

# RUSSIAN GERUNDIVE GAPS AS TOPIC DROP<sup>1</sup>

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In this paper I propose a novel analysis of adjunct gaps in Russian. Whereas such gaps have previously been analyzed as parasitic gaps, I argue that they result from ellipsis of an object triggered solely by its topichood. Topic drop is independently registered in Russian and is widely used as a topic marking strategy in the language. Focusing on gaps in gerundive phrases, I show that the properties they display are identical to those of non-adverbial topic drop and cannot be accounted for under either a topic operator analysis or a V-stranding VP-ellipsis analysis. Finally, I show the superiority of the topic drop analysis of Russian adjunct gaps over the Chain Composition analysis.

## 1 Setting the Stage

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 parallel to English (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 poprobavav] vybrosil?  
which dish he neg. taste.*perf.prtc.* threw-away  
'Which dish did he throw away without tasting?'

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<sup>1</sup> This paper is a part of a bigger project on topic drop conducted under the guidance of prof. Nomi Erteschik-Shir in Ben Gurion University of the Negev. I wish to thank Nomi Shir and Sharon Taube for the fruitful discussions and helpful suggestions.

The bracketed phrase in (2), referred to as a 'gerund', corresponds to the English *without*-adverbial. 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.<sup>2</sup>

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 (are 'parasitic' upon) the *wh*-trace of the antecedent. The examples in (3), in which the matrix clause contains no *wh*-trace, are ungrammatical without the overt pronoun in the adjunct.

- (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 the presence of a *wh*-trace. (4) show that Russian gerundive gaps can refer back to an *in situ* antecedent.

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

(4)a is perfect; sentences of this kind are widely used both in colloquial and written register. Sentences (4)b and (4)c are only good as echo questions provided special context and intonation. An *in situ* antecedent can also license a gap in finite adjuncts:

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

<sup>2</sup> Ickovič, 1982 notes that the spectrum of usage of the gerundive phrases in Russian is much broader; they can also modify infinitives, participles and nouns. The present analysis is restricted to gerundive adjuncts that modify finite verb phrases.

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 gerundive adjunct gaps in Russian and their English counterparts is that the former can be licensed by covert movement of the antecedent.

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 present evidence against alternative analyses of object gaps in non adverbial contexts. Section 4 shows that gerundive gaps have properties of topic drop found elsewhere. In sections 5 I discuss the case parallelism condition and show that this condition is irrelevant for topic drop. Section 6 focuses on the behavior of object gaps in passive sentences. I offer an explanation of this behavior in terms of the topic drop analysis. Section 7 shows the superiority of the topic drop analysis of adjunct gaps over the Chain Composition analysis (Chomsky, 1986). This section is followed by a conclusion.

## 2 Topic Drop in Russian

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 What is Topic Drop?

By topic drop I mean deletion at PF (ellipsis) of an argument triggered solely by topichood. 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 verbs in Russian, e.g., *čitat'* 'read', can be used intransitively (6).

- (6) a. Olja čitaet knigu.  
Olya read.*imprf.pres.* book  
'Olya is reading a book.'
- b. Olja bystro čitaet.  
Olya quickly read.*imprf.pres.*  
'Olya reads quickly.'

To control for this situation, I use optionally transitive verbs and gerunds formed from these verbs in perfective form and only in episodic contexts. Perfective verbs are resistant to transitivity loss (7).

- (7) a. Olja pročitala knigu.  
 Olya read *perf.past.* book  
 'Olya read a book.'
- b. \*Olja bystro pročitala.  
 Olya quickly read *perf.past*  
 'Olya 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 be also marked by movement (topicalization, scrambling), pronominalization and intonation (deaccenting). A combination of different strategies is also possible. In the following section I discuss properties of topic drop in Russian.

## 2.2 Properties of Topic Drop

Topic drop applies to an element whose identity is recoverable from the discourse and which 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 antecedent can be either overtly represented in the preceding discourse or situational. In (8) the most embedded object has an overt antecedent, namely the matrix object 'course paper', therefore the object can optionally drop.

- (8) a. Ja ne sdala kursovuju, potomu što vremeni ne bylo  
 I neg. hand-in.past course-paper because that time neg. was  
 (eje) dopisat'.  
 it.SG.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 (8) 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. (8) 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. (9) show that a topic whose antecedent is situational can pronominalize or drop altogether.

- (9) a. [a woman enters home and shows a purchase to her family]  
 Vot, kupila (eto) po-deševke.  
 here bought<sub>1SG</sub> it prep. cheap  
 'Here, I bought it cheaply.'

- b. [listening to music]  
 Vam (èto) nraivitsja?  
 you it like  
 'Do you like it?'

The fact that topic drop in Russian does not require a linguistic antecedent helps us to distinguish it from VP-ellipsis. The latter, according to Hankamer and Sag, 1976, and Gribanova, 2011, among others, crucially depends on the presence of a corresponding VP in the preceding context. Arguments against VP-ellipsis analysis of missing objects in Russian will be presented in section 3.

### 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. In the answer to the question in (10), for instance, an overt pronoun is required.

- (10) Q: Kak Igor' otnositsja k Maše?  
 how Igor relate.refl. to Masha  
 'How does Igor feel towards Masha?'

- A: (Ja dumaju), Igor'/on ljubit \*(jeë).  
 I think Igor/he loves her

The acceptability of topic drop improves dramatically if the clausemate subject is null. This is shown in (11)a which is a possible answer to the question in (10). Contrasting the subject as in (11)b (capital letters are used to show accentuation, indicating contrast) also has an ameliorating effect on topic drop.<sup>3</sup>

- (11) a. Ja dumaju, ljubit (jeë).  
 I think loves her
- b. Naščet IGORJA - ne znaju, a PETJA ljubit (ejë).  
 on-score Igor neg. know.1SG but Peter loves her  
 'Regarding Igor, I don't know, but Peter loves her.'

Topic drop is also tolerated with an overt subject when it is quantificational. Sentences with an object gap and a quantificational subject are common in Russian. This is illustrated with (12) and (13) from the National Corpus of the Russian Language (NCRL).

<sup>3</sup>Anticipating the discussion of V-stranding VP-ellipsis in section 3, it is worth noting here that VP-ellipsis is not a possible derivation for (11). VP ellipsis requires the verbs in both the antecedent VP and elided VP to have identical selectional properties (Otani and Whitman, 1991). This requirement is not observed in (11).

- (12) Stalo byt', kto-nibud' našel na polu? – Ili iz karmana poxitił!  
 became be someone found on floor or out-of-pocket stole  
 'Can it be that someone found **it** on the floor? – Or stole **it** from the pocket?'  
 F. Dostoyevsky "The Idiot" (1869)

- (13) ... ejë iskali djadja Ljenja, ded, daže mama, ja  
 her searched<sub>3PL</sub> uncle Ljenja grandfather even mom I  
 proboval triždy. Nikto ne našel ni razu.  
 tried three-times. Nobody neg. found prtl. once  
 '... uncle Ljenja, grandfather and even mom searched for her, I tried three times.  
 Nobody found **her** even once.'

'Znamja' (2000)

In contrast to (12) and (13), the direct object of 'find' does not drop in the presence of a non-quantificational overt subject. The search in the NCRL did not yield a single positive result. Quantificational subjects, like *kto-nibud'* 'someone', *nikto* 'nobody' are not topics, therefore, they cannot drop.

The overt subject restriction on topic drop seems to be a correct descriptive generalization for Russian. Although I have no explanation for it yet, I will use the restriction as a diagnostic for object topic drop in section 4 below.

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 (14) 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.

- (14) Q1: Čto slučilos?  
 'What happened?'

- Q2: Otkuda èta kniga?  
 from-where this book  
 'Where is this book from?'

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

One can ask why topic drop in (14) 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 (14) is acceptable for a reason similar to the one we observed in (11)b.

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 a discourse salient antecedent, its inability to precede its antecedent and its dependency upon the presence of an overt subject.

### 3 Alternative Accounts

In this section I consider two proposals regarding the nature of the missing objects. According to the first proposal the gapped object is a variable bound by a topic operator. According to the second analysis the missing object results from ellipsis of the entire VP containing it. I reject both these analyses for Russian.

The Operator movement analysis, as it is known, was originally proposed to account for null objects in Chinese (Huang, 1984), and adopted, among other languages, for E(uropean) P(ortuguese) (Raposo, 1986). In Chinese and EP, similarly to Russian, gapped objects are discourse anaphors, i.e. they require a discourse antecedent (either linguistic or situational). The null objects in these languages obey island constraints. (15) is an example from EP (Raposo, 1986, 18) which shows that the gap within the sentential subject is ungrammatical even if the antecedent of the null object is discourse available:

- (15) \*Que a IBM venda  $e_i$  a particulars surpreende-me.  
'that IBM sells  $e_i$  to private individuals surprises me'

The fact that object drop is sensitive to islandhood provides evidence for the operator movement analysis according to Raposo. Topic drop in Russian, as I show below, can occur within an island, provided that a topic reading of the missing object is forced by the context, and that the conditions on topic drop are satisfied. The evidence for operator movement that follows from the EP data therefore doesn't hold in Russian.

The second analysis, termed V-stranding VP-ellipsis (V-stranding VPE), posits that a null object results from ellipsis of the VP/vP which contains the object. This analysis crucially relies on movement of a lexical verb out of the VP before the latter is targeted by ellipsis. V-stranding VPE has been proposed to account for null objects in Hebrew (Doron, 1990, 1999, Goldberg, 2005), Finnish (Holmberg, 2001), Chinese (Otani and Whitman, 1991)<sup>4</sup> and Irish (McCloskey, 1991). A version of this account has been argued for in Gribanova, 2011 for Russian.

According to Gribanova, finite lexical verbs in Russian undergo short movement out of the VP to an aspectual projection (AspP) below IP.<sup>5,6</sup> The availability of short verb movement opens up the possibility that V-stranding VPE also exists in Russian. It has been notoriously difficult to distinguish between VP-ellipsis and a dropped object since both result in identical surface forms. Gribanova proposes a combination of two diagnostics to tease apart these constructions. The first diagnostic is based on the observation in Hankamer and Sag, 1976 that VP-ellipsis only applies if an antecedent VP is present in the preceding discourse. Missing objects, however, can be licensed when the antecedent is situational. (16) and (17), her (40) and (37) respectively, are both good, but only (17), according to the first diagnostic, is a case of topic drop.

<sup>4</sup> But see Soowon, 1999 for an alternative view.

<sup>5</sup> For short verb movement of finite verbs in Russian see Bailyn, 1995.

<sup>6</sup> It has been argued that AspP projects above the vP only when it is headed by a superlexical perfectivizing prefix. Lexical (i.e., meaning changing) perfectivizing prefixes project within the VP (Svenonius, 2004, Romanova, 2004). It is therefore not obvious that movement to AspP necessarily drives the finite verb out of the VP.

- (16) Kažetsja, čto nikto ne podnjaj tu vazu.  
 seem.<sub>3SG.RRFL</sub> that no one.<sub>NOM</sub> NEG *under*-hold.<sub>SG.M</sub> that.<sub>ACC</sub> vase.<sub>ACC</sub>  
 'It seems that no one picked up that vase.'

Tot fakt, čto nikto ne podnjaj, menja očēn' ogorčajet.  
 the fact that no-one neg. *under*-hold.<sub>3SG</sub> me.<sub>ACC</sub> very upsets.<sub>3SG</sub>  
 'The fact that no one picked it up very much upsets me.'

- (17) [something falls; no one wants to get it]  
 Ne vstavaj. Sejčas pridēt papa, poprosim ego podnjat' \_.  
 NEG get-up.<sub>2SG</sub> now come.<sub>3SG.FUT</sub> dad ask.<sub>1PL.FUT</sub> him.<sub>ACC</sub> *under*-hold.<sub>INF</sub>  
 'Don't get up. Soon dad will come, we'll ask him to pick it up.'

The second diagnostic employs the different behavior of VP-ellipsis and missing objects in islands. Ellipsis can target a VP embedded in an island. In the same environment an object whose antecedent is situational is only marginally possible. (18), her (36), should be compared with (17).

- (18) [something falls; no one wants to get it]  
 # Tot fakt, čto nikto ne podnjaj, menja očēn' ogorčajet.  
 the fact that no-one neg. *under*-hold.<sub>3SG</sub> me.<sub>ACC</sub> very upsets.<sub>3SG</sub> *Intended:*  
 'The fact that no one picked it up very much upsets me.'

Due to the contrast between (17) and (18), Gribanova concludes that missing objects result from movement of a null operator.

Regarding the first diagnostic, I agree with Gribanova. The validity of the second diagnostic, however, is undermined by the example in (19) from the NCRL.

- (19) A možet sygral rol' tot fakt [čto kogda vozila na privivku neskol'ko  
 and maybe played role that fact that when drive.<sub>1SG.PAST</sub> on vaccination a-few  
 dnej nazad, ostavila odnu v čužoj komnate], ona až zaplakala.  
 days back left.<sub>1SG.PAST</sub> alone in strange room, she even cry<sub>3SG.PERF.PAST</sub>  
 'Maybe played the role the fact that when I took **her** to be vaccinated a few days ago I  
 left **her** alone in a strange room; she even started to cry.'

(19) appeared in a discussion in a forum of pet-lovers. A concerned dog-owner speculates about the cause of her pet's depression. The two gapped objects within the logical subject phrase refer back to the discourse topic (the dog). The rightmost gap is a direct object of 'leave', the leftmost dropped object is embedded in the adjunct clause.

Neither of the gaps in (19) can result from VP-ellipsis for two reasons. First, there is no VP-antecedent in the preceding context (diagnostic 1). Second, it is known that VP-ellipsis deletes all VP-internal material. This is not what happens in (19). In the VP headed by 'drive' the prepositional phrase 'on vaccination' remained intact, in the VP headed by 'leave' the locative PP argument and the semi-predicate 'alone' are overt. These facts eliminate the VP-ellipsis option for island-internal gaps.



Finally, wh-movement out of either of the gap positions in (19) is ungrammatical. This is shown in (20) which are the simplified versions of (19).

- (20) a. \*Kakuju sobaku sygral rol' tot fakt čto kogda vozila na privivku, opozdala?  
 which dog played role that fact that when drove on vaccination was-late  
 \*'Which dog did the fact that when I drove her to be vaccinated I was late play the role?'
- b. \*Kakuju sobaku sygral rol' tot fakt čto ostavila odnu v čužoj komnate?  
 which dog played role that fact that left alone in strange room  
 \*'Which dog did the fact that I left her alone in a strange room play the role?'

If either of the gaps in (19) were the trace of the null operator, (19) would be as bad as (20), contrary to fact. I conclude therefore that object drop is not a trace of a null operator.

It is still necessary to explain why (18) is marginal. The relative badness of (18) can be explained as follows. With the absence of a linguistic antecedent, the non-linguistic context must force a topic reading of the dropped object. A grammatical result is obtained when such a situation is provided. Five Russian speakers judged (21) good (compare with (18)).

- (21) [pointing on a banknote which is lying on the floor]  
 - Smotri-ka, von tam, na polu. Pojdi podnimi. – Tot fakt, čto do six  
 look part. there on floor go pick-up that fact that till this  
 por ne podnjali, - uže podozritelen. Naverno fal'šyvyje.  
 time neg. picked-up3PL already suspicious probably fake  
 ' - Look, there, on the floor. Go and pick it up. – The fact that until now they didn't pick it up is already suspicious. Probably it is fake.'

In sum, the grammaticality of the island-internal object gap examples presented in this section indicates that object drop in Russian cannot be analyzed either as VP-ellipsis or as a trace of a topic operator.<sup>7</sup> I assume without further argument that the conclusions reached in this section regarding missing objects of finite verbs also hold of gerundive gaps.

## 4 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:

<sup>7</sup> The situation is not unique for Russian. Farrell, 1990 argues against a topic operator analysis of missing objects in Brazilian Portuguese on the basis of facts that are similar to those observed in Russian.

- (22) Direktor vernul mojě *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:

- (23) – Èto novyj ščet za telefon?  
 this new bill for telephone  
 'Is this the new phone bill?'  
  
 -Net, postojal'cy ujexali ne oplativ.  
 no tenants left neg. pay.*perf.prtc.*  
 'No, the tenants left without paying it?'

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

- (24) [showing the unpaid phone bill]  
 Posmotri, postojal'cy ujexali ne oplativ.  
 look<sub>2SG</sub> tenants left neg. pay.*perf.prtc.*  
 'Look, the tenants left without paying it?'

Similarly to topic drop, the gerundive gap cannot precede its antecedent. In (25) the gerundive adjunct is positioned before the matrix VP. The answer in (25), 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.

- (25) Q1: *Čto slučilos'?* What happened?  
 Q2: *A gde kniga, kotoruju my podarili Olegu (na denj roždenija)?*  
 Where is the book that we presented Oleg (on his birthday)?

Oleg, [ne pročítav (jeě) (ni razu)], otnjes (ètu) knigu k bukinistu.  
 Oleg neg. read.*perf.prtc.* it part. once took-away this book to bookseller.  
 'Oleg took this book to the bookseller without reading it (even once).'

The next property I consider is the dependency on an overt clausemate subject. 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 (26) and (27).

- (26) a. Olja sožgla pis'mo, posle togo kak pročitala.  
 Olya burned letter after that how read<sub>3SG.F.PAST</sub>  
 '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<sub>3SG.F.PAST</sub> it  
 'Olya burned the letter after she had read it.'
- (27) a. Oleg vnimatel'no pročital stat'ju pered tem kak  
 Oleg attentively read article before that how  
 otoslal v redakciju.  
 send<sub>3SG.M.PAST</sub> 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<sub>3SG.M.PAST</sub> 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 (26) and (27). As a result, the object in these examples must also be overt. In the grammatical 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 (28). The most embedded object can only drop in a subjectless finite clause as in (28)b. When the subject is overt, the object is necessarily realized as an overt pronoun (28)a.

- (28) a. Oleg iskal ključ vsjë utro, [tak i ne vspomniv  
 Oleg looked-for key all morning so and neg. recall.*perf.prtc.*  
 [čto on zabył \*(jego) doma]].  
 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 ključ vsjë utro, [tak i ne vspomniv  
 Oleg looked-for key all morning so and neg. recall.*perf.prtc.*  
 čto zabył (jego) doma]].  
 that forgot<sub>3SG.PAST</sub> it at-home  
 'Oleg was looking for the key all morning without having recalled that he forgot it at home.'

The data in (26) through (28) 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 a topic drop analysis of adjunct gaps in Russian.

## 5 A Case Parallelism Condition

This section is devoted to a discussion of a case parallelism condition. This condition requires that the parasitic gap and its antecedent bear identical case. It has been established that case parallelism is essential for licensing PGs in Hungarian (Kiss, 2001, Horvath, 1992). It has also been argued that the condition holds of true PGs in Polish (Bondaruk, 2000). The question I wish to consider is whether case parallelism is relevant to Russian topic drop. In the next two sections I show that topic drop is not restricted by case parallelism.

### 5.1 Case Parallelism in Finite Clauses

Regarding Russian, Franks, 1993 claims that sentences that look like PGs are subject to the 'morphological compatibility' requirement, which is a version of the case parallelism condition. The requirement states that the adjunct gap and its antecedent can differ in case marking as long as the morpho-phonological form of the gap, if it is overt, corresponds to that of the antecedent. Franks demonstrates the impact of the requirement with the sentences in (29), his (33) and (34a). In both examples the gap appears in a finite temporal adjunct.

- (29) a. mal'čik, \**kotoromu*/\**kotorogo* Maša davala den'gi e  
 boy who<sub>(DAT)/(GEN)</sub> Masha<sub>(NOM)</sub> 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<sub>(DAT-GEN)</sub> Ivan<sub>(NOM)</sub> gave money until  
 (on) stal izbegat' e, ...  
 (he) started to-avoid  
 'the girl who Ivan gave money to until he started to avoid her'

The sentences differ only on the gender of the antecedent. The contrast in grammaticality is ascribed by Franks to the inventory of morphological case forms for feminine and masculine. Franks' explanation proceeds as follows: the antecedent (*boy/girl*) is relativized from the object position of *davat* 'give' which governs DAT case. The verb *izbegat* 'avoid' governs GEN. (29)a is ungrammatical because there is no form of the masculine relative pronoun that corresponds to both DAT and GEN. In contrast (29)b is good because the phonological form of the feminine relative pronoun bearing DAT case is identical to that of GEN case.

This argument, however, suffers from two problems. To begin with, the verb *izbegat* 'avoid' assigns GEN only to inanimate objects (30)a, whereas animate objects selected by this verb receive ACC case, as shown in (30)b.

- (30) a. on *izbegal* voprosa<sub>M.GEN</sub>/problemy<sub>F.GEN</sub>  
 he avoided question problem

- b. on *izbegal* mal'čika<sub>M.ACC</sub>/devušku<sub>F.ACC</sub>  
 he avoided boy girl

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

- (31) *kotoromu*<sub>SG.M.DAT</sub> vs *kotorogo*<sub>SG.M.ACC</sub>  
*kotoroj*<sub>SG.F.DAT</sub> vs *kotoruju*<sub>SG.F.ACC</sub>

This means that on Franks' analysis both sentences in (29) must be ungrammatical. Secondly, Russian speakers, judge both sentences in (29) good, provided the embedded bracketed subject is omitted and the relative pronoun is DAT.

Observe further that the version of (29) without relativization of the matrix object is fine:

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

(32) demonstrates that the gap in the adjunct is allowed independently of whether the antecedent is dislocated or remains in situ contrary to what Franks' analysis implies. Finally, the object of 'avoid' can also drop in non adverbial context:

- (33) Snačala Ivan daval jemu/jej den'gi, a potom stal izbegat' (jego)/(jejë).  
 at-first Ivan gave him/ her money but then started 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 in Russian. A dropped topic can differ in case from its antecedent in adverbial contexts and in parallel non adverbial contexts. I will continue using the comparison between adverbial and non adverbial topic drop in the next section to fortify the argument against the parasitic nature of adjunct gaps.

## 5.2 Case Parallelism in Gerundive Adjuncts

In the previous section it has been shown that 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 (34) and (35) where the gerund governs ACC case and the matrix verb governs DAT. The (b) examples show topic drop in parallel non adverbial contexts.

- (34) a. On ne daval ej poblažek, vospityvaja (ejě)  
 he neg. gave her<sub>DAT</sub> indulgence bring-up.*imprf.prtc.* her<sub>ACC</sub>  
 strogo.  
 strictly  
 'He didn't indulge her, bringing her up strictly.'
- b. On ne daval ej poblažek, i vospital (ejě)  
 he neg. gave her<sub>DAT</sub> indulgence and bring-up.<sub>3SG.PAST</sub> her<sub>ACC</sub>  
 v strogix pravilax.  
 in strict rules  
 'He didn't indulge her, and brought her up by using strict rules.'
- (35) a. On otkazyval ej vo vsěm, lišaja (ejě)  
 he refused her<sub>DAT</sub> in everything deprive.*imprf.prtc.* her<sub>ACC</sub>  
 kakix-libo udovol'stvij.  
 any pleasures  
 'He refused everything to her, depriving her of any pleasures.'
- b. On otkazyval ej vo vsěm, i lišal (ejě)  
 he refused her<sub>DAT</sub> in everything and deprived her<sub>ACC</sub>  
 vsech udovol'stvij.  
 all pleasures  
 'He refused everything to her, and deprived her of all pleasures.'

(36) 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.

- (36) On rešyl vospol'zovalsja priborom, predvaritel'no ne  
 he decided to-use device<sub>INSTR</sub> previously neg.  
 počiniv (jego).  
 repair.*perf.prtc.* it<sub>ACC</sub>  
 'He decided to use the device without having repaired it.'

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

- (37) -Ja uže mogu vospol'zovalsja priborom?  
 I already can to-use device<sub>INSTR</sub>  
 'Can I already use the device?'
- Podoždi, ešče ne počinili (jego).  
 wait yet neg. repair<sub>3PL.PAST</sub> it<sub>ACC</sub>  
 'Hold on, it hasn't been repaired yet.'

The conclusion of the discussion in this section is that morphological parallelism, and, more generally, case compatibility, do not restrict gerundive gaps in Russian. Parallel behavior of missing objects in adverbial and non adverbial contexts points to their non parasitic nature.

## 6 Adjunct Gaps in Passives

This section discusses the properties of adjunct gaps in passive sentences. I show that the topic drop analysis of adjunct gaps in Russian stands the challenge of accounting for their behavior in passive environment while the PG analysis falls short when explaining it.

### 6.1 A Problem of Control

I start by introducing a set of Russian data which exemplify the use of gerunds in passive environments. The sentences in (38) are ungrammatical either with the gap or the pronoun after the gerund.

- (38) a. \*Resul'taty byli opublikovany ne proveriv (ix).  
 results were published neg. check.perf.prtc. them  
 \*'The results were published without having checked them.'
- b. \*Statja byla pročítana (studentami) ne ponjav (ejë).  
 article was read students.INSTR neg. understand.perf.prtc. her  
 \*'The article was read by the students without having understood 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, (38) are ruled out by the lack of wh-movement in the matrix clause. 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 (39) from Engdahl, 1983.

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

The question regarding (38) is why they are ungrammatical under the topic drop analysis. Nothing that has been said so far about topic drop can rule out these sentences. It has been argued here that topic drop in a 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 (38), I argue, is unrelated to topic drop, and its reason lies in the failure of control into the gerund.





- (43) Premii on byl lišen, ne dokazav što byl dostoin  
 premium<sub>GEN</sub> he was deprived-of neg. prove.perf.prtc. that was worth  
 \*(ejě) polučit'.  
 it<sub>ACC</sub> to-receive  
 'He was deprived of the premium without having proved that he was worth receiving it.'

Recall that case compatibility is irrelevant to topic drop. The badness of (42) and (43) therefore cannot be blamed upon this factor. The legitimate question (42) raises is why the object cannot drop altogether.

In section 5.2 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 (44) and (45) which correspond to the situation described in (42). The examples differ in that in (45) the case of the pronoun in the answer is identical to that of the antecedent in the question. In (44) the pronoun and the antecedent bear different case. In both examples the pronominal object in the answer cannot drop.

- (44) Q: Počemu vy lišili Ivanova premii?  
 why you deprived-of Ivanov premium<sub>GEN</sub>  
 'Why did you deprive Ivanov of the premium?'

A: On ne dokazal što byl dostoin \*(ejě) polučit'.  
 he neg. proved that was worth it<sub>ACC</sub> receive  
 'He did not prove that he is worth receiving it.'

- (45) Q: Vy dali Ivanovu premiju?  
 you gave Ivanov<sub>DAT</sub> premium<sub>ACC</sub>  
 'Did you give Ivanov the premium?'

A: Net, on ne dokazal što byl dostoin \*(ejě) polučit'.  
 no he neg. proved that was worth it<sub>ACC</sub> receive  
 'No, he did not prove that he is worth receiving it.'

Now consider example (46). It demonstrates that the demoted INSTR subject in passives cannot serve as an antecedent for topic drop.

- (46) Olja byla nakazana (roditeljami) ne ubediv \*(ix)  
 Olya was punished parents.<sub>INSTR</sub> neg. convince.perf.prtc. them.<sub>ACC</sub>  
 v svojej pravote  
 in self rightness  
 'Olya was punished by her parents without having convinced them that she was right.'

In (46), the object of *ubedit'* 'convince' refers back to the demoted subject 'parents'. Despite the availability of an 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:

(47) Q1: Počemu Olja byla nakazana roditeljami tak strogo?  
 why Olya was punished parents<sub>.INSTR</sub> so strictly  
 'Why was Olya punished by her parents so strictly?'

Q2: Počemu Olja tak rasserdila roditelje?  
 why Olya so make-angry parents<sub>ACC</sub>  
 'Why did Olya make her parents so angry?'

A: Ona ne ubedila \*(ix) v svojej pravote.  
 she neg. convinced them<sub>ACC</sub> in self rightness  
 'She did not convince them she was right.'

The sentence in (47) 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.

(48) shows parallel sentences where the situation is reverse. In (48)a the ACC object of 'convince' refers back to the DAT argument of 'hand' and is embedded in the gerund. In (48)b the object is part of the second conjunct. In both sentences topic drop is allowed.

(48) a. On vručil im priglašenije, ne ubediv  
 he handed they<sub>DAT</sub> invitation<sub>ACC</sub> neg. convince.*perf.prtc.*  
 (ix) odnako prjti na večerinku.  
 them<sub>ACC</sub> 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 ubedil  
 he handed they<sub>DAT</sub> invitation<sub>ACC</sub> but neg. convince.*perf.prtc.*  
 (ix) prjti na večerinku.  
 them<sub>ACC</sub> to-come on party  
 'He handed them the invitation, but he didn't convince them to come to the party.'

The examples in (46) through (48) 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 adverbial context. I leave it for future research.

## 7 Against the Chain Composition Analysis of Gerundive Gaps

In this section I discuss in more detail Ivlieva's 2006 analysis of adjunct gaps in Russian. I show that her proposal suffers from both theoretical and empirical shortcomings and cannot ultimately account for the nature of adjunct gaps. I start with an overview of Ivlieva's proposal.

## 7.1 Ivlieva's 2006 Proposal

On Ivlieva's proposal, the adjunct gaps in (49) and (50) are truly parasitic. She adopts the Chain Composition analysis of PGs (Chomsky, 1986). On this analysis the sentences include two chains: the antecedent chain in the matrix clause and the Null Operator chain in the adjunct, shown in the schematic LF representation in (49)b and (50)b.

- (49) a. Kakije pis'ma Olja sožgla [ne pročítav]?  
 which letters Olya burned neg. read.perf.prtc.  
 'Which letters did Olya burn without reading?'  
 b. [CP wh-antecedent<sub>1</sub>..... [VP ..... t<sub>1</sub>] [Adjunct OP<sub>1</sub> .....pg<sub>1</sub>]]
- (50) a. Petja šzeg (èti) pis'ma, ne pročítav.  
 Peter burned these letters neg. read.perf.prtc.  
 \*'Peter burned these letters without reading.'  
 b. [CP OP<sub>1</sub>..... [VP ..... antecedent<sub>1</sub>] [Adjunct OP<sub>1</sub> .....pg<sub>1</sub>]]

The important distinction between (49) and (50) is that in the former the dislocated antecedent binds its trace in the matrix object position. In (50) the in situ matrix object is bound by the operator in SpecCP. This distinction led Ivlieva to the conclusion that in Russian PGs can be licensed by covert movement of the antecedent.

On the alternative analysis defended in this paper, the adjunct gap in (50), and by extension in (49), is not parasitic, but rather 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 gerundive gap in Russian cannot be a result of a null operator movement; second, I show that covert movement as a licenser of adjunct gaps is problematic in general.

## 7.2 Gerund-internal Islands

In the first step I show that the null operator analysis makes wrong predictions regarding the distribution of Russian gerundive gaps. 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 is ungrammatical if it appears in an island within the adjunct that contains it:

- (51) \*Which book did John read t [without meeting a person who recommended pg]?

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

In (52) topic drop occurs in a finite interrogative clause which is a complement of the gerund.

- (52) On razobral pribor na časti, ne pointeresovavšys'  
 he took-to-pieces device on parts neg. inquire.*perf.prtc.*  
 kto soberët (jego) obratno.  
 how assemble<sub>3SG.FUT</sub> it back  
 'He broke the device to pieces, without inquiring who would put it together.'

Wh-movement out of the position of the gap yields an ungrammatical result. Compare (52) with (53) where the wh-object is extracted overtly.

- (53) \*Kakoj pribor on ne pointeresovalsja kto soberet obratno?  
 which device he neg.inquire who assemble<sub>3SG.FUT</sub> back  
 \*'Which device did he inquire who would put together.'

(54) shows that topic drop can occur in an adjunct-internal complex NP, but wh-movement out of the complex NP is disallowed.

- (54) a. On razobral pribor na časti, ne prinjav vo vnimanije  
 he took-to-pieces device on parts neg. take.*imprf.prtc.* into attention  
 tot fakt čto ne smožet potom sobrat' (jego).  
 that fact that neg. will-be-able then to-assemble it  
 'He broke the device into pieces, without taking into account the fact that he would not be able to put it together.'
- b. \*Kakoj probor on ne prinjal vo vnimanije tot fakt  
 which device he neg. took into attention that fact  
 čto ne smožet potom sobrat' (jego).  
 that neg. will-be-able then to-assemble it  
 \*'Which device didn't he take into account 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 full clausal complements of the preposition 'without'. Russian gerundive phrases, according to Franks, 1995 are bare VPs. Assuming this is correct, there is no projection within the gerundive phrase that can host the Null Operator.

### 7.3 Covert Movement Licensing

In the second step I address the question of whether covert movement can license adjunct gaps. I examine arguments in favor of covert movement licensing of parasitic gaps in other languages and point to their weaknesses, before I reject such an analysis for Russian.

As (55) show, the in-situ phrase in English is unable to license the PG. The sentences are ungrammatical without an overt pronoun in the adjunct. On the accepted account the in situ wh-phrase in (55) moves covertly.

- (55) 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 (56), his (2a), where the adjunct gap associated with the in situ wh-phrase is acceptable.<sup>9</sup>

- (56) ?Which senator<sub>1</sub> did you persuade <sub>1</sub> to borrow which car<sub>2</sub> after getting an opponent of <sub>pg1</sub> to put a bomb in <sub>pg2</sub>?

Nissenbaum's theory predicts that the in situ wh-phrase can be a licit PG licenser 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 (56), 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. Without going into further details of Nissenbaum's theory, note that it is designed to account for a situation which is different from the one 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 (4)b, rewritten as (57). Note the contrast between the acceptable Russian sentence and its ungrammatical English translation.

- (57) Petja szeg kakije pis'ma, ne pročitav?  
 Peter burned which letters neg. read.perf.prtc.  
 \*'Peter burned which letters without reading?'

Wahba, 1995 claims that covert wh-movement can license PGs in Jeddah Arabic. The relevant data are in (58).

- (58) a. Mona γaarat min miin<sub>i</sub> řařaan [řomar<sub>j</sub> yebγa [PRO<sub>j</sub> yetjawwaz pg<sub>i</sub>]]  
 Mona was jealous of whom because Omar wants to-marry  
 "Of whom<sub>i</sub> was Mona jealous e<sub>i</sub> because Omar wants to marry pg<sub>i</sub>?"  
 b. řali darab miin<sub>i</sub> řařaan biyekra pg<sub>i</sub> ?  
 Ali hit whom because he-hates  
 "Who<sub>i</sub> did Ali hit e<sub>i</sub> because he hated pg<sub>i</sub>?"

In (58)a and in (58)b 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, the data in (58)

<sup>9</sup> Fox and Pesetsky, 2009 provide a version of (56) which is marked fully grammatical:

Which senator did John let t drive which car after asking opponents of t to put a bomb in t?

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 (58)b, as well as similar sentences, was definitely rejected by all native speakers of Palestinian Arabic I randomly asked. Second, although judgments regarding (58)a diverged, the sentence has an additional problem not considered in Wahba. The problem is that the verb 'marry' can be used intransitively in Arabic. Thus the answer to the question in (58)a can be 'Mona was jealous of Omar's mother.' 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 (59) from Lin, 2005 shows, covert wh-movement fails to license PG in Chinese.

- (59) \*Laowang [zai huijian  $pg_i$  zhiqian] jiu kaichu-le shei?  
 Laowang at meet before already fire-PERF who  
 'Who did Laowang fire before meeting?'

In contrast with (59), the PG in (60) where the wh-phrase is topicalized is grammatical.

- (60) Shei<sub>i</sub> Laowang [zai huijian  $pg_i$  zhiqian] jiu kaichu-le e<sub>i</sub>?  
 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 (61) from Takahashi, 2006 shows that the gap in the subject phrase is ungrammatical in the true interrogative sentence (61)a. The gap is acceptable when the matrix object is dislocated by focus movement (61)b.

- (61) 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'

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. Considering this, Ivlieva's proposal that defends covert movement licensing means that Russian is a 'special case'. It remains a puzzle however why Russian should be special in this respect.

## 7.4 A Missing Antecedent

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 Chain Composition 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 (62) from the National Corpus of Russian Language.

- (62) 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 (62) does not have any antecedent in the matrix clause. The identity of the object however is easily recovered from the discourse. Recall that discourse linking is one of the properties of topic drop. A topic drop analysis therefore can account for the gerundive gap in (62) while the Chain Composition analysis fails to do so.

Summing up, in this section I showed that the Chain Composition analysis of Russian gerundive gaps, both in its original form or in its modified version that employs covert movement, is untenable. This analysis crucially relies on the overt 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 Chain Composition analysis encounters a severe problem in explaining its grammaticality.

## Conclusion

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

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