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Topics at the left periphery in Russian*

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This paper analyses a paradigm in Russian in which a preposed nominal stranding 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 connectivity, 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 pronoun. 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.

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; Wiltschko 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   REFL 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 pjat'   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 pjat'.
         theater-**GEN.PL** in town   was   five
         'As for theaters, there were five in that town.'
     b. *Teatr-a   v   gorodke bylo pjat'.
         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:[3]

(5) a. Teatr-a   v   gorodke bylo tri.
         theater-**PAUC**   in town   was   three
     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   kalendar'.
     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. Kalendarej   Maša   kupila odin.
         calendar.GEN.PL Masha   bought one.ACC
         'As for calendars, Masha bought one.'
     c. *Kalendarja   Maša   kupila odin.
         calendar.PAUC   Masha   bought one.ACC

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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 F^0 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 F^0 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   u   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 perseverate in the following discourse. [Scrambled] elements, on the other hand, exhibit a contrastive topic discourse function. The discourse referents of [scrambled] elements do not perseverate in the discourse but are, instead, contrasted with other members 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   esť   žurnaly?
    by   you   is   magazine.NOM.PL
  B: Da, četyre/odin/devjať *pro.*
    yes   four/one/nine
  'A: Do you have magazines?
  B: Yes, four/one/nine.'

(14) A: Ja   obyčno kladu   desjať ogurcov.
    1SG   usually   put   ten   cucumber.GEN.PL
  B: A   ja   vsego   dva/šesť/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.'

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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-ov$_i$ v   gorodke bylo tri   *pro*$_i$
          theater-GEN.PL in town   was   three
          'As for theaters, there were three in that town.'[5]

(17) *higher numerals: structural ambiguity*
      a. *movement*
          Teatr-ov   v   gorodke bylo pjat' ~~teatr-ov~~
          theater-GEN.PL in town   was   five

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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*

Teatr-ov$_i$ v   gorodke bylo   pjat' *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]

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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.

(18)   a.   Udiviteľno, [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   udiviteľno, čto oni   našli   vsego dva.
             case.PAUC surprising   that they found only   two

       c.   Slučaev   udiviteľno, 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;
Bošković and Franks 2000; Kasai 2004; Hornstein and Nunes 2002).

(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 *pro*s 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 pjat' *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 pjat'.
        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 pjat' *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~~ ešče   dopisyvaet.
        but two   still   is_writing_up
        'He has already published three novels and is still working on another two.'

b.*/??Romana   on   tri   ~~romana~~ uže   izdal,
  novel.PAUC he   three   already published
  a   dva ~~romana~~ nikak   ne dajutsja.
  but two   in no way not happen
  '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.
     happen
     '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.'

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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.

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$_i$ stesnjaetsja,   kogda ee$_i$ xvaljat.
        Masha is.embarrassed when she.ACC praise.3PL
        'Masha$_i$ feels embarrassed when she$_{i,k}$ gets praised.'
     b. Ona$_{k,*i}$ stesnjaetsja,   kogda Mašu$_i$ xvaljat.
        she   is.embarrassed when Masha.ACC praise.3PL
        'She$_{k,*i}$ is embarrassed when Masha$_i$ gets praised.'

It is useful to compare the following sentences involving dislocation:

(31) a. Ona$_{k,*i}$ naščitala tri [raza,   [kogda Mašu$_i$ xvalili]].
        she   counted three time.PAUC when Masha.ACC praised.PL
        'She$_{k,*i}$ found three times when Masha$_i$ got praised.'
     b. [Raza,   [kogda Mašu$_i$ xvalili]] ona$_{k,*i}$ naščitala tri.
        time.PAUC when Masha.ACC praised she   counted three
        'She$_{k,*i}$ found three times when Masha$_i$ got praised.'
     c. [Raz,   [kogda Mašu$_i$ xvalili]] ona$_{k,i}$ naščitala tri.
        time.GEN.PL when Masha.ACC praised she   counted three
        'As for times when Masha$_i$ got praised, she$_{k,i}$ counted three.'

(31a) exhibits a Principle C violation, which is triggered by the fact that the pronominal 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) ˀMike$_i$, I told his$_i$ 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*$_i$]]

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 *pro*s:

(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$_i$~~]]

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:

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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 pjat',
museum.PAUC they informed   all   five
čto delegacija posetit   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. Kritik otpravil etot roman$_i$ 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 kritik otpravil ~~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.
trying.on   them
'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?
       entire 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?
       entire 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

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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.

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   želanija.
         by Petya was   three wish.PAUC
         'Petya had three wishes.'

    b. želanija   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*

       Teatr-a   v gorodke bylo tri ~~teatr-a~~

       theater-PAUC in town   was   three

    b.   *left dislocation without number connectivity: HTLD*

       Teatr-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

	Paucal form	Genitive plural
Shows island sensitivity	Yes	No
Obeys CSC	Yes	No
Requires number connectivity	Yes	No
Reconstructs for Binding Theory	Yes	No
Shows crossover effects	Yes	No
Licenses parasitic gaps	Yes	No
Can occupy intermediate scrambled positions	Yes	No
Can be doubled by a pro-form or epithet	No	Yes

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.

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