Topics at the left periphery in Russian*

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This paper analyses a paradigm in Russian in which a preposed nominal strand-
ing a numeral can show (paucal) number connectivity, with a gap following
the numeral, or can appear in a non-agreeing (plural) form:

(1) theater-paucal/plural, there were three. paucal__

Numerous syntactic diagnostics confirm that, when there is number con-
nectivity, the nominal has been fronted via A’-movement, creating a syntactic
A’-chain dependency. In the absence of connectivity, the construction involves
a hanging topic related via discourse mechanisms to a base-generated null pro-
noun. These two constructions constitute a minimal pair and can be considered
a counterpart to the better-known left edge topics observed in Romance or
Germanic languages.

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The following glossing abbreviations are used: coll-collective, part-partitive, pauc-paucal.
Other abbreviations follow the Leipzig Glossing Rules.
1. **Left Dislocation**

**Left Dislocation constructions** (LDs below) are constructions in which a phrase related to some clause-internal anaphoric element appears at the left edge of a clause, dislocated from its expected position. English examples are in (1a,b), with the left-dislocated phrase italicized and the anaphoric element, if expressed, bold-faced.

(1) a. *Information structure*, Knud has always enjoyed __.
   b. *Information structure*, Knud has always enjoyed it.

There is much work on LD in the linguistics literature (see, for example, the collections of papers in Anagnostopoulou et al. 1997 and Alexiadou 2006, and references therein), and there is a clear consensus that LD constructions are not a syntactically or semantically unitary phenomenon. This is the case both inter- and intra-linguistically. It is therefore helpful to survey LD constructions in some better-analyzed languages to understand the spectrum of options. Cross-linguistically, there are two relevant parameters of morphosyntactic variation: (i) the form of the clause-internal anaphoric element, and (ii) the analysis of the construction as involving movement or base generation.

Regarding the first parameter, the form of the anaphor varies between zero, some kind of pronominal element, and an epithet. (2a) illustrates English Topicalization, in which the anaphor is a null element. (2b) illustrates Romance Clitic Left Dislocation (CLLD), in which the anaphoric element is a preverbal pronominal clitic. CLLD has been very widely discussed and analyzed (see Cinque 1977, 1990, 1997[1983]; Anagnostopoulou 1994, 1997; Lambrecht 1996, 2001; Escobar 1997; Rizzi 1997; Cecchetto 2000; Benincà and Poletto 2004; Lopez 2009; Aoun et al. 2010; and numerous other works). (2c) illustrates Germanic Contrastive Left Dislocation (CLD), in which the anaphoric element is a (displaced) demonstrative pronoun (see Ross 1967; van Riemsdijk and Zwarts 1997[1974]; Vat 1997[1981]; Zaenen 1997; Wiltshko 1997; and others). (2d) illustrates Hanging Topic Left Dislocation (HTLD), in which the anaphoric element is a full pronoun,1 (see Cinque 1977; Thrainsson 1979; van Riemsdijk and Zwarts 1997[1974]; and Vat 1997[1981]). Finally, (2e) illustrates the use of an epithet as the anaphoric element, an option selectively allowed by several languages, including French, Lebanese Arabic, and Spanish (Alexiadou 2006).

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1. The term Hanging Topic Left Dislocation was originally proposed by Alexander Grosu (Cinque 1977:406).
(2) a. *Information structure*, Knud has always enjoyed __.
   b. A Gianni, Maria **gli ha parlato** recentemente
to John Maria **3SG.DAT has speak.PTCP** recently
   ‘To John, Maria spoke to him recently.’ (Italian, Rizzi 1997: 294)
   c. *Die man, die ken ik niet.*
   that man **DEm know** I not
   ‘That man, I don’t know.’ (Dutch, Vat 1997: 70)
   d. *Information structure*, Knud has always enjoyed it.
   e. Paul, Pierre vient de se battre avec **cet idiot**.
   Paul Pierre come **C REFLECT** fight with this idiot
   ‘Paul, Peter has just fought with that idiot.’ (French, Hirschbühler 1997: 56)

The second parameter of variation concerns the actual analysis of the construction. Approaches to LD constructions can be split into movement analyses, in which some element has been dislocated from a clause-internal position, and base-generation analyses, in which the left-dislocated element is base-generated and no movement is involved. In the latter, the left-dislocated element is linked to its clause-internal position via interpretive mechanisms. HTLD is typically analyzed as base generation (see, for example, Hirschbühler 1997[1974] and de Cat 2007 on French), while CLLD/CLD receive movement analyses.

The distinction between HTLD and movement has been widely explored in Romance and Germanic languages (see Grewendorf 2008 for a comparison of Romance and Germanic). The distinction has also been explored in Mayan (Aissen 1992, and subsequent work on individual languages that builds on that paper). Surprisingly, there has been very little work on LD in Slavic. Sturgeon (2008) discusses the situation in Czech, noting a contrast between HTLD and scrambling with respect to syntax, semantics, and prosody. It is difficult to find any other discussion of this contrast in Slavic.

This chapter provides a preliminary investigation into Slavic left-edge topics through an exploration of the contrast between base-generated and moved LD elements in Russian. Russian shows a distinction between HTLD and movement that replicates the phenomenon seen in better-studied languages. Unlike other languages, Russian does not use clitics, so the overt expression of the contrast between base-generated and moved LD can be absolutely minimal.

The following discussion starts with an overview of relevant aspects of Russian grammar and the constructions under investigation. We then turn to the syntax of these constructions and demonstrate that Russian displays both moved and base-generated LD elements, although the difference is sometimes obscured by morphology.
2. **Introducing Russian left periphery elements**

2.1 **Russian numerical expressions**

The form of a Russian noun co-occurring with a numeral differs depending on the numeral. When a noun co-occurs with a lower numeral (1.5, 2–4, and the expression 'both'), it obligatorily takes a special form that is different from the form co-occurring with higher numerals (5 and up). The nominal form co-occurring with lower numerals has received several analyses (see Xiang et al. 2011 for an overview), but for our purposes, it is sufficient to identify it as pauc(al). With numerals 5 and up, Russian requires nouns in gen(itive) pl(ural). The difference is morphologically visible when the modified expression appears in the nominative (and in the accusative for inanimates, which is homophonous with the nominative). It is obscured in all other instances. The distinct morphology is shown in (3) for the numerals ‘three’ versus ‘five’. ‘Three’ requires paucal morphology on the noun, while ‘five’ requires genitive plural morphology.2

(3) a. *V gorodke bylo tri teatr-a/*ov.
   *in town* was *three.nom theater-pauc/gen.pl*
   ‘There were three theaters in that town.’

   b. *V gorodke bylo piat’ teatr-ov/*a.
   *in town* was *five.nom cathedral-gen.pl/pauc*
   ‘There were five theaters in that town.’

The numeral and the nominal can be separated, and it is under this separation that we observe the phenomenon described below.

2.2 **Creating a topic expression**

When a numeral and its nominal are separated, the nominal can strand the numeral at the front of the clause (other separation possibilities also exist, but we will not discuss them here). This fronting has the effect of creating a topic, which we will often translate using English ‘as for.’ When the stranded numeral is a higher numeral, the left-dislocated noun must be in the genitive plural form:

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2. In this example and the next, we show the morphological division of the nouns in question. However, since Russian genitive plural and paucal forms vary by declensional class, in subsequent examples we will typically only indicate the status of a form in the glosses without showing any morpheme boundaries.
(4) a. Teatr-ov v gorodke bylo p'jat'.
    theater-gen.pl in town was five
    'As for theaters, there were five in that town.'

b. *Teatr-a v gorodke bylo p'jat'.
    theater-pauc in town was five
    'As for theaters, there were five in that town.'

When the stranded numeral is a lower numeral, however, both the expected paucal and genitive plural are possible:

(5) a. Teatr-a v gorodke bylo tri.
    theater-pauc in town was three
    'As for theaters, there were three in that town.'

b. Teatr-ov v gorodke bylo tri.
    theater-gen.pl in town was three
    'As for theaters, there were three in that town.'

The generalization is as follows:

(6) A left-dislocated nominal that strands a numeral can show number connectivity – the number that would be appropriate were it not left dislocated – or it can appear in the (genitive) plural form.

The behavior of 'one' conforms to this pattern. A noun modified by the numeral 'one' ordinarily appears in the singular, (7). When the noun is left dislocated, it can remain in the singular form or appear in the genitive plural form (8a, b). Crucially, it may not occur in the paucal form (8c).

(7) Maša kupila Odin calendar.
    Masha bought one.acc calendar.sg.acc
    'Masha bought one calendar.'

(8) a. Kalendar' Maša kupila Odin.
    calendar.acc.sg Masha bought one.acc
    'As for calendars, Masha bought one.'

b. Kalendar' Maša kupila Odin.
    calendar.gen.pl Masha bought one.acc
    'As for calendars, Masha bought one.'

c. *Kalendar'ja Maša kupila Odin.
    calendar.pauc Masha bought one.acc

3. To our knowledge, Isaac Kozinsky (1945–1992) was one of the first people to identify this contrast, in the 1980s. He never published anything on it but he brought it up a number of times in his presentations. The construction with the fronted genitive plural nominal is discussed in Crockett (1976: Ch. 5), Pesetsky (1982: 233–236, who refers to this construction as Crockett-sentences), House (1982), Franks (1995: 186–192), Partee and Borschev (2006), and Choo (2007).
Analytically, the presence of (paucal) number connectivity in the above data points towards a movement analysis, while the absence of connectivity with genitive plural suggests a base-generated HTLD analysis. In what follows, we will provide evidence for the following:

(9) a. For lower numerals, the left-dislocated nominal has undergone movement when there is number connectivity (paucal), and is HTLD when there is no connectivity (genitive plural).
   b. For higher numerals, the left dislocation construction is structurally ambiguous between movement and HTLD.

2.3 Scrambled topic vs. HTLD

To make these proposals concrete, we assume a structure for numeral-modified nominals in Russian as in (10) (Bošković 2006). The numeral is a QP in the specifier of a functional projection FP that dominates NP. One might identify FP as NumP.

(10) [FP QP [F’ F NP ]]

Under the movement analysis, the NP complement to the functional head F⁰ moves to the clause-initial position. We take this to be an instance of the widely discussed Russian scrambling (King 1995; Bailyn 1995, 2001, 2003, 2007, 2012; Sekerina 1997; and others), and an instance of A′-movement. We assume that scrambled elements adjoin to any maximal projection. To generate a left-peripheral element, scrambling of NP can target CP or TP. In the case of a base-generated hanging topic, we propose that the topic phrase can adjoin only to CP (Alexiadou 2006) and that the complement of the F⁰ position must be occupied by a null pronominal, pro, thus:

(11) [FP QP [F’ F pro]].

Both constructions – with the fronted nominal showing number agreement or genitive plural – function as topic-marking constructions, containing either a plain topic or a contrastive topic. The latter is underscored by the use of the overt contrastive particle to:

(12) dači/dač-to un nix tri, country.house.pauc/country.house.gen.pl-contrast by them three a kvartir ni odnoj. but apartment.gen.pl not one.gen
‘While they have three country houses they don’t have a single apartment.’

The degree of contrastiveness, however, seems to differ between the two constructions. In her insightful comparison of hanging and scrambled topics in Czech, Sturgeon (2008) shows that the two are associated with different intonational
contours. The scrambled type is characterized by a significantly greater rise than
the hanging type. In further comparing hanging and scrambling topics, Sturgeon
writes: “I conclude that the [hanging topic] construction is a topic promotion
device. Hanging topics have been evoked (either overtly or as members of a
previously evoked set) in the preceding discourse, but are, as yet, non-topical.
Appearing in the left edge hanging topic position promotes them to sentence topic
status. Their status as sentence topic is confirmed by the fact that they persevere
in the following discourse. [Scrambled] elements, on the other hand, exhibit a con-
trastive topic discourse function. The discourse referents of [scrambled] elements
do not perseverate in the discourse but are, instead, contrasted with other mem-
bers of a set of alternatives with respect to an open proposition” (146). In order
to verify these observations for Russian, one would need to conduct an extensive
corpus study, which is beyond the scope of this chapter.

In terms of the earlier discussion, the relationship between the scrambled
paucal phrase and its trace is subject to syntactic constraints. The relationship
between the hanging topic phrase and pro belongs to discourse constraints. The
interpretation of pro is not determined until the discourse component, where
pronouns receive their referents (see Reuland 2011 for a recent discussion).
At this point, pro takes as its antecedent a salient entity, the hanging topic.
Alternatively, one might propose that the hanging topic construction represents
a variable binding configuration and thus instantiates a semantic co-construal,
but we believe that this is not the case for two reasons.4 First, pro following a
numeral need not have a binder. The antecedent may be in another sentence in
the discourse, as demonstrated in Examples (13) and (14). Pro here cannot be
a bound variable.

(13) A: U vas est’ žurnaly?
    by you is magazine.NOM.PL
B: Da, četyre/odin/devjat’ pro.
    yes four/one/nine
‘A: Do you have magazines?
B: Yes, four/one/nine.’

(14) A: Ja obyčno kladu desjat’ ogurcov.
    1sg usually put ten cucumber.GEN.PL
B: A ja vsego dva/šest’/odin pro.
    and 1sg only two/six/one
‘A: I usually use ten cucumbers (for this recipe).
B: And I only use two/six/one.’

4. Wiltschko (1997:331) also claims that Dutch HTLD is not a variable-binding construction.
Second, the genitive plural hanging topic need not have a bindee. It can be what van Riemsdijk (1997:4) calls a loose aboutness left dislocation. Although such examples seem somewhat difficult to construct, they are possible. The examples in (15) are based on Choo et al. (2007); see also Crockett (1976: 318–335) and Franks (1995: 187):

(15) a. Podrug v to vremja u menja ostalos’
girlfriend.gen.pl in that time by me remained
vsego liš’ odna Tanja.
only one.nom.fem Tanya
‘Of girlfriends at that time I was just friends with Tanya alone.’
b. Vremeni prošlo dve nedeli.
time.gen.sg passed two weeks.pauc
‘The amount of time that passed was two weeks.’
c. Narodu bylo devjat’ čelovek.
people.coll.part was nine person.gen.pl
‘The number of people was nine persons.’
d. Deneg u menja dvadcat’ dva dollara.
money.gen.pl by me twenty two dollar.pauc
‘As for money, I have $22.’

To summarize, our analysis can be represented as follows:

(16) lower numerals
   a. left dislocation with number connectivity: movement
      Teatr-a v gorodke bylo tri teatr-a
      theater-pauc in town was three
   b. left dislocation without number connectivity: HTLD
      Teatr-ovi v gorodke bylo tri pro-
      theater-gen.pl in town was three
      ‘As for theaters, there were three in that town.’

(17) higher numerals: structural ambiguity
   a. movement
      Teatr-ov v gorodke bylo pja teatr-ov
      theater-gen.pl in town was five

5. The acceptability of these two patterns is different: While HTLD as in (16b) is always acceptable, the acceptability of the movement variant in (16a) varies with the lexical items. For instance, masculine nouns seem preferable to feminine nouns. This variability certainly warrants further investigation but is beyond the scope of this paper. The examples used below are limited to those that were accepted by all or most of the native speakers whom we consulted.
b.  *HTLD*
   
   \[
   \text{Teatr-ov}_1 \quad \text{v gorodke bylo pjat'} \quad pro_i
   \]
   
   theater-gen.pl in town was five
   ‘As for theaters, there were five of them in that town.’

In Section 3, we will explore the proposal in (9) as it relates to lower numerals – the contrast illustrated in (16) – because number morphology on the dislocated element unambiguously identifies the construction involved.6

3.  Syntactic analysis

The evidence in favor of the proposal in (9) comes from a wide range of phenomena. The arguments form two sets. One set is based on diagnostics of movement (Section 3.1). These phenomena, which include island effects, reconstruction, and parasitic gaps, confirm that the left-dislocated paucal construction involves A’ movement, while the genitive plural construction does not. The second set of arguments in Section 3.2 appeals to characteristics of HTLD to show, conversely, that the genitive plural construction is HTLD, while the paucal construction is not.

3.1  Movement diagnostics

3.1.1  *Island sensitivity*

Island (in)sensitivity is a classic diagnostic for movement (Ross 1967), and it is widely used in the LD literature to help decide between movement and HTLD. HTLD, a base-generated structure, is generally insensitive to islands.7 The expectation for Russian is that paucal LD elements should not be able to relate to gaps inside islands, but the corresponding genitive plural forms should be able to do so. The data confirm this prediction. (18) and (19) illustrate weak factive islands and wh-islands, respectively. Example (20) illustrates a strong complex noun phrase island.8

6.  We will not discuss structurally ambiguous cases such as (17). The predictions, however, are clear: if a structure is well formed under either the hanging topic or movement analysis, then such sentences with higher numerals should be grammatical.

7.  The diagnostic occasionally yields conflicting results. For example, Cinque (1990) claims that Italian CLLD, a movement construction, is sensitive only to strong islands and not weak ones (see Szabolcsi 2006 for a discussion of the difference). Lopez (2009), however, disputes this conclusion, showing that CLLD elements can actually be sensitive to all kinds of islands, as long as the right contextual conditions are met.

8.  A number of the examples presented here and further below are judged “colloquial,” and some would be unacceptable to purists.

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(18) a. Udivitel’no, [čto oni našli vsego dva slučaja].
surprising that they found only two case.PAUC
‘It is surprising that they found only two instances.’
b. *Slučaja udivitel’no, čto oni našli vsego dva.
case.PAUC surprising that they found only two
c. Slučaev udivitel’no, čto oni našli vsego dva.
case.GEN.PL surprising that they found only two
‘Of instances, it is surprising that they found only two.’

(19) a. Maša sprosila, [gde my našli tri čemodana].
Masha asked where we found three suitcase.PAUC
‘Masha asked where we found three suitcases.’
b. *Čemodana Maša sprosila, gde my našli tri.
suitcase.PAUC Masha asked where we found three
c. Čemodanov Maša sprosila, gde my našli tri.
suitcase.GEN.PL Masha asked where we found three
‘Masha asked where we found three suitcases.’

(20) a. Ty pomniš’ [vremja, [kogda u nee bylo tri ženixa]]?
2sg remember time when by her was three suitor.PAUC
‘Do you remember the time when she had three suitors?’
b. *Ženixa ja pomnju vremja, kogda u nee bylo tri.
suitor.PAUC 1sg remember time when by her was three
c. Ženixov ja pomnju vremja, kogda u nee bylo tri.
suitor.GEN.PL 1sg remember time when by her was three
‘Speaking of suitors, I remember the time when she had three.’

3.1.2 Coordinate Structure Constraint and across-the-board movement
Although coordinate structures are often categorized as strong islands, the
unique behavior of extraction from coordinate structures allows us to formulate a
slightly more nuanced argument for our analyses. Ross (1967) first formulated the
Coordinate Structure Constraint (CSC) in (21), which prohibits movement from
coordinating conjuncts. He observed, however, that violations of clause (ii) of the
CSC could be avoided if the same element were extracted from both conjuncts, a
phenomenon referred to as across-the-board (ATB) movement (Williams 1978;

(21) Coordinate Structure Constraint (Ross 1967)
In a coordinate structure, (i) no conjunct may be moved, (ii) nor may any
element contained in a conjunct be moved out of the conjunct.

With respect to the Russian LD construction, if the number of the fronted element
is appropriate for both conjunct positions, the result is grammatical:
(22) a. Derev’jev Maša posadila tri, a Petja dva.
    tree.gen.pl Masha planted three and Petya two
b. Dereva Maša posadila tri, a Petja dva.
    tree.pauc Masha planted three and Petya two
    ‘As for trees, Masha planted three and Petya, two.’

Under our analysis, (22a) is base-generated as shown in (23a). The hanging topic is coreferential with pro in each of the conjuncts.

(22b) is derived by ATB movement with the derivation in (23b):

(23) a. Derev’jev [[Maša posadila tri pro], a [Petja dva pro]]
    tree.gen.pl Masha planted three and Petya two
b. Dereva [[Maša posadila tri dereva], a [Petja dva dereva]]
    tree.pauc Masha planted three and Petya two
    ‘As for trees, Masha planted three and Petya, two.’

When the numerals in the two conjuncts differ, however, our analyses correctly lead us to expect a difference in grammaticality. Genitive plural should still be acceptable, because both pros are bound by the hanging topic, (24a). Paucal morphology, (24b), is unacceptable because movement out of just one conjunct violates the Coordinate Structure Constraint, as shown in (25):

(24) a. Derev’jev Maša posadila tri pro, a Petja pjet’ pro.
    tree.gen.pl Masha planted three and Petya five
    ‘As for trees, Masha planted three and Petya five.’
b. *Dereva Maša posadila tri, a Petja pjet’.
    tree.pauc Masha planted three and Petya five
    ‘As for trees, Masha planted three and Petya, five.’
(25) *Dereva [[Maša posadila tri dereva], a [Petja pjet’ pro]]
    tree.pauc Masha planted three and Petya five
    ‘As for trees, Masha planted three and Petya, five.’

A relevant restriction on ATB movement is that, with certain exceptions (Kasai 2004), gaps created by ATB movement normally occupy syntactically parallel positions (Franks 1993). This prediction holds for the gaps created by movement of the paucal nominal. In (26a), both gaps are in the object position, and the result is acceptable. In (26b), the first gap is in the object position and the second is in the subject position, and the resulting sentence is ungrammatical.

(26) a. Romana on tri romana uže izdal,
    novel.pauc he three already published
    a dva romana ešće dopisyvaet.
    but two still is_writing_up
    ‘He has already published three novels and is still working on another two.’
b. *??Romana on tri novel PAUC uže izdal,
    a dva novel GEN.PL nikak ne dajutsja.
    ‘He has already published three novels, but two more are causing a block.’

In contrast, hanging topics can strand numerals even if they are not in syntactically parallel positions:

(27) Romanov on tri uže izdal, a dva nikak ne novel GEN.PL he three already published but two in no way not dajutsja.
    ‘He has already published three novels, but two more are causing a block.’

The behavior of coordinate structures thus yields the expected differences between movement and base generation.

3.1.3 Number connectivity
Reconstruction, or connectivity, is another standard hallmark of movement. The term refers to phenomena in which a moved element behaves as though it were in its unmoved (reconstructed) position for various morphological, syntactic, semantic, and thematic purposes. The appearance of paucal morphology on a LD element, which we used as motivation for proposing a movement analysis, is an instance of number connectivity. The appearance of paucal morphology is determined by the position of the nominal before movement. Similarly, the lack of connectivity for number in HTLD argues against movement in that construction; genitive plural morphology is not licensed on the nominal in its post-numeral position, suggesting that the dislocated element did not originate there.

A particularly compelling piece of evidence in support of our contention that the paucal marking on left-dislocated elements arises from reconstruction comes from *pluralia tantum*. These are nouns, such as nožnicy ‘scissors,’ sani ‘sled,’ or brjuki ‘pants,’ that have no morphologically singular form and only occur in the plural, (28a). In Russian, they too are incompatible with paucal morphology, (28b).9

(28) a. Na kuxne stojali odni/*odna vesy/*vesa.
    on kitchen stood one.PL/one.SG scale.PL/scale.SG
    ‘A weighing scale was in the kitchen.’

9. The situation can be rectified by using a collective numeral (troe), but that is beside the point. The preference for the collective numeral, however, may be the reason why (29b) below is still degraded.

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b. *Na kuxne stojalo tri vesa.
on kitchen stood three scale.PAUC

Given this morphological restriction, we correctly expect that a left-dislocated paucal element will be impossible with such nouns, because the paucal number arises from reconstruction on our analysis. (29a) is ungrammatical for precisely the same reason as (28b). (29b) is acceptable and is structurally ambiguous between a movement and a HTLD analysis.

(29) a. *Vesa na kuxne stojalo tri.
scale.PAUC on kitchen stood three

b. ?Vesov na kuxne stojalo tri.
scale.GEN.PL on kitchen stood three

‘As for scales, there were three in the kitchen.’

3.1.4 Binding Theory reconstruction

Binding Theory reconstruction also supports our analyses. Principle C of the Binding Theory (Chomsky 1981) requires that R-expressions such as names be free. Russian obeys Principle C. Only the non-coreferential interpretation is allowed in (30b):

(30) a. Maša, stesnjaetsja, kogda ee xvaljat.
Masha is.embarrassed when she.ACC praise.3PL
‘Masha feels embarrassed when shei,k gets praised.’

b. Onak,*i stesnjaetsja, kogda Mašu xvaljat.
she is.embarrassed when Masha.ACC praise.3PL
‘Shei,k is embarrassed when Mashai gets praised.’

It is useful to compare the following sentences involving dislocation:

(31) a. Onak,*i nasčitala tri [raza, kogda Mašu xvalili].
she counted three time.PAUC when Masha.ACC praised.PL
‘Shei,k found three times when Mashai got praised.’

b. [Raza, kogda Mašu xvalili] onak,*i nasčitala tri.
time.PAUC when Masha.ACC praised she counted three
‘Shei,k found three times when Mashai got praised.’

c. [Raz, kogda Mašu xvalili] onak,i nasčitala tri.
time.GEN.PL when Masha.ACC praised she counted three
‘As for times when Mashai got praised, shei,k counted three.’

(31a) exhibits a Principle C violation, which is triggered by the fact that the pro-nominal subject c-commands a name in the number-modified nominal in brackets. In (31b), the paucal nominal is fronted, and coreference is still impossible.
We can account for this contrast, because the pronominal subject c-commands the R-expression under reconstruction, again yielding a Principle C violation. In (31c), however, coreference between the name and the pronoun is possible with the genitive plural HTLD element. The observed coreference is permitted because neither one of the pronouns nor the name c-commands the other; in addition, there is no reconstruction available to restrict the interpretation, because HTLD does not involve movement.10

3.1.5  **Weak Crossover (WCO)**

Weak Crossover prohibits a moving element from crossing over a non-c-commanding pronoun with which it is coindexed:

(32) `Mikei, I told hisi mother that the police caught Mike using a fake ID.

We can explore weak crossover in the Russian LD constructions by including another number higher in the clause. This is shown schematically in (33).

(33) NP_i [ … [ # ec_i ] … [ # ec_j ] ]

There are two possibilities for the identification of the empty categories in (33), pro or trace/copy. If both empty categories are pro, then we have HTLD, and the result is expected to be grammatical with a genitive plural topic. There is no movement, and the hanging topic is simply coreferential with both pros:

(34) NP.gen.pl_i [ … [ # pro_i ] … [ # pro_i ] ]

The data confirm this prediction:

(35) %Muzejev oni proinformirovali vse pjat’ pro, museum.gen.pl they informed all five 
čto delegacija posetit vsego dva pro.
that delegation will.visit only two
‘As for museums, they informed all five that the delegation will visit only two.’

If the left-dislocated element is paucal, the representation is as follows:

(36) NP.pauc_i [ … [ # pro_i ] … [ # NP.pauc ] ]

We correctly expect that the result will be ungrammatical, because (36) is a weak crossover violation. The moved NP crosses over the pro with which it is coindexed:

---

10. In theory, Principle A could also be used as a diagnostic. Russian reflexive binding is subject to poorly understood constraints, however, and judgments change significantly under scrambling (see Bailyn 2007 and references therein). Thus, we chose to avoid it.
(37) *Muzeja oni proinformirovali vse pjač,
    museum.pauc they informed all five
    čto delegacija posetil vsego dva.
that delegation will.visit only two

‘As for museums, they informed all five that the delegation will visit only two.’

3.1.6 Parasitic gaps
Parasitic gaps are another standard diagnostic of movement (Engdahl 1983; Culicover 2001). Several researchers have suggested that Russian has parasitic gaps (Franks 1992; Culicover 2001; Ivlieva 2007), although their appearance is more limited than in English. For example, Russian parasitic gaps are constrained by the surface identity of case forms such that both extracted elements must be phonologically identical (for instance, the accusative and the genitive can form a chain if they are homophonous; see Franks 1992, 1993, 1995). An example follows:

(38) a. Kritic otravil etot roman, v izdatel'stvo,
    critic sent this novel in publishing_house
    do togo kak on ego pročital.
before he it read

‘The critic sent the novel to the publisher before he read it.’

b. Kakoj roman kritic otravil kakoj roman, v izdatel'stvo,
    what novel critic sent in publishing_house
    do togo kak pročital pg?
before read

‘Which novel did the critic send to the publisher before reading?’

Our analysis leads to the expectation that only paucal left-dislocated elements will license a parasitic gap. The data confirm this prediction:

(39) a. Kostjuma on otložil srazu tri kostjuma, daže ne
    suit.pauc he set.aside at.once three even not
    merjaja pg/?ix.
try.on.gerund

b. Kostjumov on otložil srazu tri pro, daže ne
    suit.gen.pl he set.aside at.once three even not
    merjaja pro/ix.

‘As for suits, he picked three right away without even trying them on.’

On the assumption that (39a) involves movement, as shown, the parasitic gap in the gerundial adjunct is licensed. A pronoun in place of the parasitic gap is not consistently accepted by speakers, which reminds us of Ross’s (1967) original observation.
that the relative acceptability of a parasitic gap and a pronoun are roughly inversely correlated. Where a parasitic gap is acceptable, an overt pronoun is less so. In (39b), the gap inside the adjunct clause is a null pronoun, but an overt pronoun is equally possible. A trace is illicit here because the gap is inside an island.

As an interim conclusion, we have presented evidence that the paucal form is scrambled to the left. We will now turn to left-dislocated genitive plural nominals and show that they are base-generated hanging topics.

### 3.2 HTLD diagnostics

In this section, we capitalize on cross-linguistic properties of hanging topics to support our claim that left-dislocated genitive plural nominals are hanging topics. These properties include peripheral positioning and co-occurrence with epithets.

#### 3.2.1 Peripheral positioning

Further differences between the movement and HTLD constructions appear when we consider the linear positions of the LD elements. An investigation of linear order is complicated by the fact that Russian is extremely generous with scrambling. Even if a constituent is left dislocated, it is always possible that another constituent can scramble over it, placing the LD element in a non-peripheral position. Nevertheless, certain patterns appear when we look at the position of LD elements with respect to WH-phrases. Such examples are rather hard to construct, and most of them seem marginal, but inasmuch as they are interpretable, the preference is for the LD element to precede the WH-phrase:

(40) a. Maše nado segodnja posmotret’ celyx tri fil’ma.  
Masha.dat necessary today see.inf entire three movie.pauc  
‘Masha has to watch an entire three movies today.’

b. %fil’m-a/ov komu segodnja nado posmotret’  
movie-pauc/gen.pl who.dat today necessary see.inf  
celyx tri?  
etire three  
‘Of movies, who has to watch an entire three today?’

c. %fil’m-a/ov kogda Maše nado posmotret’  
movie-pauc/gen.pl when Masha.dat necessary see.inf  
celyx tri?  
etire three  
‘Of movies, when does Masha have to watch an entire three?’
Such data indicate that both hanging topics and moved elements can occur quite high in the clause. Assuming that WH-phrases are in spec, CP, the hanging and scrambled topics in (40) must occur above that position. We hypothesize that they are both adjoined to CP. Where the two constructions differ is in the possibility of the LD element’s appearing in positions further to the right. Moved elements, but not hanging topics, can occur after the WH-phrase. In the examples below, the hanging topic is degraded after a WH-phrase (41b), and ungrammatical after the subject (41c). These positions are permitted for the paucal nominal.

(41) a. Maša dala Pete tri apel’sina i dva banana.
   Masha gave Petja.dat three orange.pauc and two banana.pauc
   ‘Masha gave Petya three oranges and two bananas.’

b. Komu apel’sina/?apel’sinov Maša dala tri,
   who.dat orange.pauc/orange.gen.pl Masha gave three
   a banana tol’ko dva?
   but banana only two

c. Komu Maša apel’sina/*apel’sinov dala tri,
   who.dat Masha orange.pauc/orange.gen.pl gave three
   a banana tol’ko dva?
   but banana only two
   ‘Whom did Masha give three oranges but only two bananas?’

The freedom of positioning for the paucal element follows if it has undergone scrambling, since this process can target numerous adjunction positions in the clause, including positions after a fronted WH-phrase and after the subject. The hanging topic, in contrast, is restricted to the clause-peripheral position under our assumptions. The marginal acceptability of (41b) is likely due to the ability of WH-phrases themselves to undergo scrambling.

3.2.2 Doubling
Because hanging topics relate to a null pronominal, it is expected that they can be replaced by overt expressions, which is not generally the case for traces.11 This predicts that the hanging topic should be resumable by an overt pronoun, a count word, or an epithet, but the moved element should not allow such doubling. This

11. Cases in which traces are realized as pronouns, epithets, or full copies exist. See, for example, the CLLD literature cited above, as well as Boeckx (2003), Nunes (2004), and Aoun and Choueiri (2000) on traces realized as epithets in Lebanese Arabic. We ignore this possibility here, as Russian does not seem to allow such realization of traces; scrambling in Russian obligatorily leaves a gap.

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prediction is confirmed by the data. Examples (42), (43), and (44) show that the gap can be replaced, by a count word, an epithet, or a pronoun, respectively, only in the HTLD construction with the fronted genitive plural.

(42) a. U Peti bylo tri želaniaja.
   by Petya was three wish.Pauc
   ‘Petya had three wishes.’

b. želaniaja u Peti bylo tri (*štuki).
   wish.Pauc by Petya was three piece.Pauc

c. želanij u Peti bylo tri (štuki).
   wish.Gen.pl by Petya was three piece.Pauc
   ‘Wishes, Petya had three.’

(43) a. U generala ostavalos’ četyre soldata.
   by general remained four soldiers.Pauc
   ‘The general had four soldiers left.’

b. Soldata u generala ostavalos’ četyre (*bugaja).
   soldier.Pauc by general remained four yokel.Pauc

c. Soldat u generala ostavalos’ četyre (bugaja).
   soldier.Gen.pl by general remained four yokel.Pauc
   ‘Of soldiers, the general had four left.’

(44) a. U etogo generala ostalos’ četyre soldata.
   by this general remained four soldier.Pauc
   ‘This general had four soldiers left.’

b. Soldata u etogo generala ostalos’ (*ix) četyre.
   soldier.Pauc by this general remained them four

c. Soldat u etogo generala ostalos’ (ix) četyre.
   soldier.Gen.pl by this general remained them four
   ‘Of soldiers, this general had four left.’

3.3 Summary

We have examined arguments from a number of angles that show a systematic difference between left-dislocated paucal nominals and genitive plural nominals that strand a low numeral. These differences are summarized in Table 1.

The directionality and systematicity of these diagnostics confirm that the paucal form that strands a numeral is derived by movement, while the genitive plural form is base-generated. Hence, our initial proposal, repeated below, is validated.

(45) For lower numerals, the left-dislocated nominal has undergone movement when there is number connectivity (paucal), and it is HTLD when there is no connectivity (genitive plural).
(46) lower numerals
   a. left dislocation with number connectivity: movement
      Theater-a V gorodke bylo tri teatr-a
      theater-pauc in town was three
   b. left dislocation without number connectivity: HTLD
      Theater-ov V gorodke bylo tri pro
      theater-gen.pl in town was three
      ‘As for theaters, there were three in that town.’

Table 1. Syntactic properties of paucal vs. genitive plural forms appearing at the left edge of a clause

<table>
<thead>
<tr>
<th></th>
<th>Paucal form</th>
<th>Genitive plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shows island sensitivity</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Obeys CSC</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Requires number connectivity</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Reconstruc5s for Binding Theory</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Shows crossover effects</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Licenses parasitic gaps</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Can occupy intermediate scrambled positions</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Can be doubled by a pro-form or epithet</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Thus, Russian, like a number of other languages, shows a difference between base-generated and scrambled left-dislocated elements, and this difference has a very clear morphological exponent in some contexts. Syntactically, the difference between these two constructions mirrors differences observed in other languages.

4. Conclusion

In this paper, we analyzed a contrast in Russian between two constructions with a clause-initial nominal and a stranded paucal numeral. As demonstrated in (47), in one, the nominal appears in a non-agreeing (plural) form; in the other, the nominal shows number connectivity (paucal) with a gap following the numeral:

(47) a. theater-plural, there were three. paucal pro
   b. theater-paucal, there were three. paucal ec

We have shown, using numerous syntactic diagnostics, that in the absence of connectivity, this construction involves a hanging topic related via discourse mechanisms to a base-generated null pronoun. Under number connectivity, the nominal has been fronted via A’-movement, creating a syntactic dependency. Thus, the
two constructions constitute an excellent syntactic minimal pair. This minimal pair can be compared to the more familiar minimal pairs of scrambled and base-generated topics in Romance and Germanic languages.

References


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