“Postposition stranding” and related phenomena in Russian

1. Introduction

This paper addresses the question what underlies and what constraints different cases of discontinuity in Russian adpositional phrases. Special focus is made on the analysis of the data illustrating a postposition stranding effect, which has been paid little attention in literature so far (Section 3). The proposed analysis emphasizes that all Russian adpositions are prepositions at the earliest stages of derivation and that discontinuous PPs can be derived either via extraction of a part of a PP or via movement (copying) of the whole PP and subsequent distributed deletion of copies at PF (Section 4).

2. Preposition standing

Russian (just like all other Slavic languages) is often claimed to be a language without preposition stranding, i.e. the complement of a preposition cannot move without pied-piping the preposition itself. Consider examples in (1)–(3):

(1) a. O čem ty govoriš?
   about what you talk
   ‘About what are you talking?’

   b. *Čem ty govoriš o?
      what you talk about

(2) a. V kakix gorodax ty pobyval?
   in which cities you have been
   ‘To which cities have you been?’

   b. *Kakix gorodax ty pobyval v?
      which cities you have been in

(3) a. Ja ne znaju, s kem on vstrečaetsja.
   I not know with whom he dates
   ‘I don’t know whom he dates.’

   b. *Ja ne znaju, kem on vstrečaetsja s.
      I not know whom he dates with

The impossibility of preposition stranding in Russian as well as in many other languages is extensively studied in (Abels 2003). In this work, it was suggested that in languages that lack
preposition stranding, PPs are (strong) phases and hence subject to Phase Impenetrability Condition of (Chomsky 2001) cited in (4).

(4) Phase Impenetrability Condition (PIC)
If H is a strong phase head, the domain of H is not accessible to operations outside HP; only H and its edge are accessible to such operations.

Independently of PIC, Abels suggests another relevant constraint, informally stated in (5)

(5) Anti-Locality Constraint (ALC)
No phrase can be both the complement and the specifier to the same head:

Thus, if some phrase is to move out of a PP in a non-P-stranding language, it needs to proceed through the PP’s leftmost position (Spec-PP), as required by PIC. However, if the phrase undergoing movement is a complement of a preposition, it cannot move through the Spec-PP since this step would violate ALC, which is claimed to be a universal constraint true for all heads and their complements.

On the contrary, in P-stranding languages (in English, for example), PPs are not phases, that is why complements of prepositions may be extracted without necessarily moving through Spec-PP. Thus, ALC does not need to be violated.

Importantly, Abels’ analysis predicts that even in languages that lack preposition stranding certain extractions out of PPs are still possible. These are the cases when a subpart of a complement NP is extracted. The prediction is borne out for Russian. Consider examples in (6) and (7) from (Abels 2003).

(6) (?)[ za kakie prestuplenija], on otkazalsja [ ot [ otvetstvennosti t]]? for which crimes he rid-self from responsibility ‘Which crimes did he reject responsibility for?’

(7) (?)[ Protiv kakoj točki zrenija], ty ešče ne slyšal [ ob [ argumentax t ]]? against which point view you yet not heard about arguments ‘Which point of view haven’t you heard about any arguments against?’

It should be noted, however, that there is at least one kind of subextraction out of PPs that is still prohibited. Prenominal adjectives cannot be extracted. Normally in Russian they can move out of NPs. This process is known as Left Brach Extraction (LBE). Consider examples in (8)–(9).

(8) Kakie, ty kupil [ t bilety ]? which you bought tickets ‘Which tickets did you buy?’
At first glance, it may seem that the ungrammaticality of (9) cannot be explained by appealing only to PIC and ALC. Yet, one can make use of these constraints if LBE is viewed as a process involving movement (or, more precisely copying in the spirit of Chomsky 1993, 1995) of a whole NP with subsequent distributed (scattered) deletion of the copies at PF (cf. Fanselow and Čavar 2005, and especially Pereltsvaig 2007 for colloquial Russian data). Consider a possible derivation of (8) in (10):

(10) Step A:
    ty kupil [kakie bilety]

    Step B:
    [kakie bilety] ty kupil [kakie bilety]

    Step C (PF):
    [kakie bilety] ty kupil [kakie bilety]

If this analysis is correct for all cases of Russian LBE, then the ungrammaticality of (9) can be easily explained. Consider a possible derivation in (11). Linear separation of the adjective kakix from the noun bilety is only possible only after the movement of the whole NP kakix bilety to the leftmost position in the sentence. Since PP o kakix bilety is a phase, PIC requires that this movement proceeds through the Spec-PP (Step 2). As this step of derivation violates ALC, (9) is ruled out. Crashed derivation of (9) is in (11).

(11) Step A:
    ty govoris [o [kakix bilety]]

    Step B; required by PIC, ruled out by ALC:
    * ty govoris [[kakix bilety] o [kakix bilety]]

What might pose a bigger problem for ALC-based analysis, is the fact that in Russian there are adpositions that allow for stranding. These cases are discussed in the following section.

3. Postposition stranding

Most Russian adpositions (o ‘about’, LOC; v ‘in’, LOC/ACC; na ‘on’, LOC/ACC; s ‘with’, INST; do ‘before’, GEN; vokrug ‘around’, GEN; soglasno ‘according to’, DAT; etc.) are prepositions. They can appear only to the left of their complements (henceforth they will be often called “simple” prepositions):

(12) a. o Pete about Petja

b. * Pete o Peter about
A much less studied class of adpositions (radi ‘for the sake of’, GEN; vopreki ‘contrary to’, DAT; nazlo ‘to spite (someone)’, DAT; naperekor ‘counter to’, DAT; vsled ‘following after (someone)’, DAT; navstreču ‘towards’, DAT; spustja ‘after’, ACC; and, maybe, some more) includes those that may appear to the left as well as to the right of their complements. In other words, they may function not only as prepositions but also as postpositions (henceforth, these lexical items will be called ambivalent adpositions, or ambivalent Ps). Consider examples in (15)–(17):
to spite whom whom to spite you this did

b. Komu ty èto sdelal nazlo
   whom you this did to spite
   ‘To spite whom have you done it?’

(20) a. [ Radi çego] / [ Çego radi] ty èto sdelal?
   for the sake of what what for the sake of you this did

b. Çego ty èto sdelal radi?
   what you this did for the sake of
   ‘For the sake of what have you done it?’

Sentences in (18)–(20) illustrate a crucial difference between two classes of adpositions, cf. sentences (1)–(3), where prepositions from the first class are used, hence no stranding is possible. The grammaticality of the b-examples in (18)–(20) is even more striking since PPs, headed by ambivalent Ps, at least those in (19) and (20), are adjuncts and, therefore, extraction out of them should have been ruled out, say, by Huang’s (1982) Condition on Extraction Domains (CED) (surely, this problem is not particular to Russian, cf. possibility of P-stranding with adjunct PPs in English).1

Another contrast between “simple” prepositions and ambivalent Ps is illustrated in (21). Certain subextractions out of complement NPs are not possible with ambivalent Ps (cf. similar grammatical examples with “simple” prepositions in (6)–(7)).

(21) a. * [ O čjej svad’be]i on ženilsja [ nazlo [ sluxam t1]]?
   about whose wedding he got married to spite rumors

b. * [ O čjej svad’be]i on ženilsja [[ sluxam t1] nazlo]?
   about whose wedding he got married rumors to spite
   Intended: ‘To spite rumors about whose wedding did he get married?’

As shown in (21a,b) relative ordering of a P and its complement is irrelevant. Subextraction is banned in both possible cases2.

However, there are cases when the possibility of splitting depends on whether an ambivalent P functions as a preposition or as a postposition. Consider sentences in (22). LBE out of a complement NP is possible if and only if this NP is to the left of a head (P), i.e. if an ambivalent P functions as a postposition (22b). If it functions as a preposition (22a), LBE is banned just like in (9). (For convenience, LBE in (22) is depicted as “true” extraction, not “copying and distributed deletion” process.)

(22) a. * čjegoi ty èto sdelal [ radi [ t1 blagopolučija]]?
   whose you this did for the sake of prosperity

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1 The PP in (18) may be not an adjunct but an argument. Thus, (18b), unlike (19b) and (20b) may be a result of direct extraction.

2 In fact, (21 a,b) is radically different from (6)–(7) in that the relevant PPs are adjuncts in (21 a,b) and arguments in (6)–(7). However, it was already shown that adjunct PPs headed by ambivalent adpositions can be split. This suggests that ungrammaticality of sentences in (21 a,b) is not due to the adjunct status of PPs used there.
4. Analysis
4.1. What it takes to be a postposition

To understand the facts from the previous section better, one needs to know what is the specific nature of ambivalent Ps, that makes their syntactic behavior different from that of “simple” prepositions.

There are several ways of how postpositional word order may be obtained. Here, I adopt a derivational perspective.

One way is to derive postpositional order from an “unmarked” prepositional order via movement of the complement to the Spec-PP ([P NP] → [NP P]). The same movement step is involved in the analysis of preposition stranding proposed in (Bošković 2004) based on ideas of (van Riemsdijk 1978). Yet, if a PP has just one layer of P-structure as shown in (23), this movement would violate Abels’ ALC.

(23) One-layer structure of PP

\[
\text{Spec} \quad P' \quad P_0 \quad \text{NP}
\]

An alternative derivational account could postulate more structure in a PP (cf. analyses proposed in Koopman 1997 and Bošković 2005). Say, a PP is dominated by a functional projection, say, FP, and it is to the Spec-FP where the complement moves, thus deriving a [NP P] order without violating ALC. However, as noted by the anonymous reviewer, in this case one should state that FPs are phases, and PPs headed by ambivalent Ps are not, which is not a desirable conclusion, since it either implies that some Ps induce phases and others don’t or that no PP is a phase, which ruins all the argumentation about the impossibility of P-stranding with “simple” prepositions.

A way out of this problem is to postulate more structure dominated by a PP. It can be noted that there is an implicational relationship between “ambivalence” of an adposition and its morphological complexity. In fact, all ambivalent Ps are morphologically complex (it is not true vice versa: there are morphologically complex prepositions which are not ambivalent, cf. soglasno). Most, if not all, ambivalent Ps are historically derived from nouns (radi according to some etymologies, cf. Vasmer 1950–1959), verbs (spustja is a converb form of the verb spustiti) or preposition-noun combinations (navstreču < na vstreču ‘on meeting’, vsled < v sled ‘in trace’). So, there may be some nominal or verbal projections intervening between PP and complement NP. Consider, for example, a possible structure of a PP headed by the ambivalent adposition nazlo in (24).
It seems plausible to say that “simple” prepositions project the structure in (23) and ambivalent Ps (in their postpositional usages) — one similar to that in (24). It may be also possible that an ambivalent PP can be dominated by some FP: while Spec-PP serves only as an escape hatch, Spec-FP is responsible for postpositional uses of ambivalent Ps.

What is crucial, anyway, is the fact that a phrase headed by an ambivalent P is easier to split when this head is used postpositionally (cf. 22). The next sections address the issue of why prepositional structures are sometimes harder to split than postpositional ones.

### 4.2. How to split a PP

Whatever structure of PPs headed by ambivalent Ps is, it is still hard to analyze “postposition stranding” facts in (18b), (19b) and (20b) as true extraction out of a PP. As it was already noted, PPs headed by ambivalent Ps are adjuncts and, hence, subject to CED. (Note that CED can still explain certain effects with ambivalent Ps, for example, those illustrated in (21).)

My proposal is that b-examples in (18)–(20) are result not from extraction out of a PP but from copying of a whole PP and distributed (scattered) deletion of the copies. Consider, for example, derivation of (19b) in (25).

(25) \( \text{Step A:} \) [ nazlo komu ] to.spite whom

(25) \( \text{Step B:} \) [ komu nazlo ] whom to.spite

(25) \( \text{Step C:} \) [ komu nazlo ] ty èto sdelal [ komu nazlo ] whom to.spite you this did whom to.spite

(25) \( \text{Step D (PF):} \) [ komu nazlo ] ty èto sdelal [ komu nazlo ] whom to.spite you this did whom to.spite

Suppose that, as shown in (25), the ambivalent P in the split phrase in (18b) is used postpositionally. The relevant hypothesis is stated in (26).
Distributed deletion must preserve relative ordering of lexical items in a PP.

Cf. a descriptive generalization from (Fanselow and Čavar 2005) stating that PP-splits, derived via distributed deletion, in which word order is not the same as in a corresponding continuous PP, are ill-formed. Note that similar generalization is not true for Russian NP-splits, if they are believed result from distributed deletion, cf. no contrast in grammaticality between (27) and (28).

(27) [Kakuju mašinu] on kupil [kakuju mašinu]? which car he bought which car ‘What car did he buy?’

(28) [Krasnuju mašinu] on kupil [krasnuju mašinu]? red car he bought red car ‘He bought a red car’.

The constraint in (26) does not allow phrases headed by “simple” prepositions to show adposition stranding effects even under distributed deletion (cf. ungrammaticality of (1b), (2b) and (3b)): in a continuous phrase “simple” prepositions always precede their complements, and this relative ordering cannot change.

A seeming contradiction to (28) is illustrated in sentences of type (6)–(7) in which the surface word order in split PPs is inverted. However, split PPs in (6)–(7), unlike those headed by ambivalent Ps, can be derived by true extraction. If it is really so, the contrast between (6)–(7) and (21) can be explained. Being an adjunct, split PP in (21) cannot be derived by extraction. As (6)–(7) and (21) differ in grammaticality, it is natural to hypothesize that these splits have different derivational nature. It seems that if a PP can be inversely split, it signals that the process involved is definitely not distributed deletion.

The linear constraint on distributed deletion (together with CED) also yields ungrammaticality of (22a). Again, the PP in (22a) is an adjunct, hence, the only possibility to split it is distributed deletion (possible derivation shown in (29a)) which is blocked by a linear constraint in (28). Cf. (22b) which is grammatical since it is allowed by (26), derivation shown in (29b).

(29) a. Step A: [radi čjego blagopolučija] for whose prosperity

Step B: [radi čjego blagopolučija] ty èto sdelal [radi čjego blagopolučija] for whose prosperity you this did for whose prosperity

Step C (PF); ruled out by (27): * [radi čjego blagopolučija] ty èto sdelal [radi čjego blagopolučija] for whose prosperity you this did for whose prosperity

b. Step A: [radi čjego blagopolučija] for whose prosperity

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Step B:
[ čjego blagopolučija radi]
whose prosperity for

Step C:
[ čjego blagopolučija radi] ty èto sdelal [čjego blagopolučija radi]
whose prosperity for you this did whose prosperity for

Step D (PF):
[ čjego blagopolučija radi] ty èto sdelal [čjego blagopolučija radi]
whose prosperity for you this did whose prosperity for

4.3. Why ordering in a PP should be preserved

To explain the linear constraint on distributed deletion PP-splits formulated in (26), I will use a slightly modified version of the theory of cyclic linearization developed in (Fox and Pesetsky 2005).

Fox and Pesetsky (2005) argue that the Spell-out applies cyclically to pieces of a syntactic structure called Spell-out domains (a notion similar to Chomsky’s (2001) phases). The rule in (30) constraints possible linear orderings at Spell-out:

(30) Order Preservation
Information about linearization, once established at the end of a given Spell-out domain, is never deleted in the course of a derivation.

The rule in (30) correctly predicts PIC effects. For example, the syntactic unit Y cannot move in one fell swoop out of the Spell-out domain [X Y Z]λ, since this movement would result in the ordering Y > X > Z which contradicts the ordering in the Spell-out domain A: X > Y > Z. To move out of this Spell-out domain, Y needs first to move to its edge (cf. PIC) before Spell-out, so that the ordering in A first becomes Y > X > Z. Another possibility for Y to escape A is to move together with Y (X Y [tX tY Z]A), so that the relative ordering (X > Y > Z) is preserved.

In the copy-theoretical version of this theory, Order Preservation (30) ignores lower copies (traces). In the modification used in this paper, lower copies play a very important role in linearization.

I argue that units Order Preservation cares about are lexical items. If a certain phrase moved, at the point of Spell-out either one of the two copies of a moved phrase must be deleted at PF, or both copies must be affected by distributed deletion to escape ordering contradiction.

Russian PPs are Spell-out domains. Order Preservation requires that relative ordering of lexical items in a PP cannot be rearranged in the course of a derivation. That means that if distributed deletion applies to a PP, the relative ordering of its elements must stay intact, in other words. Thus, constraint in (26) is just a particular case of Order Preservation.

Consider the sketch of cyclic Spell-out of (19b) in (31)\(^3\): In a very much the same way, all split PPs headed by ambivalent Ps are cyclically linearized.

\(^3\) For convenience, in (30) and forth Spell-out of VP/vP is ignored.
A phrase headed by a “simple” preposition cannot exhibit adposition stranding effect even under distributed deletion, since it causes an ordering contradiction: $P > NP$ at the PP Spell-out of the PP vs. $NP > P$ at the CP Spell-out. Consider cyclic Spell-out of (1) sketched in (32):

(32) PP Spell-out:

[$[o \ \check{\text{\v{c}}em}]$

about what

$o > \check{\text{\v{c}}em}$

CP Spell-out:

[* [$<\check{\text{\v{c}}em}]$ ty govoriš [$o \ \check{\text{\v{c}}em}$]

about what you talk about what

$\check{\text{\v{c}}em} > ty > govoriš > o$ (ordering contradiction)

Thus, it can be predicted that distributed deletion is not at work in sentences like (6–7) which receive a natural analysis in terms of extraction out of a PP.

However, it is not to say that PPs headed by “simple” Ps can never be split in a distributed deletion way. Consider sentences like (33). In these sentences a phrase headed by a “simple” preposition is split, but the ordering of the lexical items in a split PP is the same as it was in a continuous phrase. Therefore, there is a possibility of analyzing these splits as derived with the help of distributed deletion⁴, cyclic Spell-out sketched in (34).

(33) O kakoj ty govoril devuške?

about which you talked girl

‘Which girl were you talking about?’

(34) PP Spell-out:

[$[o \ kakoj \ devuške]$]

$o > kakoj > devuške$

CP Spell-out:

[$[o \ kakoj \ devuške]$ ty govoril [$o \ kakoj devuške]$]

$o > kakoj > ty > govoril > devuške$ (no ordering contradiction)

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⁴ See (Bošković 2005) for other possibilities.
4.4. Unsolved problems

Although the constraints on extraction out of PPs seem clear (PIC or Order Preservation; ALC, CED, etc.), the constraints on distributed deletion of PPs are still questionable. The latter must include Order Preservation (this was shown in the previous subsection), however, they can’t be limited to it. For example, a preposition cannot be “stranded” to the right of its complement (35), even though nothing that was said so far could rule these cases out.

(35) a. * [O čem] ty govoriš [čem]
   about what you talk about what
   Intended: ‘What are you talking about?’, cf. (1) and (34).

   b. * [nazlo komu] ty èto sdelal [komu]
      to.spite whom you this did to.spite whom
      Intended: ‘To spite whom have you done it?’, cf. (19b) and (31).

Both in (35a) and in (35b) Order Preservation is respected. The explanation of their ungrammaticality remains issue for further investigation.

Another problem comes from the fact that not all the PPs headed by ambivalent adpositions can be split. For example, the adposition spustja ‘after’ may take its complements either to the right or to the left, but does not demonstrate stranding effects, cf. (36) and (37).

(36) a. spustja dva časa
    after two hours

   b. dva časa spustja
      two hours after
      ‘two hours later’

(37) * Skolko časov ty prišel spustja
    how.many hours you came after
    Intended: ‘How many hours later id you come?’

It was noted to me the anonymous reviewer that a similar situation occurs in Slovenian: there are ambivalent Ps that can be stranded but there are also those which can’t.

This issues I leave for future research.

5. Conclusion

Split prepositional phrases in Russian follow at least two different patterns. There are splits that are derived through direct extraction out of a PP, but there are also those that result from distributed deletion of copies of a whole PP.

A distributed (scattered) deletion analysis helps to shed light on several Russian phenomena including “postposition stranding”. However, the analysis proposed here doesn’t presume that distributed deletion is blocked by more economical options (for example, fewer instances of deletion, cf. (18–20)), contrary to what is claimed in (Bošković 2001, Nunes 2004 and Bošković and Nunes 2007).

I tried to show that distributed deletion is constrained by linearization principles, namely, by a version of Fox and Pesetsky’s (2005) Cyclic Linearization theory: linear ordering, once
established in a Spell-out domain, cannot change throughout the derivation. As this requirement should be compatible with distributed deletion analysis, units being ordered are taken to be not heads and phrases, but lexical items. It seems that the version of Cyclic Linearization theory used in this paper would account for all facts that are accounted for by the original Fox and Pesetsky’s version. Moreover, it renders possible to make new specific predictions including, though not limited to those about the word order in constructions with split PPs.

Note that distributed deletion analysis is only needed to account for the possibility of splitting adjunct PPs, i.e. to escape CED violations. If CED is not taken seriously, there would be no need to postulate distributed deletion and the described facts would receive a rather straightforward account within standard Cyclic Linearization theory.

References


