions, even if we restrict ourselves only to their semantic effects. As noted in Section 1, a crucial feature in paucal constructions crosslinguistically can be the presence or absence of a human/animate feature: in Russian, this effect is also observed. To give an example, an inanimate phrase such as the one in (9a), clearly not a DP, but a PP, and even more, deprived from an individual reference reading (because of its approximative sense), renders an ungrammatical sentence. But exactly the same construction when the subject is animate is perfectly fine when the verb stands in plural form (9b):

(9) a. Prišlo/??prišli ot trëx do pjati pisem.
came.N.SG/PL from three to five letters
«Some three to five letters arrived».
[Ljutikova, 2016, p. 208]

b. V komnatax mogut proživat’ ot dvux do trëx
in rooms be able.PL live from two to three
studentov.
students
«Some two to three students can live in these rooms».

In our own survey on paucal constructions in Russian, answered by 197 native speakers,¹ we also observe the impact on plural agreement triggered by human subjects (and to a slightly lesser extent, also other animate subjects of active verbs) in these paucal constructions.

¹ We thank all the people who agreed to answer the questionnaire and are deeply indebted to Xenia Semionova for her invaluable assistance with distributing it and helping with the answers received.
Another important factor is the position of the subject: postverbal subjects are more prone to trigger default verbal agreement than preverbal ones. This fact led some scholars to propose the so-called Positional Approach [Franks, 1994; Isakadze, 1998; Bošković, 2006]. In fact, it seems that such a positional account, combined with the observation about animacy made before, can override the alleged absence of a DP-layer in most cases, including (8) above; thus, postverbal animate subjects can trigger default on the verb, even in case they bind anaphoras and/or clearly display an individual reference reading, as in (10):

(10) a. Posmotrelo sebja na jutube pjad’ ženščin
looked.N.SG themselves on YouTube five women(F).GEN.PL
(po očeredi).
in row
«Five women in a row (no group reading) looked at themselves on YouTube».

b. PRO Staralos’ zalezt’ na Èverest v odinočku vsego
tried.N.SG climb to Everest in loneliness only
dve ženščiny.
two women(F).PAUC
«Only two women tried to climb Everest all alone».

In any case, the semantic effects triggered by the default verbal forms in paucal constructions are nothing comparable to other more salient semantic effects, in which Perelstvaig’s [2006] Small Nominals are certainly involved. For example, small NPs, which are completely non-referential (vybrat’ v prezidenty «chose as a president», komnata na pjad’ ćelovek «room for five people», siloj v tri medvedja «as strong as three bears»), or other parts of Russian quantification (partitives, cumulatives, genitive of negation, and so on), in which the contrast between the agreeing variant (11a) and the non-agreeing one (11b) lies in a very clear distinction in specificity of the corresponding NP subjects:

(11) a. [D]Voda potekla / ne potekla.
water(F).NOM.SG flowed.F.SG / not flowed.F.SG
«The water (specific) flowed / did not flow».  

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1 Besides these two, other factors also determine the preference for the plural variant: (i) the specificity of the subject, (ii) the individuation level of the elements in the counting (as noted by i.a. [Mel’čuk, 1985; Perelstvaig, 2006]; (iii) the use of a lower numeral; and (iv) the presence of an active / telic verb [Graudina et al., 1976; Kuz’minova, 2004].
b. \( \text{Part/Neg}_n \text{Vody} \) poteklo / ne teklo.
\( \text{water(f).GEN.SG} \) flowed.N.SG / not flowed.N.SG

«There flowed some water / no water (unspecific)».

So let us revisit this phenomenon in a new way, and see how the history of these constructions, as well as a comparison to other similar effects in other languages, can help to clarify it.

3. A brief look at the history of Russian paucals

Earlier stages of the Russian language, namely Old Russian, displayed a complete inflectional paradigm for dual number on nouns, adjectives, and verbal forms. See an example of an inanimate object in (12a), marked with dual number, and a dual subject related overtly to the numeral \( dva \) «two» in (12b):

(12) a. Rucě i kolëně opiraše
\( \text{hand(F).NOM-ACC.DU} \) and knee(\( N \)).NOM-ACC.DU leaned.3SG

(Paterikon of Sinai, 11thc., 130v)

«(He) leaned on (his) hands and knees».

b. Pristupista kъ nemu dъva slěpьca.
came.3DU to him two blind person(\( M \)).NOM-ACC.DU

(Gospel of Arxangel’sk, 1092, 33v)

«Two blind men came up to him».

The dual as a number category started to be lost in Russian from the late 12\(^{th}\) century on: in the case of dual number as in (12a), it was replaced by plural forms, but in number phrases including a numeral, the development was much more complicated. Žolobov [2002, 2003] reviews this development in detail:

(a) On the one hand, from the 14\(^{th}\) century on, nouns started to distinguish their case patterns according to gender: feminine expressions including \( dve \) took the nominative plural form that had been so far exclusively related to the low numerals \( tri \) «three» and \( četyre \) «four». On the contrary, masculine and neuter dual expressions underwent just the reverse process: the old dual form in \( -a \) was not only preserved in them, but also extended to the low numerals «three» and «four». However, the old nominative plural case related to both these low numerals was also preserved in masculine/neuter, giving rise to a situation of competing grammars in the 17\(^{th}\) century, illustrated in (13):

(13) a. na dva gody (Čelobitnaja P. Zolotova No. 40, 1642, 63)
for two years(\( M \)).NOM-ACC.PL

«for two years»
(b) On the other hand, adjectives related to both dual and the lower numerals «three» and «four» were marked with nominative plural (14), but in the 16th century an innovation was introduced in these expressions: some times postposed adjectives could be realized as genitive plural forms, as shown in (15):

(14) a. Masculine
dva dvora pustye (Gramota from Suzdal’, 1612)
two.M courtyard(M).OLD DUAL empty,NOM.PL
«two empty courtyards»
b. Feminine
dvě ry(b)ki zoločony (Gramota No. 99, 1521, Žolobov 2003: 179)
two.F fish(F).NOM.PL golden,NOM.PL
«two gilt fish»

(15) A indějskii 4 vozyri velikix and Indian.NOM.PL four viziers(M).NOM.PL big,GEN.PL
(Afanasii Nikitin’s Journey, 16th century copy, 15)
«Four important Indian viziers»

According to Žolobov [2003, p. 180], this genitive plural marking was introduced in paucal expressions from the corresponding phrases with higher numerals, most probably from compound lower numerals. This innovation gave rise to a second instance of competing grammars in the language between the 16th and 18th centuries, namely the alternation between nominative plural and genitive plural on adjectives in paucal expressions of all genders [Boguslawski, 1966], which nowadays has survived as such only in the case of feminine paucal expressions (the masculine and neuter pattern definitely adopted the genitive plural form more than a century ago).

4. Morphosyntactic hybrids and some crosslinguistic parallels

After having reviewed the history of the construction at issue, let us have a look at similar patterns of disagreement or heterogeneous concord patterns triggered by low number/numerals in other languages.

According to Haspelmath (2013), even if a language marks plurality overtly on regular NPs, the insertion of an overt numeral can give rise to further different patterns, so it can be the case that:
(i) no plurality marker is used with numerals (as in Lezgian);
(ii) the plurality marker is allowed optionally with numerals (like Itzaj);
(iii) the plurality marker is anyway required (in most languages).

Plurality, in these cases, is more often left unmarked when the NP is indefinite (as in Mangarayi) and, on the contrary, is most likely overtly marked on human NPs than inanimate NPs (as in e.g. Sandawe, in which the plural suffix -sò is used only with human entities, reminding us of some Slavic languages; cf. Section 1 above).

Graščenkov [2002] defines a further typological property for Haspelmath’s [2013] types (i) and (ii): if singular morphology in a numeral expression is allowed in a language, then related categories (adjectives, demonstratives, and verbs) display singular as the preferred form (as in Tsakhur, Ossetic, Finnish, Nivkh, Tatar, Buryat, and so forth), although plural is also available.

This all shows that the presence of a numeral gives rise crosslinguistically to various mismatches or ways of disagreement not only of the noun with respect to the numeral, but also between the noun and related verbs and modifiers.

The same effect is observed with regard to the presence of low number or low numerals in many languages. Let us see a pair of examples focusing on cases in which low number values are implied; in these, dual number triggers morphosyntactically «irregular» patterns or patterns of «disagreement» between the nouns and modifiers / verbs related to it:

(a) Our first language is Mangarayi (a non-Pama-Nyungan Australian language, analyzed by [Merlan, 1982]): here, the disagreement pattern displayed by modifiers / verbs with respect to agreeing subject and objects proceeds according to animacy distinctions, as shown in (16):

(16) Mangarayi
a. Ø-ɬ urʔ+ma-ʔ waɬi j ʃabaranwa jadba-ra-ʃan.
3SG/3SG-cut up-PST.PFV also two upperleg-DU-ACC
«He also cut up the two legs».

b. Daɬ i-na ʃaɬ a-bugbug wuran-jirag
F.NOM-DIS F.NOM-old person 3SG/3DU-eat-PST.PFV
malam-gara-ʃan.
man-DU-ACC
«That old woman ate the two men». [Merlan, 1982, p. 91]

In (16a), the verb does not agree in number (dual) with the dual inanimate object, while in (16b) the corresponding exponent in the verb in (16b) does agree in dual with the animate object (we disregard here other potential factors behind this difference, like the contrast between occasional and
natural pairs). This effect is reminiscent of Russian in that in Mangarayi, too, animate and active subjects tend to trigger plural verbal agreement, unlike inanimate subjects.

(b) A very interesting pattern with respect to the category of low number is observed in Hopi, a Northern Uto-Aztecan language, as analyzed by Whorf (1946), Corbett (2000), and Sadler (2011): here the disagreement pattern between a dual noun with respect to its modifiers and verbs results in an asymmetric relation. The morphology displayed on modifiers and verbs, both of them being instances of disagreement with respect to the dual nouns, is different depending on the element involved: in Hopi, only nouns have retained dual morphology, that is, neither verbs nor modifiers have dual forms so that, according to Sadler (2011), these elements are impoverished in diverse ways: «dual» verbs are singular, while «dual» pronouns are plural (17b). Interestingly, the combination of a plural pronoun with a singular verb renders a dual entity in Hopi (17a):

(17) a. Hopi
Puma wari \[Corbett, 2000, р. 160\]
DEM.PL run.PFV.SG
«They (two) ran».

b. Hopi
Puma moosa-vit wari.
DEM.PL cat-DU run.PFV.SG
«Those (two) cats ran».

Sadler’s [2011] explanation for this phenomenon is based on an underspecified feature representation together with the neutralization of the distinctions between dual and plural/singular in the case of modifiers/verbs. In this paper, we adopt a similar idea to account for the disagreement pattern in Russian paucal constructions, to which we turn in the next section.

5. Back to Modern Russian

As we said in Section 3, after the complete disintegration of the dual as a number category in Russian, starting from the 16th century on we observe various situations of competing grammars regarding expressions with low numerals. In addition, a spurious element was introduced into Russian in the 16th century, namely a genitive plural marker on adjectives,

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1 Jingulu, another non-Pama-Nyungan Australian language, behaves similarly to Hopi in this respect [cf. Pensalfini, 1999].
which had been limited to other quantificational expressions and higher numerals, but was totally strange in association with low numerals, which had been exclusively nominative (dual/paucal or plural) up to that time.

As reported before, this irregular form was inserted as an innovation under the influence of compound paucal numerals and was a clear instance of the so-called genitive of quantification, which was found in every other instance of Russian quantification, except for low number. Assuming that some sort of quantificational, adverbial, or partitive head – or more than one – is responsible for genitive case assignment in Russian quantification [cf. Babby, 1987; Franks, 1994; Bailyn, 2004; Testelets, 2010; Bošković, 2013; Ljutikova, 2016], we can ask ourselves how speakers managed to accommodate the quantificational «alien» element into paucal constructions.

The original «old» structure related to dual/paucals was a regular nominative construction (the adjective lost its dual exponent very early, and replaced it with a plural form):

\[(D) \text{dva } \text{dvora pustye}]\]

«Two empty courtyards»

On the other hand, the innovating «alien» element was taken from regular quantificational constructions, as in (19):

\[(Q) \text{dvadcat' } \text{dvorov pustyx}]\]. (= quantificational genitive)

«Twenty empty courtyards».

The introduction of an innovation in a language gives rise to a situation of competing grammars, which can derive into double coding [cf. Kroch, 1989]: in such cases, the old variant becomes more restricted (in Russian, it was preserved only in feminine expressions containing a nominative plural adjective), while the new variant is progressively spread (here, the variant with a quantificational element inside).

In order to handle the «alien» quantificational element, the speakers could resort to certain mechanisms at the level of the interface with PF, in order to repair this morphological «irregularity»: more specifically, we propose that, as in Hopi, an impoverishment process tied to a pattern of morphological underspecification can solve the morphological problem.

A possible feature specification for nouns and verbs / modifiers in Russian can be the following (very similar to the one proposed for Hopi by [Sadler, 2011]):
(20) Nouns:  
Singular Ns  
Plural Ns  
Paucal (<dual) Ns

(21) Verbs/modifiers:  
Singular V / A
Plural V / A
Default V / A

The reader can observe a differentiated number specification for nouns vs. verbs / modifiers in (20) and (21) respectively; only that, unlike Hopi, Russian seems to display a symmetric pattern leveling modifiers and verbs, on the one hand, versus nouns, on the other. As in Hopi, nouns would be fully specified as singular, dual/paucal, or plural entities, while modifiers and verbs undergo different impoverishment processes: on the one hand, in the absence of their own paucal morphological exponent, verbs and adjectives can show up in the plural (because it is the way in which they are underspecified). On the other hand, Russian displays a further feature specification, namely a «default» form (characterized as [numberless, genderless]), which surfaces as neuter singular on verbs and as genitive plural on adjectives (as is usual in quantificational contexts).

So in the old pattern, the one preserved only in feminine nominative phrases, the impoverishment is quite straightforward, and probably did not change much from the very first time when dual was lost: here, the noun would be fully specified as paucal / dual ([+pl, +sg]), and the adjective and the verb would be impoverished simply as [+pl], surfacing as a plural form (see 22):

(22) tri \textit{krasnye} knigi ležali /*ležalo…

The innovative quantificational pattern (all genders) is more complicated, as it includes a quantificational element, triggering a default ([numberless, genderless]) feature within the numeral expression itself. This feature «competes» with the fully specified plural feature contained in the nominative paucal noun of these expressions so that, depending on which of them projects, the verb can be impoverished as [+pl] or as [numberless, genderless]. Hence the (dis)agreement variants on the verb:

(23) tri \textit{krasnyx} karandaša ležali

/ ležalo…
/ N.SG.
«Three red pencils were lying…»
In case no overt modifier is included, still the quantificational feature can be present, triggering the same (dis)agreement pattern with the verb.

Finally, when an overt nominative determiner or prequantifier is inserted (see 24), this element remains out of the scope of the lower quantificational element and, as it is fully specified as [–sg, +pl], and is the last merged element, it overrides the presence of the lower quantificational head, avoiding default and forcing plural verb agreement:

(24) èti tri krasnyx karandaša ležali / *ležalo…
these N.SG three GEN.PL pencil(M) N.SG.PAUC lied.PL / N.SG
«These three red pencils were lying…»

6. Conclusions

In this paper, we have explored a new way of analyzing Modern Russian numeral expressions that contain the low numerals dva/dve, tri, and četyre, by combining the historical data at our disposal and those from other languages that behave in a similar way with respect to the morphology of dual/paucal constructions. We have proposed that the disagreement pattern most extended nowadays in Russian paucal expressions had its origin in an innovation that took place in the 16th century and consisted of inserting a genitive quantificational form (and thereafter, adapting it) into paucal constructions. This initially spurious element was successfully accommodated by means of certain mechanisms of number feature impoverishment, similar to those taking place in Hopi. These impoverishment patterns led to the double (dis)-agreement verbal pattern we observe nowadays in these constructions in Modern Russian. The old nominative structure was preserved only in feminine paucal phrases including an overt nominative adjective, while the innovative one was extended to every other paucal context.

References


