Russian Gerundive Gaps as Topic Drop[*]

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The paper proposes a novel analysis of adjunct gaps in Russian that have previously been analyzed as true parasitic gaps. I propose that adjunct gaps result from ellipsis triggered solely by the topichood of the object. Focusing on gaps in gerundive adjuncts, I show that the properties they display are identical to those of non-adverbial topic drop. Ellipsis of arguments under certain discourse conditions is independently attested in the language and is used as a topic marking strategy. I argue against the PG analysis of Russian adjunct gaps and for the superiority of the topic drop analysis.

Keywords: *topic drop, parasitic gaps, gerunds, Russian*

1   Introduction

English sentences in (1) are canonical examples of the Parasitic Gap (PG) construction.

(1) a.   *Which articles did John file without reading?*
     b.   *This is the kind of food you must cook before eating.*

Russian has constructions seemingly parallel to the English examples in (1):

(2) a.   *Kakije pis'ma Olja   sožgla   [ne   pročitav]?*
          which   letters Olya   burned   neg.   read-PERF.PRTC
          'Which letters did Olya burn without reading?'
     b.   *Kakoje bljudo on   [ne   poprobovav]   vybrosil?*
          which   dish   he   neg.   taste-PERF.PRTC   threw-away
          'Which dish did he throw away without tasting?'

The bracketed phrase in (2) which corresponds to the English *without*-adverbial is referred to here as a 'gerund'.[1] It minimally includes a negated verb in the form of perfective or imperfective participle and a gap. Gerundive phrases function as adverbial modifiers of the matrix verbal phrase; structurally they are VP-adjuncts.

Despite the apparent similarity between (1) and (2), there are important differences. One of the core properties of true PGs is that they are licensed by an antecedent in an A'-position.[2] The examples in (3), in which the antecedent remains in situ, are ungrammatical without the overt pronoun in the adjunct.

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[1] Babby and Franks (1998) refer to these phrases as 'adverbial participles' pointing out that that the terms 'gerund' and 'verbal adverb' are also applicable to them.

[2] To be precise, in Chomsky (1982) it was assumed that the PG becomes a variable at S-structure locally bound by the operator of the real gap. On Chomsky's (1986) account which I consider in section 6.1, PG constructions involve two independent chains: the antecedent chain and the PG chain.

(3) a. *John filed a bunch of articles without reading *(them).*
    b. *John filed which articles without reading *(them)?*
    c. *Who filed which articles without reading *(them)?*

The core distinction between PGs in English and their Russian counterparts, noted in Ivlieva (2006), is that the latter are not dependent on overt wh-movement of the antecedent. (4) show that Russian gerundive gaps can refer back to an in situ antecedent.

(4) a. *Petja sžeg (èti) pis'ma, ne pročitav.*
       Peter burned these letters neg. read-PERF. PRTC
       *'Peter burned these letters without reading.'
    b. *Petja sžeg kakije pis'ma, ne pročitav?*
       Peter burned which letters neg. read-PERF.PRTC
       *'Peter burned which letters without reading?'
    c. *Kto sžeg kakie pis'ma, ne pročitav?*
       who burned which letters neg. read-PERF.PRTC
       *'Who burned which letters without reading?'

(4a) is perfect; sentences of this kind are widely used both in colloquial and written register. Sentences in (4b) and (4c) are good provided special context and intonation.

An in situ wh-phrase ('letter' in (5a), 'article' in (5b)) can also license a gap in finite adjuncts:

(5) a. *Olja sožgla pis'mo, posle togo kak pročitala.*
       Olya burned the-letter after that how read-3SG.F.PAST
       'Olya burned the letter after she had read it.'
    b. *Oleg vnimatel'no pročital stat'ju pered tem kak*
       Oleg attentively read article before that how
       otoslal v redakciju.
       send-3SG.M.PAST in publishers
       'Oleg had attentively read the article before he sent it to the publishers.'

(5) should be compared with the English (6) from Engdahl (1983). In the latter wh-movement of the antecedent is required.[3]

(6)   *This is the kind of food you must cook t before you eat pg.*

Ivlieva (2006), argues that the adjunct gaps in (2), (4) and (5) are truly parasitic and result from null operator movement. On this analysis, the only difference between the Russian adjunct gaps and the gaps in English is that the former can be licensed by covert movement of the antecedent to the topic projection in the left periphery of the matrix clause. I will present arguments against this analysis in section 6.

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[3] Emonds (2001), fn 6, however, points out that PG constructions parallel to (6) are ungrammatical if the subject in the adjunct is a full DP and the verb is unambiguously transitive:
(i) a. *These are the tools that I broke before Mary sold cheap.*
    b. *Which articles did she file if the boss put to the side?*
    c. *Here's the editor who we sent your manuscript to just after Mary contacted.*

In this contribution I propose an alternative analysis of adjunct gaps in Russian. The claim defended in this paper is that Russian adjunct gaps are not parasitic and are better accounted for as instances of topic drop. Although the empirical domain of the analysis is primarily gerundive adjuncts, other kinds of adjuncts are considered as well. The structure of the paper is as follows: section 2 outlines the main properties of Russian topic drop in non-adverbial contexts. In section 3 I show that gerundive gaps have properties of topic drop found elsewhere. In sections 4 and 5 I consider the behavior of topic drop in both adverbial and non adverbial contexts and offer an explanation in terms of the topic drop analysis. Section 6 shows the superiority of the topic drop analysis of adjunct gaps over the PG analysis. The conclusion ends the paper.

2   Topic drop in non adverbial contexts

This section is devoted to a discussion of topic drop in Russian in non-adverbial contexts and its core properties. I show later on that the same properties hold of adjunct gaps as well.

2.1   The notion of topic drop

By topic drop I mean deletion at PF (ellipsis) of an argument triggered solely by topichood. Following Reinhart (1981), I define a topic as an element with respect to which the truth value of the sentence is determined. Russian has been traditionally referred to as a discourse oriented language where processes like movement and ellipsis can be triggered by discourse factors (Franks 1995, King 1995, McShane 2002). Franks (1995) uses the notion of 'discourse ellipsis' as a descriptive term that broadly covers deletion of a variety of contextually recoverable elements (arguments, verbs, COMP elements), without committing himself either to formal mechanisms involved in this process or to specific discourse factors that allow it. The present proposal combines Frank's analysis of discourse ellipsis in Russian and the ideas in Erteschik-Shir (2007) regarding the topic status of the dropped elements. Importantly, the proposal highlights the discourse dependency of dropped objects. This property has been consistently mentioned but has remained theoretically unexplained within the syntactic analyses of dropped objects cross-linguistically (Huang 1984, Raposo 1986, Xu 1986, Farrell 1990).

For the purposes of this paper the discussion of topic drop is limited to object topics, and the term 'topic drop' refers to null objects of obligatorily transitive verbs. Some of the verbs in the Russian examples in this paper (for ex., *read*) can be used intransitively (7).

(7)   a.   *Olja   čitaet   knigu.*
          Olya   read-IMPRF.PRES book
          'Olya is reading a book.'
       b.   *Olja   bystro   čitaet.*
          Olya   quickly read-IMPRF.PRES
          'Olya can read quickly.'

To control for this situation, I use these verbs in perfective form, in which case they become resistant to transitivity loss (8).

(8) a.   *Olja   pročitala   knigu.*
         Olya   read-PERF.PAST book
         'Olya read a book.'
     b.   **Olja   bystro   pročitala.*
         Olya   quickly read-PERF.PAST
         intended: 'Olya could read quickly.'

Topic drop is registered in Russian independently and is widely used in the language as means of marking topic elements. In Russian, topics can also be marked by movement (topicalization, scrambling), pronominalization and intonation (deaccenting). A combination of different strategies is also possible as shown in the following section.

2.2   Discourse recoverability

Topic drop applies to an element whose precise identity is recoverable from the discourse and is part of the common knowledge of the speaker and the hearer. The important property of a dropped topic (likewise a pronominalized topic) is its anaphoric relation to a discourse salient antecedent. Such an antecedent can be either overtly represented in the preceding discourse or situational. In (9) the most embedded object has an overt antecedent, namely the matrix object 'course paper', therefore the object can optionally drop.

(9) *Ja   ne   sdala   kursovuju,   potomu čto   vremeni*
     I   neg.   hand-in-PAST course-paper   because that   time
     ne   bylo   (jejë)   dopisat'.
     neg. was   it-3SG.F   to-write-PERF
     'I haven't handed in the course paper, because I haven't had time to finish writing it.'

The object in the 'because' clause in (9) can also be realized as an overt deaccented pronoun. Russian is an SVO language. However, there is a preference for using pronominal topic objects preverbally. (9) therefore illustrates all possible topic marking strategies in Russian: topic drop (in case the object drops) and a combination of pronominalization, deaccenting and dislocation (in case the object is realized as a pronoun).

The object can be a topic not only when it has been previously mentioned in the discourse. Extralinguistic means, like seeing the object or hearing it, provide the speakers with sufficient information about the object and allow it to become the topic of the discourse. (10) show that a topic whose antecedent is situational can pronominalize or drop altogether.

(10) a.   [a woman enters home and shows a purchase to her family]
          Vot,   kupila   (èto)   po-deševke.
          here   bought-1SG.F.PAST   it   prep.cheap
          'Here, I bought it cheaply.'
     b.   [listening to music]
          Vam   (èto)   nravitsja?
          you   it   like
          'Do you like it?'

2.3 Restrictions on topic drop

Topic drop in Russian is not absolutely free; it is subject to a number of restrictions some of which are still poorly understood. One of these restrictions is that in certain contexts topic drop is disallowed in the presence of an overt non-contrastive subject.[4] In the answer to the question in (11), for instance, an overt pronoun is required.

(11) Q: *Petja   ljubit   jejë?*
          Peter   loves   her
      A: *Da,   Petja/on   ljubit   *(jejë).*
          yes   Peter/he   loves   her

Acceptability of topic drop improves dramatically if the clausemate subject is null. This is shown in (12a) which is a possible answer to the question in (11). Contrasting the subject as in (12b) (capital letters are used to show accentuation, indicating contrast) also has an ameliorating effect on topic drop. The presence of other contrastive elements in the sentence as in (12c) where the verbs are contrasted together with the subjects, further improves topic drop.

(12) a. *Da,   ljubit.*
          yes   loves-3SG.M.PRES
          'Yes, he loves her.'

      b. *Net,   no   OLEG (jejë)   ljubit.*
          no   but   Oleg   her   loves

      c. *PETJA/ON (jejë)   LJUBIT, a   JA   (jejë)   NENAVIŽU*
          Peter/he   her   loves   but I   her   hate

Obligatory anaphoric linking of a topic to a discourse antecedent predicts that the topic, pronominal or dropped, cannot precede its antecedent. Thus the sentence in (13) with topic drop or an overt pronoun in the first conjunct is infelicitous when pronounced out of the blue or as an answer to the question 1. It is fine in the context of question 2 which contains the antecedent.

(13) Q1: *Čto   slučilos'?*
           'What happened?'
      Q2: *Otkuda   èta   kniga?*
           from-where   this   book
           'Where is this book from?'

           Petja   vzjal   (jejë) v   biblioteke, i   prines   jejë/ètu knigu   domoj.
           Peter   took   it   in library   and brought it/this book   home
           'Peter took it in the library, and brought it/this book home.'

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[4] Rögnvaldsson (1990) observes that a similar restriction is operative in Modern Icelandic. According to Rögnvaldsson, topic objects in Icelandic are obligatorily topicalized before they are deleted. The restriction therefore is due to the impossibility of an object to move to a topic position occupied by the overt topic subject. It remains unclear however why only overt subjects, but not null (pro) subjects, necessarily occupy the topic position blocking topicalization of the object.

One can ask why topic drop in (13) is possible in the presence of the overt clausemate subject. The answer is that the subject in this sentence is (part of) the focus. Focused elements must remain overt, just like contrastive elements. Therefore topic drop in (13) is acceptable for a reason similar to that we observed in (12b).

Summing up, in this section it has been shown that topic drop is productive in Russian. Among its important properties are its anaphoric linking to the discourse salient antecedent, its inability to precede its antecedent and its dependency upon the presence of an overt subject.

3   Properties of gerundive gaps

The purpose of this section is to show that Russian gerundive gaps display properties that are identical to those of non-adverbial topic drop.

The null object in the gerund must have a discourse salient antecedent. The latter generally appears in the matrix clause containing the gerund:

(14) *Direktor   vernul   mojë   zajavlenije,   ne   podpisav.*
      director   returned my   application   neg.   sign-PERF.PRTC
      'The director returned my application without signing it.'

The antecedent can also be separated from the gap by a number of clauses:

(15) *–Ja   slučajno   vybrosila   tvojë   pis′mo. Ty ne serdišsja?*
      I   unintentionally threw-away   your   letter   you neg. angry
      'By accident, I threw away your letter. Are you angry?'

      -Èto pravda? Vybrosila,   daže   ne   pročitav?
       this truth   threw-away-2SG.PAST   even   neg.   read-PERF.PRTC
      'Is it true? Did you throw it away without even reading it?'

The gerundive gap, just like the non-adverbial dropped object, is also good with an extralinguistic antecedent.

(16) [somebody is trying on a new shirt, which is too tight on him]
      Čto, kupil   ne   primeriv?
      what bought-2SG.PAST   neg.   try-on-PERF.PRTC
      'Did you buy it without trying it on?'

Similarly to topic drop, the gerundive gap cannot precede its antecedent. In (17) the gerundive adjunct is positioned before the matrix VP. The answer in (17), with either the gap or the pronoun, is infelicitous when uttered out of the blue (in response to question 1). However, it is acceptable as an answer to question 2, which provides an antecedent for the object topic.

(17) Q1: *Čto   slučilos′?*
           'What happened?'
      Q2: *Gde kniga, kotoruju my podarili Olegu (na denj roždenija)?*
           'Where is book that we presented Oleg (on his birthday)?'

> *Oleg,* [*ne* *pročitav* *(jejë)* *(ni* *razu)],*
> Oleg neg. read-PERF.PRTC it part. once
> *otnjes* *(ètu)* *knigu* *k* *bukinistu.*
> took-away this book to bookseller
> 'Oleg took this book to the bookseller without reading it (even once).'

The last property I consider is the dependency on the overt clausemate subject. In section 2.3 I showed that non adverbial topic drop is restricted in the presence of the overt subject ((11A) vs (12a)). The same restriction holds of the topic embedded in an adjunct. Simple gerundive phrases are subjectless; therefore, the problem of the overt subject does not arise. The blocking effect of the overt subject is visible only when the gap appears in a finite adjunct. Observe the contrast in the minimal pairs in (18) and (19).

(18) a. *Olja* *sožgla* *pis'mo,* *posle* *togo* *kak* *pročitala.*
Olya burned letter after that how read-3SG.F.PAST
'Olya burned the letter after she had read it.'

b. *Olja* *sožgla* *pis'mo,* *posle* *togo* *kak ona* *pročitala* **(jego).*
Olya burned letter after that how she read-3SG.F.PAST it
'Olya burned the letter after she had read it.'

(19) a. *Oleg* *vnimatel'no* *pročital* *stat'ju* *pered* *tem* *kak*
Oleg attentively read article before that how
otoslal *v* *redakciju.*
send-3.SG.M.PAST in publishers
'Oleg had attentively read the article before he sent it to the publishers.'

b. *Oleg* *vnimatel'no* *pročital* *stat'ju* *pered* *tem* *kak* *on*
Oleg attentively read article before that how he
otoslal **(jejë)* *v* *redakciju.*
send-3SG.M.PAST it in publishers
'Oleg had attentively read the article before he sent it to the publishers.'

An overt subject is present only in the even sentences in (18) and (19). As a result, the object in these examples must also be overt. In the odd sentences both the object and the subject in the adjunct are null.

The overt subject restriction is also operative in a finite clause embedded within the gerundive adjunct. Russian speakers report the contrast between the sentences in (20). The most embedded object can only drop in a subjectless finite clause as in (20b). When the subject is overt, the object is necessarily realized as an overt pronoun (20a).

(20) a. *Oleg* *iskal* * key* *vsjë* *utro,* [*tak i* *ne*
Oleg looked-for key all morning so and neg.
vspomniv [*čto* *on* *zabyl* **(jego)* *doma]].*
recall-PERF.PRTC that he forgot it at-home
'Oleg was looking for the key all morning without having recalled that he forgot it at home.'

b. *Oleg* *iskal* *key* *vsjë* *utro,* [*tak i* *ne*
Oleg looked-for key all morning so and neg.
vspomniv [*čto* *zabyl* *(jego)* *doma]].*
recall-PERF.PRTC that forgot-3SG.PAST it at-home
'Oleg was looking for the key all morning without having recalled that he forgot it at home.'

The data in (18) through (20) indicate that adjunct gaps behave similarly to dropped topics with respect to the overt subject restriction.

To sum up, in this section I have shown that gerundive gaps have properties of non-adverbial topic drop: they must refer back to a discourse antecedent, they cannot precede their antecedent and they are restricted in the presence of an overt clausemate subject. In the next two sections I will discuss other properties of topic drop. I show that these properties further support the topic drop analysis of adjunct gaps in Russian.

4   Case parallelism condition

This section is devoted to a discussion of a case parallelism condition. This condition requires that the gap and the antecedent bear the same case. It has been established that case parallelism is essential for licensing of PGs in Hungarian (Horvath 1992, É. Kiss 2001). It has also been argued that the condition holds of true PGs in Polish (Bondaruk 2000). The reader is referred to the mentioned works for examples and extensive discussion. The question we must consider here is whether case parallelism is relevant to Russian topic drop.

4.1   Case *in*compatibility (finite adjuncts)

Regarding Russian, Franks (1993) claims that sentences that look like PGs are subject to a 'morphological compatibility' requirement. This means that the adjunct gap and its antecedent can differ in case marking as long as the morpho-phonological form of the gap, if it were overt, corresponds to that of the antecedent. The pair in (21), Franks' (33) and (34a), is supposed to demonstrate the impact of the requirement. The gap appears in the finite temporal adjunct.

> (21) a.   mal'čik, *kotoromu/*kotorogo   Maša   davala   den'gi e
> boy   who(DAT)/(GEN)   Masha(NOM) gave   money
> do togo, kak (ona) stala   izbegat' e, …
> until   (she) started to-avoid
> 'the boy who Masha gave money to until she started to avoid him'
>
> b.   devuška,   kotoroj   Ivan   daval den'gi e do togo, kak
> girl   who(DAT-GEN) Ivan(NOM) gave money   until
> (on)   stal   izbegat'   e, …
> (he)   started to-avoid
> 'the girl who Ivan gave money to until he started to avoid her'

Franks' explanation proceeds as follows: In (21) the antecedent 'boy' which bears DAT case is relativized from the object position of *davat'* 'give'. The verb *izbegat'* 'avoid' governs GEN. (21a) is ungrammatical because there is no idiosyncratic form of the masculine relative pronoun that corresponds to both DAT and GEN. In contrast to (21a), (21b) is good because the phonological form of the feminine relative pronoun bearing DAT case is identical to that in GEN case.

Two comments regarding the data in (21) are due here. To begin with, the verb *izbegat'* 'avoid' assigns GEN only to inanimate objects (22a), whereas animate objects selected by *izbegat'* 'avoid' receive ACC case (22b).[5]

(22) a.   on *izbegal*   voprosa-SG.M.GEN/problemy-SG.F.GEN
          he avoided question   problem
     b.   on *izbegal*   mal'čika-SG.M.ACC/devušku-SG.F.ACC
          he avoided boy   girl

The ACC form of singular masculine and singular feminine relative pronouns differs from the DAT form. Compare:

(23) a.   kotoromu-SG.M.DAT   vs   kotorogo-SG.M.ACC
     b.   kotoroj-SG.F.DAT   vs   kotoruju-SG.F.ACC

This means that on Franks' analysis both sentences in (21) must be ungrammatical.

Secondly, Russian speakers, including myself, judge both sentences in (21) good, provided the embedded bracketed subject is omitted and the relative pronoun is DAT.

Observe further that the version of (21) without relativization of the matrix object is fine:

(24) *Ivan daval jemu/ jej   den'gi,   do togo kak   stal*
     Ivan gave   him-DAT her-DAT money   until   started
     (jego)/   (jejë)   izbegat'
     him-ACC/her- ACC   to-avoid
     'Ivan gave him/her money until he started to avoid him/her.'

Finally, the object of 'avoid' can also drop in non-adverbial context:

(25) *Snačala   Ivan   daval   jemu/jej   den'gi, a   potom stal*
     at-first   Ivan   gave   him/ her   money but   then   started
     izbegat'   (jego)/(jejë).
     to-avoid   him/ her
     'At first, Ivan gave him/her money, but then started to avoid him/her.'

The conclusions so far are as follows: morphological compatibility/case parallelism does not restrict adjunct gaps. Moreover, topic drop in the adjunct is allowed independently of whether the antecedent is dislocated or remains in situ. Importantly, a dropped topic that differs in case from its antecedent is allowed in parallel non-adverbial contexts as well. I will continue using the comparison between adverbial and non-adverbial topic drop in the rest of this section and in the next section to fortify the argument against the parasitic nature of adjunct gaps.

4.2 Case *in*compatibility (gerundive adjuncts)

In the previous section it has been shown that case parallelism/morphological compatibility is irrelevant to topic drop in finite clauses. A similar situation is observed in gerundive adjuncts. Morphological identity does not restrict the gerundive gaps in (26)

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[5] Franks apparently missed this peculiarity of the verb 'avoid' which was the cause of an error in his analysis.

and (27) where the gerund governs ACC case and the matrix verb governs DAT. The (b) examples show topic drop in parallel non-adverbial contexts.

(26) a. *On   ne   daval   ej   poblažek,   vospityvaja*
         he   neg.   gave   her-DAT indulgence   bring-up-IMPRF.PRTC
         (jejë)   strogo.
         her-ACC   strictly
         'He didn't indulge her, bringing her up strictly.'

     b. *On   ne   daval   jej   poblažek,   i   vospital*
         he   neg. gave   her-DAT indulgence   and   bring-up-3SG.PAST
         (jejë)   v   strogix   pravilax.
         her-ACC   in   strict   rules
         'He didn't indulge her, and brought her up by using strict rules.'

(27) a. *On otkazyval   jej   vo   vsëm,   lišaja*
         he refused   her-DAT in   everything   deprive-IMPRF.PRTC
         (jejë)   kakix-libo   udovol'stvij.
         her-ACC   any   pleasures
         'He refused everything to her, depriving her of any pleasures.'

     b. *On   otkazyval   jej   vo   vsëm,   i   lišal*
         he   refused   her-DAT in   everything and   deprived
         (jejë)   vsex   udovol'stvij.
         her-ACC   all   pleasures
         'He refused everything to her, and deprived her of all pleasures.'

(28) shows that topic drop in the gerund is grammatical despite the fact that the matrix object is INSTR, and the dropped object is ACC. The sentence is good if uttered in a situation which forces a topic reading.

(28) *On   rešyl   vospol'zovalsja priborom,   predvaritel'no   ne*
     he   decided to-use   device-INSTR   previously   neg.
     počiniv   (jego).
     repar-PERF.PRTC   it-ACC
     'He decided to use the device without having repaired it.'

Again, observe the parallelism with topic drop in a non-adverbial context:

(29) *–Ja   uže   mogu   vospol'zovalsja priborom?*
     I   already can   to-use   device-INSTR
     'Can I already use the device?'
     -Net, ja   ešče   ne   počinil   (jego).
     no   I   yet   neg.   repair-1SG.PAST it-ACC
     'No, I haven't repaired it yet.'

   The conclusion of the discussion in this section is that morphological parallelism, and, more generally, case compatibility, do not restrict adjunct gaps in Russian. An in situ antecedent allows for topic drop regardless of case marking in both adverbial and non-adverbial contexts.

5 Adjunct gaps in passives

This section discusses the properties of adjunct gaps in passive sentences. It will be shown that the topic drop analysis of adjunct gaps in Russian meets the challenge of accounting for their behavior while the PG analysis falls short when explaining it.

5.1 An apparent problem

It is well known that in English NP-movement in passive and raising constructions cannot license PG. This is illustrated with the relevant examples in (30) from Engdahl (1983).

(30) a. *John was killed by a tree falling on *pg/ him.*
     b. *Mary seemed to disapprove of John's talking to *pg/ her.*

English raising constructions of the kind (30b) are missing in Russian, therefore the discussion here is limited to passive sentences. (31) are ungrammatical either with the gap or the pronoun after the gerund.

(31) a. *Resul'taty   byli   opublikovany   ne   proveriv   (ix).*
        results   were   published   neg. check-PERF.PRTC them
        *'The results were published without checking them.'
     b. *Statja byla   pročitana (studentami)   ne   ponjav   (jejë).*
        article was   read   students-INSTR neg. understand-PERF.PRTC it
        *'The article was read by the students without understanding it.'
     c. *Pis'mo bylo   otoslano   ne   zapečatav   (jego).*
        letter was   sent   neg. seal-PERF.PRTC   it
        *'The letter was sent without sealing it.'

On the PG analysis, (31) are ruled out by the lack of wh-movement in the matrix clause (Engdahl 1983). The question is why they are ungrammatical under the topic drop analysis. Nothing has been said so far about topic drop that can rule out these sentences. It has been argued here that topic drop in the gerund does not depend on movement of the antecedent. Topic drop therefore must also be blind to the kind of movement (wh – movement or NP-movement) of the antecedent. The ungrammaticality of (31), I argue, is unrelated to topic drop, and its reason lies in the failure of control into the gerund.

5.2 Obligatory subject control

Babby and Franks (1998) observe that in Russian the understood gerundive subject is canonically controlled by the matrix subject.[6] In (32), their (2), the subject of 'return' must be *you*, and cannot be *wife*.

(32) *Čto ty₁ skažeš žene₂ [vernuvšys'₁/*₂ domoj tak pozno]PG?*
     'What do you say to your wife when you return (*she returns) home so late?'

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[6] Extensive discussion of grammatical relations in constructions with gerundive adverbials can be found in Ickovič (1982), ch. 7. As is explained there, sentences in which the gerund is controlled by an element other than the nominative subject are 'not normative' and are generally deviant. The exception is parenthetical ("independent") gerundive phrases which include: *učityvaja* 'considering', *isxodja* 'assuming (that)', *ne sčitaja* 'not considering', *imeja v vidu* 'taking into account' and some others. Parenthetical gerunds are not discussed in this paper.

Horvath (1992) also notes that the independent problem of control is the reason for the contrast between (33a) and (33b), her (22). In the grammatical (b), but not in (a), there is a controller for the adjunct PRO subject.[7]

(33) a.   *The papers were lost before [PRO reading them]
                                    [PRO talking to the secretary]
       b.   We thought that the papers were lost before [PRO reading them]
                                    [PRO talking to the secretary]

Considering this, the problem in (31) is the impossibility of either the passivized inanimate argument or the demoted logical subject to function as the controller.[8]

The next question to ask is whether topic drop is allowed in passive sentences where the control problem is neutralized. Crucially, there is a clear contrast between (31) and (34). The passivized subject 'he' in (34) not only can, but in fact must be the controller of the gerund.

(34) *On   byl   lišen   premii,   ne   dokazav*
       he   was   deprived-of premium-GEN neg.   prove-PERF.PRTC
       *čto   byl   dostoin *(jejë)   polučit'.*
       that   was   worthy   it-ACC   to-receive
       'He was deprived of the premium without having proved that he was worthy of receiving it.'

Although in (34) the control problem is eliminated and the sentence is grammatical, the object embedded in the gerundive phrase in this sentence can only be realized as an overt pronoun. Topicalization of the antecedent does not improve grammaticality; Russian speakers I consulted judge topic drop in (35) as bad as in (34).

(35) *Premii   on   byl   lišen,   ne dokazav   čto*
       premium-GEN   he   was   deprived-of neg. prove-PERF.PRTC that
       *byl   dostoin *(jejë)   polučit'.*
       was   worthy   it-ACC   to-receive
       'He was deprived of the premium without having proved that he was worthy of receiving it.'

Recall that case compatibility is irrelevant to topic drop. The badness of (34) and (35) therefore cannot be blamed upon this factor. The legitimate question (34) raises is why the object cannot drop altogether.

Recall that in the previous section we observed that grammaticality of topic drop in adverbial context parallels grammaticality of topic drop in the corresponding non adverbial context. In this light, consider the question-answer pairs in (36) and (37) which

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[7] On Horvath's (1992) analysis gerundive phrases in English are clauses that have a PRO subject. Babby & Franks (1998) argue that Russian gerunds are bare VPs that are directly predicated of the matrix subject. I abstract away from these differences here and use the term 'control' loosely.

[8] It is not inanimacy *per se* that makes the passivized objects bad controllers in (31). Inanimate NPs can control into the gerund:

(i) *Poezd pribyl   na stanciju ne   opozdav   (ni   na minutu).*
     train arrived on station neg. be-late-PERF.PRTC part. on minute
     'The train arrived to the station without being late (even for a minute).'
     The problem is rather the semantic incompatibility between the controller and the gerund.

correspond to the situation described in (34). The examples differ in that in (37) the case of the pronoun in the answer is identical to that of the antecedent in the question. In (36) the pronoun and the antecedent bear different case. In both examples the pronominal object in the answer cannot drop.

(36) Q: *Počemu vy   lišili   Ivanova premii?*
        why   you   deprived-of   Ivanov premium-GEN
        'Why did you deprive Ivanov of the premium?'
     A: *On   ne   dokazal čto   byl   dostoin *(jejë)   polučit'.*
        he   neg.   proved that   was   worthy it-ACC to-receive
        'He did not prove that he was worthy of receiving it.'

(37) Q: *Vy   dali   Ivanovu   premiju?*
        you   gave   Ivanov-DAT   premium-ACC
        'Did you give Ivanov the premium?'
     A: *Net,   on ne   dokazal čto   byl dostoin   *(jejë)   polučit'.*
        no   he neg.   proved that   was worthy   it-ACC to-receive
        'No, he did not prove that he was worthy of receiving it.'

Now consider the example (38). It demonstrates that the demoted IMSTR subject in passives cannot serve as an antecedent of topic drop.

(38) *Olja byla   nakazana   (roditeljami)   ne*
     Olya was   punished   parents-INSTR neg.
     *ubediv   *(ix)   v   svojej   pravote*
     convince-PERF.PRTC them-ACC   in   self   rightness
     'Olya was punished by her parents without having convinced them that she was right.'

In (38), the object of *ubedit'* 'convince' refers back to the demoted subject 'parents'. Despite the availability of the overt antecedent, the gerundive object must be realized as an overt pronoun.
    The object of 'convince' cannot drop also in the parallel non-adverbial context:

(39) Q1: *Počemu Olja   byla   nakazana   roditeljami   tak strogo?*
         why   Olya   was   punished   parents-INSTR so   strictly
         'Why was Olya punished by her parents so strictly?'
     Q2: *Počemu Olja   tak   rasserdila   roditelej?*
         why   Olya   so   make-angry   parents-ACC
         'Why did Olya make her parents so angry?'
     A: *Ona   ne   ubedila   *(ix)   v   svojej   pravote.*
         she   neg. convinced   them-ACC in   self   rightness
         'She did not convince them she was right.'

The sentence in (39) can be the answer either to Q1, or Q2. The direct object in the answer must be overt irrespective of the case marking of the antecedent.
    (40) shows parallel sentences where the situation is reverse. In (40a) the ACC object of 'convince' refers back to the DAT argument of 'hand' and is embedded in the gerund. In (40b) the object is part of the second conjunct. In both sentences topic drop is allowed.

(40) a.　*On　　vručil　　im　　　　　priglašenije,　　ne　　ubediv*
　　　　he　　　handed　they-DAT　invitation-ACC　neg.　convince-PERF.PRTC
　　　　(ix)　　odnako　　prjti　　na　　večerinku.
　　　　them-ACC　however　　to-come　on　　party
　　　　'He handed them the invitation failing to convince them to come to the party.'

　　　b.　*On　　vručil　　im　　　　　priglašenije,　　no　　ne*
　　　　he　　　handed　they-DAT　　invitation-ACC　but　　neg.
　　　　ubedil　　　　　　　(ix)　　　prjti　　na　　večerinku.
　　　　convince-PERF.PRTC　them-ACC　　to-come　on　　party
　　　　'He handed them the invitation, but he didn't convince them to come to the party.'

The examples in (38) through (40) show that there is consistency in the behavior of topic drop: if it is allowed in non-adverbial context, it is allowed in the adjunct. This can hardly be explained under a PG analysis of the gaps. A full explanation of the conditions on topic drop awaits a more detailed analysis of topic drop outside of the PG context. I leave it for future research.

Before concluding this section, I wish to refer to the question raised by an anonymous reviewer who asks if the reason for the ungrammaticality of topic drop with the INSTR antecedent in (38), (39) can be structural. The underlying assumption is that the antecedent NP in (38), (39) which corresponds to the English 'by-phrase' receives instrumental case from a null P head, i.e. the antecedent NP is embedded in the PP. The answer to this question is negative because the NP complement of overt preposition can antecede topic drop. This is illustrated in (41) and (42) from the National Corpus of Russian Language (NCRL).[9]

(41) *Xozjajka　　vyšla　　k　　　　gostju …, i　　ne　　priglasiv*
　　　hostess　　　went-out　towards　guest　　and　neg.　invite-PERF.PRTC
　　　sest',　prjamo　　　načala　　s　　　　voprosa …'
　　　to-sit　right-away　　began　　with　　question
　　　'The hostess went out towards the guest, and without inviting him to sit down, she started right away with the question …'
　　　　　　　　　　　　　　　　　　　(F. Dostoyevsky 'The Brothers Karamazov', 1880)

(42) *Stalin …vspomnil　　o　　njëm　liš　v　načale　　1938 goda,*
　　　Stalin　　remembered　about　him　　only　in　beginning　1938 year
　　　priglasiv　　　　　　v　　Kreml' …'
　　　invite-PERF.PRTC　in　　Kremlin
　　　'Stalin … remembered about him only in the beginning of 1938 inviting him into the Kremlin …'
　　　　　　　　　　　　　　　(R. Medvedjev, 'Yosif Stalin and Yosif Apanasenko', 2003)

In both sentences the dropped direct object of 'invite' refers back to the NP which is a complement of the preposition. I conclude therefore that the reason for the ungrammaticality of topic drop in (38), (39) cannot be structural.[10]

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[9] In (41) the adjunct is dislocated to the left peripheral position in the second conjunct. This does not affect the analysis defended here.

[10] For a more extensive discussion of dropped objects with oblique antecedents see McShane (2005).

6 Alternative analysis of adjunct gaps

In this section I discuss in more detail Ivlieva's (2006) analysis of adjunct gaps that was mentioned in the introduction. I show that this proposal suffers from both theoretical and empirical shortcomings and cannot ultimately account for the nature of Russian adjunct gaps. A Topic drop analysis can do better.

6.1 The essence of Ivlieva (2006) proposal

On Ivlieva's (2006) proposal, the adjunct gaps in (43) and (44) are truly parasitic. She adopts Chomsky's (1986) analysis according to which PG constructions include two chains: the licensing chain in the matrix clause formed by wh-movement of the antecedent and the null operator chain in the adjunct. Under this analysis the two chains are combined in LF by the rule of Chain Composition for the purposes of interpretation. I will refer to it as the Chain Composition analysis. Thus the sentences in (43a) and (44a) have the schematic LF representation in (43b) and (44b) respectively.

(43) a. *Kakije pis'ma Olja sožgla [ne pročitav]?*
     which letters Olya burned neg. read-PERF.PRTC
     'Which letters did Olya burn without reading?'

   b. $[_{CP}$ antecedent$_1$ .... $[_{VP}$ .... $t_1]$ $[_{Adjunct}$ OP$_1$ ......pg$_1]]$

(44) a. *Petja sžeg (èti) pis'ma, ne pročitav*
     Peter burned these letters neg. read-PERF.PRTC
     *'Peter burned these letters without reading.'

   b. $[_{CP}$ OP$_1$ .... $[_{VP}$ ..... antecedent$_1]$ $[_{Adjunct}$ OP$_1$ ......pg$_1]]$

The important distinction between (43) and (44) is that in the former the dislocated antecedent binds its trace in the matrix object position. In (44) the in situ matrix object is bound by the null topic operator in SpecCP forming a covert A'-chain. This distinction, combined with the fact that in both sentences the adjunct gap is grammatical, led Ivlieva to the conclusion that in Russian PGs can be licensed by covert movement of the antecedent. The analysis crucially relies on the availability of the licensing A'-chain in the matrix clause.

On the analysis proposed here the adjunct gap in (44), and by extension in (43), is not parasitic, it is an instance of topic drop. The argument for topic drop analysis and against the Chain Composition analysis proceeds in two steps: first, I show that the adjunct gap cannot be a result of a null operator movement; second, I show the inconsistency of covert movement licensing.

6.2 Topic drop is not a variable

The null operator movement analysis of gerundive gaps predicts that the gap is ungrammatical if it is embedded in a gerund-internal island. In English the PG cannot appear in an island within the adjunct that contains it. This is shown in (45) from Emonds (2001) (e=PG).

(45) a. *Which guest did John criticize t while recalling $[_{DP}$ the fact that Sue supported e]?*

b.   *Which one did Bill encourage t without saying [CP where he would publicly support e]?

The topic drop analysis does not make such a prediction. In fact, this analysis predicts that ellipsis of the topic object embedded in an island is possible provided all conditions on topic drop are satisfied. This prediction is born out.

In (46) the gerundive phrase includes a finite interrogative clause. The sentence is grammatical despite the fact that topic drop occurs within the adjunct-internal wh-island.

(46)   *On razobral   pribor na časti,   ne   podumav   predvaritel'no*
       he took-to-pieces device on parts   neg. think-PERF.PRTC in-advance
       kak   soberët   (jego) obratno.
       how assemble-3SG.FUT   it   back
       'He broke the device to pieces, without having thought first about how he would put it together.'

In (47), topic drop occurs in an adjunct-internal complex NP.

(47)   *On   razobral   pribor na časti, ne   učityvaja*
       he   took-to-pieces device on parts neg. take-into-account-IMPRF.PRTC
       tot   fakt čto   ne smožet   potom sobrat'   (jego).
       that fact that neg. will-be-able then   to-assemble it
       'He took the device to pieces, without taking into account the fact that he will not be able to put it together.'

Note that grammaticality of the gap in (46) and (47) automatically excludes the derivation suggested by the anonymous reviewer where the object is deleted after it is topicalized to the edge of the gerundive phrase. Topicalization in Russian respects locality constraints. Observe:

(48)   **Ètot pribor, on učel   tot   fakt čto   ne   smožet*
       this   device he took-into-account that   fact   that neg. will-be-able
       sobrat'.
       to-assemble
       'This device, he took into account the fact that he would not be able to put it together.'

There is an additional reason to reject the null operator movement analysis of gerundive gaps. Russian gerundive adjuncts differ structurally from their English counterparts. In English the adjuncts are analyzed as clausal complements of the preposition 'without'. Franks (1995) presents a number of arguments for that Russian gerundive adverbials are maximally VPs and lack a CP and a TP projection.[11] Assuming this is correct, there is no projection within the gerundive phrase that can host the null operator.

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[11] An anonymous reviewer points out that the presence of negation in the gerund is evidence for a clausal structure of the gerundive phrase. To get around this problem, I will tentatively assume that the particle *ne* is constituent negation and is part of the verbal phrase.

6.3 The problem of covert movement licensing

The second question I address is whether covert movement can license PGs. In this connection it will be instructive to see what the situation is regarding covert movement licensing in a broader cross-linguistic perspective.

As (49) show, the in situ phrase in English is unable to license the PG. The sentences are ungrammatical without an overt pronoun in the adjunct.

(49) a. *John filed which articles without reading *(them)?*
b. *Who filed which articles without reading *(them)?*

The only proposal known to me on which covert wh-movement can license PGs in English is Nissenbaum (2000). Nissenbaum discusses sentences of the kind in (50), his (2a), where the adjunct gap associated with the in situ wh-phrase is acceptable.[12]

(50) *?Which senator$_1$ did you persuade _$_1$ to borrow which car$_2$ after getting an opponent of _$_{pg1}$ to put a bomb in _$_{pg2}$?*

Nissenbaum's theory predicts that the in situ wh-phrase can be a licit PG licensor only in restricted cases where overt movement of the wh-phrase in question is banned by the presence of a structurally higher wh-phrase. English is not a multiple wh-fronting language, therefore in (50), for instance, overt wh-movement must target the structurally higher *which senator* in accordance with the Minimal Link Condition (Chomsky 1995), and *which car* must remain in situ.[13] Without going into further details of Nissenbaum's theory, note that it is designed to account for a situation which is different from that we have in Russian. To begin with, Russian is a multiple wh-fronting language, allowing overt movement of more than one wh-phrase. Secondly, and more importantly, in Russian, unlike in English, a single in situ wh-phrase can license the gap in the adjunct as is shown in example (4b), rewritten as (51). Note the contrast between the acceptable Russian sentence and its ungrammatical English translation.

(51) *Petja   sžeg   kakije   pis'ma, ne   pročitav?*
Peter   burned   which   letters neg.   read-PERF.PRTC
*'Peter burned which letters without reading?'

I should mention here another precedent from the relevant literature. Wahba (1995) claims that covert wh-movement can license PGs in Jeddah Arabic. The data in (52) are presented in the abovementioned paper to support this claim.

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[12] Fox and Pesetsky (2009) gives a version of (50) in (i) which is marked totally grammatical.
    (i) *Which senator did John let t drive which car after asking opponents of t to put a bomb in t?*
An anonymous reviewer remarks that her informant finds both (50) and (i) marginal and 'barely interpretable'. Perhaps this can be attributed in part to the relevant complexity of the examples.
[13] Pesetsky (1987) however shows that superiority effects are ameliorated in D-linked contexts, (i) is his (28b):
    (i) *Which book$_j$ did you persuade which man to read e$_j$?*
Interestingly, Soowon (2001) reports that in certain D-linked contexts PG can be licensed by the overtly dislocated lower which-phrase. (ii), his (47), are fairly grammatical compared to (3b,c) in the text:
    (ii) a. *(?)Which book did which man file t without reading pg?*
        b. *(?)Which salads did which guests order t without eating pg?*

(52) a. *Mona ɣaarat   min miin*ᵢ *ʕašaan [ʕomar*ⱼ *yebɣa [PRO*ⱼ

       Mona was jealous of   whom because Omar   wants

       *yetjawwaz pg*ᵢ*]]*

       to-marry

       'Of whomᵢ was Mona jealous eᵢ because Omar wants to marry *pg*ᵢ?'

   b. *ʕali darab miin*ᵢ *ʕašaan biyekra pg*ᵢ *?*

       Ali hit   whom because he-hates

       'Whoᵢ did Ali hit eᵢ because he hated pgᵢ?'

In (52a) and in (52b) the gap in the adjunct is related to the in situ wh-phrase *miin* 'whom'. Arabic productively employs the in situ strategy in interrogatives. At first blush, (52) indeed support the claim in Wahba that PGs in Arabic are not dependent on overt movement of the antecedent. However, two things of importance should be noted here. First, the example in (52b), as well as similar sentences, was definitely rejected by all native speakers of Palestinian Arabic I randomly asked. Second, although judgments regarding (52a) diverged, the sentence has an additional problem not considered in Wahba. The problem is that the verb 'marry' can be used intransitively in Arabic. The sentence therefore cannot be a valid proof that PGs are licensed by covert movement.

    Languages like Chinese and Japanese provide us with clear evidence that covert wh-movement cannot license PGs. In these languages true interrogative sentences are formed by covert movement of the wh-phrase which obligatorily remains in situ. As (53) from Lin (2005) shows, covert wh-movement fails to license the PG in Chinese.

(53) **Laowang [zai huijian pg*ᵢ *zhiqian] jiu   kaichu-le shei*ᵢ*?*

     Laowang at   meet   before   already fire-PERF who

     'Who did Laowang fire before meeting?'

In contrast with (53), the PG in (54) where the wh-phrase is topicalized is grammatical.

(54) *Shei*ᵢ *Laowang [zai huijian pg*ᵢ *zhiqian] jiu   kaichu-le e*ᵢ*?*

     who Laowang at meet   before   already fire-PERF

     'Which person is it who Laowang fired before meeting?'

    Similarly to Chinese, Japanese also disallows covert movement licensing of PGs. The pair of examples in (55) from Takahashi (2006) shows that the gap in the subject phrase is ungrammatical in the true interrogative sentence (55a). The gap is acceptable when the matrix object is dislocated by focus movement (55b).

(55) a. *?*[Hazimete   e au hito]-ga   dare-o   kenasimasu ka?*

       for-the-first-time   see person-Nom who-Acc   criticize   Q

       'Who do people who see for the first time criticize?'

   b. *[Hazimete   e au hito]-ga t   kenasu no-wa   dare-o   desu ka?*

       for-the-first-time see person-Nom criticize that-Top who-Acc is   Q

       'Who is it that people who see e for the first time criticize t?'

    In sum, the data from different languages presented in this section support the conclusion that true PGs can be licensed only in the presence of overt A'-movement of the antecedent. Ivlieva's proposal that defends covert movement licensing can therefore not be maintained because, on the one hand, it postulates unjustified covert movement

of the PG licensor and on the other hand, it cannot explain why in languages that have covert wh-movement, such movement cannot license PGs.

6.3   The lack of the licensing chain

I started this section with the conjecture that the Chain Composition analysis is untenable for Russian constructions with adjunct gaps. Gerundive adjuncts are especially illuminating in understanding why this is so. The PG analysis requires that an A'-licensing chain be present in the matrix clause. Without such chain the PG is predicted to be ungrammatical. In light of this requirement, consider the sentence in (56) from the NCRL.

(56)   *Tak   čto,   ne   podpisav,   požaluj   vovse   ne   vyjdeš.*
       so   that   neg.   sign-PERF.PRTC probably at-all neg. leave-2SG.FUT
       'You will probably not leave at all without signing it.'

The sentence appears in a context where a police official fails to convince a prisoner to sign a document. The obligatorily transitive verb *podpisat'* 'sign' is followed by a gap. Note that the missing gerundive object in (56) does not have any antecedent in the matrix clause. The identity of the object however is easily recovered from the discourse. (57) is yet another example from NCRL, that shows the same point:

(57)   *Raskol'nikov načal   ponimat',   čto   on, možet byt', ploxo sdelal,*
       Raskolnikov began   to-understand that   he may   be   badly acted
       ugovoriv   perenesti   sjuda   razdavlennogo.
       convince-PERF.PRTC to-carry   here   crashed
       'Raskolnikov started to realize that he perhaps acted badly convincing them to carry the crashed man here.'

                                        (F. Dostoyevsky, 'The Brothers Karamazov', 1880)

In (57) the antecedent of the dropped direct object of *ugovorit'* 'convince' is missing, but it is discourse available. Recall that discourse linking is one of the properties of topic drop. A topic drop analysis therefore can account for the gerundive gap in (56) and (57) while the PG analysis fails to do so.

Summing up, in this section I showed that the PG analysis of Russian gerundive gaps (as well as the version proposed in Ivlieva 2006) is untenable. This analysis crucially relies on movement of the linguistic antecedent that must be present in the sentence containing the gap. Since adjunct gap in Russian is constrained neither by movement of the antecedent nor by its presence in the sentence, the PG analysis encounters a severe problem in explaining its grammaticality.

7   Conclusion

In this paper I argue that the gap in adjunct phrases in Russian results from ellipsis of an object triggered by topichood and cannot be analyzed as parasitic. I concentrate primarily on gerundive gaps and show that their properties are identical to that of topic drop found elsewhere. In fact, the properties that hold of true parasitic gaps in other languages do not hold of Russian adjunct gaps. Certain cases appear to be restricted by well-known parasitic gap constraints, but even these are explained in a better way as cases of topic drop.

In Russian, adjunct gaps are independent of movement of the antecedent, and, in fact, do not require the antecedent to be present in the sentence at all. This property underlies the argument against the PG analysis of Russian gaps.

I leave for future research the question of the implications of the present account for other languages where topic drop is allowed.

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