Object Ellipsis as Topic Drop

Nomi Erteschik-Shir[*], Elena Ibn-Bari, Sharon Taube

Ben-Gurion University of the Negev, Beer Sheva 84105, Israel

shir@exchange.bgu.ac.il; ibnbari@bgu.ac.il; taubesharon@yahoo.com

Abstract:

In this paper we argue that topic drop is responsible for the missing object in Russian adverbial gerunds, although they have been analyzed as Parasitic Gaps. Similarly, topic drop is solely responsible for the missing object in Hebrew structures which have been argued to involve VP-ellipsis or a moved null operator. We outline the properties of topic drop and show that these same properties pertain in the constructions in question. We argue against movement analyses of both constructions and show that the only trigger for deletion is the topichood of the missing object. Our purpose is to show that topichood plays a critical role in ellipsis in those languages which independently allow for topic drop. From the fact that topic drop is constrained differently in the two languages we discuss, as well as in other languages that have been studied, we conclude that topic drop is a PF-interface phenomenon.

1. What is a topic?

Topics are what the sentence is 'about' and the truth value of a sentence is determined with respect to them (Reinhart, 1981; Strawson, 1964). Since sentences may have more than one topic, the 'main' topic (often the syntactically highest one, i.e., a subject or one that is topicalized) is the pivot for truth value assessment. Depending on context, however, any one of the topics in a sentence can play this role.[1] Only referential expressions serve as topics. Topics are prototypically referential DPs with a discoursal antecedent. Pronouns are therefore by definition topics and can be used to tell which constituent types may function as such. Personal pronouns, temporal and locative pronouns (*then*, *there*) show that DPs and spatio-temporal expressions may function as topics. The fact that VPs are non-referential and therefore cannot be represented by a pronoun indicates that VPs, for example, are not possible topics. Although topics are necessarily given or presupposed, not all presupposed elements are topics.

1.1 Topic Drop

Topic drop is one way of marking topics. Topics can also be marked morphologically, by topicalization, by an overt or a clitic pronoun, or by intonation (including destressing). Most languages use several of these options. In Danish, for example, topicalization is prevalent, but topics can optionally remain in situ (Erteschik-Shir, 2007). Different types of topics may therefore have different properties crosslinguistically. Following Daneš, 1974, we distinguish three types of topics: Topics which refer back to a preceding topic (topic chaining); new topics which refer back to a preceding focus (focus chaining) and topics which are derived from a

---

[1] For an analysis of the various types of topics in terms of topic and focus primitives see Erteschik-Shir, 2007. For a different characterization of topic-types and their prosodic and syntactic properties see Frascarelli and Hinterhölzl, 2007.

restrictive (d-linked) set or contrastive set. The first type of topic is also referred to as a continued topic. The latter two, which introduce 'new' topics which have not been employed as topics in the preceding discourse, are referred to as shifted topics. It has been claimed that dropped topics are *continued* topics (Schulz, 2003). In the case of languages that employ both topicalization and topic drop to mark topics, there may be a division of labor such that the former applies to shifted topics, whereas the latter applies to continued topics. In Catalan, this distinction applies as follows: topicalization is reserved for shifted topics but continued topics are postposed rather than dropped (Vallduví, 1990). In some languages, however, topics selected from restrictive or contrastive sets are distinguished from topics resulting from either topic or focus chaining. Topic drop applies to the latter class in both Russian and Hebrew.[2]

Topic drop interacts with differential object marking (DOM). In languages where DOM is active, objects with atypical properties receive special marking. As Goldberg, 2005 observes, topic drop does not easily apply to animate objects in Hebrew. Schwenter and Silva, 2002 show that non-prototypical objects (animate, specific) in Brazilian Portuguese must be marked by being overt, whereas prototypical objects are unmarked to the extent that they are not pronounced. Similarly, In Hebrew (specific) topics can drop in some contexts as long as they are not animate. The objects that drop in Hebrew are therefore typical. Atypical animate objects do not drop because of DOM. That DOM applies in Hebrew (independently of topic drop) has been observed with respect to non-pronominal definite objects. These must be case-marked.[3] Since DOM is active in Hebrew, it makes sense to view the constraint on dropping animate objects as a further manifestation of DOM in the language. Topic drop in Hebrew can therefore be viewed as a way of marking topics (both subjects and objects) except when DOM requires that the object be overt.[4] We discuss this further in section 3.1.

DOM does not apply in Russian which is fully case marked. The fact that animacy does not play a role in Russian object topic drop is therefore predicted.

It is well known that the sequence subject-VP naturally aligns with Topic-Focus and that it is highly marked for an object to function as a topic.[5] Schwenter, 2006; Schwenter and Silva, 2002 argue that since topics are specific by definition and since animates, particularly humans, are the most frequent topics, it is not surprising that animacy and specificity rank highest as properties of objects requiring DOM. Dalrymple and Nikolaeva, 2011 argue that topichood is THE trigger for DOM. They depart from the accepted view that objects are marked topics and argue that in fact, just as subjects are unmarked main topics, objects are unmarked secondary or subordinate topics. Iemmolo, 2010 also adheres to the view that DOM is motivated by the need to signal the markedness of direct objects that are topics. He argues contra Dalrymple and Nikolaeva that the objects in question are main topics and not secondary ones.

---

[2] From a cursory examination of topicalization in these languages it seems likely that it is indeed limited to contrastive and restrictive topics. Further investigation of this issue is of course necessary.

[3] See, for example, Aissen, 2003.

[4] DOM also applies to topic drop of objects in German: Schulz, 2003 shows that whereas 1st, 2nd and 3rd person subjects drop, topic drop of objects is constrained to 3rd person objects. This is because 1st and 2nd person objects are atypical objects.

[5] See Erteschik-Shir, 1997, 2007 and the references cited therein for this view.

Since Russian and Hebrew allow for topic drop of objects, topichood is clearly not a trigger for DOM in these languages. Whether dropped objects are main topics or subordinate topics also does not seem to play a role: In Russian, if both the subject and the object are topics, either both are overt or both are dropped. Since topic drop is optional, either one could in principle be overt but such 'asymetrical' cases are degraded. This is shown in section 2.1. The picture in Hebrew is more complex as shown in section 3.1. Still an account distinguishing main and subordinate topics does not seem to explain the distribution.

In this paper we concentrate on the properties of dropped object topics in Russian (section 2) and in Hebrew (section 3). We show that dropped object topics in both languages alternate (more or less) freely with pronouns with the exception of nonspecific ones. These cannot alternate with pronouns.

Once we have outlined the properties of topic drop in each language we show that these same properties hold of the missing object in Russian adverbial gerunds, although they have been analyzed as parasitic gaps. We show that the same is true of missing objects in Hebrew in structures which have been argued to involve VP-ellipsis or a moved null operator. Both are argued to be solely instances of topic drop. We argue against movement analyses proposed for these cases and show that the only trigger for deletion is the topichood of the missing object.

In the conclusion we examine the consequences of our analysis for the cross-linguistic study of similar elliptical phenomena. We argue that the fact that topic drop is constrained differently in the two languages, as well as in other languages that have been studied leads us to believe that topic drop is a PF-interface phenomenon. Topichood can thus be viewed as one type of trigger for PF-deletion.

2. Object topic drop in Russian

Russian allows object topics to be phonologically null in certain contexts, providing discourse conditions are satisfied, as observed by McShane, 2005. We consider three contexts in which topic drop is possible in Russian: first, when the dropped topic has an overt specific antecedent in the preceding context; second, when the referent is extralinguistic; and third, when the overt referent is nonspecific.[6] In all three contexts, topic objects can be formally marked in three ways: they can be pronominalized, scrambled to the preverbal position or dropped; the first two ways can combine. In the sentences in (1), which exemplify focus chaining, a direct object whose antecedent is present in the first clause, is pronominalized. In both sentences the object can be left out. There is a strong preference in Russian to position overt topic objects preverbally. This option is shown in (1)b.[7]

(1)   a.   Nikak   ne   najdu svoj košeljek, naverno ostavila ø/jego doma.
             neg.-how   neg. find refl. purse   perhaps left   it   home
             'I cannot find my purse, probably I have left it at home.'

        b.   Ja ne sdala   kursovuju,   potomu čto vremeni ne   bylo
             I neg. hand-in.past course-paper because that time   neg. was
             ø/jeë   dopisat'.

---

[6] For an extensive discussion of different contexts with null objects in Russian see McShane, 2002.
[7] In our examples we use only obligatorily transitive verbs in order to control for transitive verbs that can be used intransitively (often in generic contexts).

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 antecedent of the null topic does not have to appear in the same sentence. In
the question-answer pair in (2), the occurrences of the object in the response refer
back to the pronominal antecedent in the question. They are *continued* topics and
therefore can be dropped.

(2)   Q: Maša uže na stancii.   Kto-to   pojexal za n'ej?
    Masha already on station somebody drove for her
    ' Masha is already at the station. Has anyone gone to meet her?'

    A: Ne volnujsja,   uže   vstretili ø/jeë, i   vezut   ø/jeë k nam .
    neg. worry.2SG already met.3PL her and drive.3PL her to us
    'Don't worry, they have already met her, and they are driving her to
    our place.'

The referent of the null topic can also be *extralinguistic*. It is sufficient that the object
can be seen or heard by both the speaker and the hearer for it to become the center
of the interlocutors' attention, and consequently the shifted topic of an utterance. This
is illustrated in the examples in (3).

(3)   [a woman enters home and shows a purchase to her family]
    a.   Vot, kupila   ø/èto   po-deševke.
    here bought.3SG   it   prep. cheap
    'Here, I bought it cheaply.'

    b.   [listening to music]
    Vam   ø/ èto nravitsja?
    you   it like
    'Do you like it?'

An object topic must be null if it refers to a *nonspecific* antecedent. Russian lacks
indefinite pronouns corresponding to English 'one' and 'some'. Topic drop, therefore,
is the only available option in Russian to mark a topic with an indefinite antecedent.

In (4) the null object of *buy* in the answer receives a partitive reading equivalent to
'some', therefore it must be null.

(4)   Q: Ty kupila kofe/klubniku?
    you bought coffee/ strawberries
    'Did you buy coffee/strawberries?

    A: Da, kupila   ø ješčë   včera.
    yes bought.1SG   already yesterday
    Yes, I bought some already yesterday.'

In Russian animate topic objects drop as freely as inanimate:

(5)   a.   Iskala   svojego advokata, no tak i   ne   našla   ø/jego.
    looked-for.1SG self   attorney but part. and neg. found.1SG him
    'I was looking for my attorney, but I didn't find him.'

    b.   Iskala   (kakogo-to) advokata, no tak i   ne   našla   ø/*jego.

looked-for.1SG some   attorney but part. and neg. found.1SG him
'I was looking for an /some attorney, but I didn't find him.'

(6)   a.   Xotela   kupit' ètu knigu, no tak i   ne   kupila   ø/jeë.
                 wanted.1SG buy.inf. this book   but so and neg. bought.1SG it
                 'I wanted to buy this book, but I didn't buy it.'

        b.   Xotela   kupit' (kakuju-nibud') knigu, no tak i ne kupila   ø/*jeë.
                 wanted.1SG buy.inf. some   book but but neg. bought.1SG it
                 'I wanted to buy a/some book, but I didn't buy it.'

Note also that in (5) and (6) the pronoun is grammatical only when the antecedent is specific. In the even sentences the referent of the object in the second conjunct is nonspecific, thus topic drop is the only option.

2.1. Restrictions on Russian topic drop

Topic drop in Russian is, however, not unrestricted. In the context of the question in (7), topic drop is bad.

(7)   Q: Petja ljubit jeë?
               Peter   loves her

        A: Da, Petja/on *(jeë) ljubit.
              yes Peter/he   her loves

The object in (7) can be null only if the subject is also deleted:

(8)   Da, ø   ljubit ø.
      yes he   loves her
      'Yes, he loves her.'

In case the subject and the object are topics, both are either left in as in (7) or drop as in (8). Russian therefore has a strong preference for symmetry in this respect.

The object CAN drop, however, when the subject is required to be overt because it is contrastive. This is shown in (9), with contrastive subjects, and in (10), where the verbs are contrasted in addition to the subjects (capitals indicate stress on the contrastive elements).

(9)   A':   Net, no OLEG ø/jeë ljubit.
             no but Oleg   her loves

(10)   A'':   PETJA/ON ø/jeë LJUBIT, a   JA   ø/jeë NENAVIŽU
           Peter/he   her loves   but I   her hate

The examples in (7) through (10) show that topic drop depends on the information structure of the sentence as a whole.

In this section we have shown that topic drop occurs in Russian and we have outlined its properties. In what follows we show that topic drop is responsible for the missing objects in gerundive adjuncts.

2.2 Null objects in gerundive adjuncts

Russian has constructions exemplified in (11) which are parallel to English parasitic gaps in (12).

(11) a. Kakije pis'ma Petja sžeg ø [ne pročitav ø/?ix]?
          which letters Peter burned neg. read.perf.prtc. them
          'Which letters did Peter burn without reading?'

      b. Čto (imenno) Petja podpisal ø [ne čitaja ø/*jego/*èto]?
          what (exactly) Peter signed neg. read.imprf.prtc. it this
          'What exactly did Peter sign without reading?

(12) Which document$_i$ did John file e$_i$ [without reading pg$_i$]? Engdahl, 1983

The bracketed constituent in (11), henceforth a 'without adverbial' or simply a 'gerund', includes a negation particle, a verb in the form of *Perf./Imprf. Participle* and a gap.[8] In some cases the gap can alternate with an overt pronoun. Russian speakers judge the pronoun in (11)a redundant. In (11)b, however, the pronoun is ungrammatical. In this paper we are concerned with topic drop, and although we have found cases such as these in which overt pronouns are degraded, we will not attempt to explain them here.

The sentences in (11) satisfy the licensing condition on parasitic gaps, which, by general consensus, requires that the antecedent phrase be dislocated by overt A'-movement. In English a violation of this condition rules out the gap in the adverbial, as the examples in (13) from Engdahl show.

(13) a. John filed a bunch of articles [without reading *t/them].
      b. John filed which articles without reading *t/them?

A striking property of Russian gerundive gaps, as noted in Ivlieva, 2006, is that they do not depend on overt A'-movement of the licensing phrase.

(14) a. Petja sžeg (èti) pis'ma, [ne čitaja ø/?ix].
          Peter burned these letters neg. read.imprf.prtc. them
          'Peter burned these letters without reading them.'

      b. Petja sžeg kakije (imenno) pis'ma, [ne čitaja ø/*ix]?
          Peter burned which exactly letters neg. read.imprf.prtc. them
          'Peter burned (exactly) which letters without reading them?'

The examples in (14) differ in grammaticality. (14)a is of the kind that is widely used in both colloquial and formal registers and is perfect. (14)b is less natural, but is good with special echo intonation and in an appropriate context.

To account for the movement-independent behavior of the gerundive gaps in (14), we propose that it can be explained without appealing to the syntactic licensing condition, and is analyzed as topic drop. The gerundive gaps display a number of

---

[8] In traditional Russian grammar, gerundive phrases are termed 'adverbial participles', the gloss given in the examples. We assume that 'without' adverbials of the type discussed here are structurally VP-adjuncts. For discussion of the internal structure of gerundive phrases and their properties see Babby and Franks, 1998.

properties which can be successfully accommodated within the topic drop analysis, but fail to be described in purely syntactic terms. We further propose that this analysis can be extended to cover the data in (11), where overt wh-movement of the antecedent has taken place, and thus provide a unified explanation for all types of gerundive gaps.

2.3 The position of the antecedent

The first step in the argumentation is to show that the matrix object in (14) is indeed in situ. This step is needed in order to exclude the possibility of A'-movement of the licensing phrase out of the VP. Then we will compare the properties of the gap in the gerund with the properties of Russian topic drop discussed in sections 2-2.1 and show that they are identical.

In Russian, a finite verb generally follows a manner adverb; we take this as evidence that the verb remains low in the structure, probably in the VP (although see below in this section). Moreover, an object can scramble out of the VP, in which case it necessarily precedes the finite verb and can appear either to the left or to the right of a low adverb. The scrambled word order is shown in (15) with the possible positions of the object in parenthesis.

   (15)   Petja (èti   pis'ma) bystro (èti   pis'ma) sžeg
           Peter these letters   quickly   these letters burned
           'Peter quickly burned these letters.'

If the matrix object in (14)a were scrambled out of the VP, it would necessarily precede, but not follow the finite verb. The same analysis holds of the wh-phrase in (14)b. It has been repeatedly argued in the literature that Russian is a wh-in situ language of the Japanese/Chinese type (Bošković, 1997; Stepanov, 1998; Strahov, 2000, *inter alia)*. Wh-phrases remain in situ, unless they are dislocated by Focus movement to the CP domain of the clause. We conclude, therefore, that the matrix object in both sentences in (14) is inside the VP.

One more aspect of Russian verbal phrase structure is worth mentioning here. There have been proposals in the literature that finite verbs in Russian undergo head movement to an Aspectual projection (AspP)[9]. Verb movement opens up the possibility that topic drop can, in fact, be ellipsis of a bigger constituent containing a topic. According to Gribanova, 2010 constructions where topic drop occurs are ambiguous between NP Drop and VP-ellipsis. On her proposal, NP Drop and VP-ellipsis can be distinguished by syntactic tests. We show that syntactic tests fail to support such a distinction in Russian (section 2.5). The same point is made for Hebrew in section 3.2.

2.4 The properties of the gap

We now consider properties of the 'without' adverbial gaps. We will show that these properties are identical to those of the non-adverbial topic drop discussed in sections 2-2.1.

The null object in the gerund generally has an overt antecedent in the matrix clause. Such antecedent can be a full DP (14)a or a wh-phrase (14)b and (11). The antecedent can also be a pronoun:

---

[9] See Romanova, 2004, Svenonius, 2004 for the presence of AspP in the extended structure of a finite VP and also Franks, 1995 for the presence of AspP in gerunds.

(16)   Q: Gde mojë pis'mo?
              where my letter

        A: Maša   vybrosila   *jego* ne   pročitav   ø/*jego.
              Masha threw-out   it   neg. read.perf.prtc.   it
              'Masha threw it out without having read it.'

The null object in 'without' adverbials, just like the non-adverbial object topic, is also good with an *extralinguistic* antecedent. Compare (17) with (3).

(17)   [somebody is trying on a new shirt, which is too tight on him]
        Čto, kupil   ø   [ne   primer'aja   ø]?
        what bought.2SG   neg. try.imprf.prtc.
        'Did you buy it without trying it on?'

The examples in (16) and (17) show that the adverbial gap has the properties of either a continuous or a shifted topic.
One more property assimilates gerundive gaps with dropped topics. The gerundive adjunct can appear sentence finally or precede the matrix verb. The latter option is shown in (18).

(18)   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 pročitav   (jeë) (ni razu)], otnjes   (ètu) knigu k bukinistu.
        Oleg   neg. read.perf.prt. it   part. once took-away this book to bookseller.
        'Oleg took this book/it to the bookseller without having read it (even once).'

It should be pointed out that the sentence in (18), with either the gap or the pronoun, is infelicitous if pronounced in the context of question 1. The speakers we asked rejected the pronoun in the gerund when (18) was pronounced out of the blue. However, the same speakers accepted it when the sentence answered question 2.

A similar contrast was observed in non-adverbial contexts. The overt pronoun in (19), pronounced out of the blue, is ungrammatical, but is good in the context indicated:

(19)   [*Otkuda u tebja èta kniga?* Where did you get this book from?]

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

(18) and (19) show that a topic (pronominal or null) cannot precede its antecedent, even if the latter appears in the same sentence.

Before concluding this section, it is essential to point out that we do not discriminate between the sentences in (14) and those in (11) (i.e. those lacking wh-movement of the antecedent and those that contain such movement) regarding the nature of the gerundive gap. The distinguishing property of the sentences in (11) and (14)b is that they can be pronounced only as echo questions about an object that has been mentioned previously in the discourse. The object in the gerund is necessarily a topic and therefore can drop. Consequently, there is no reason to propose different accounts for the gerundive gaps in (11) and those in (14).

2.5 Locality constraints

In this section, we show that island constrains cannot distinguish between NP Drop and VP-ellipsis. Moreover, we show that a syntactic explanation of NP Drop which employs Huang's, 1984 Op(erator)-movement analysis fails to optimally account for all occurrences of null objects in Russian, as well as for variation in speakers' judgments.

NP Drop in Russian is restricted within islands, especially in the absence of a linguistic antecedent. According to Gribanova, 2010, the null object in (20) is judged ungrammatical by Russian speakers.

(20)   [something falls; no one wants to get it]
        # Tot fakt, čto nikto   ne   podnjal,   menja   očen' ogorčajet.
        The fact   that no-one neg. *under*-hold.3SG me.ACC very   upsets.3SG
        Intended: 'The fact that no one picked it up very much upsets me.'

Under the Op-movement analysis of null objects, (20) is banned because it violates the Sentential Subject Constraint (Ross, 1967). Additionally, according to Gribanova, (20) must be an NP-Drop and not VP-ellipsis, because the latter is not sensitive to islands.

On the analysis proposed here, (20) involves topic drop. To begin with, some Russian speakers accept (20). The fact that other speakers reject it can be due to two intervening factors. Firstly, the topic drop domain includes an overt subject (compare (20) with (7) above). Secondly, the context in (20) does not force a topic interpretation of the object. If these factors are controlled for, we obtain a grammatical result:

(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   ø,- 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.'

Special intonation further improves acceptability. The contrast between the reported ungrammaticality in (20) and the acceptability of (21) can hardly be accounted for under the Op-movement analysis.

Keeping this in mind, let's turn to 'without' adverbials. The Op-movement analysis of null objects predicts that if the adverbial gap is embedded in an additional island, the result will inevitably be bad. Indeed, grammaticality can decrease dramatically when the gerundive null object is embedded more deeply.

(22)   On iskal   ključi vsjë utro , [ne pripominaja   [kuda on *(ix)   položyl]].
        he looked-for keys all morning neg. recall.imprf.prtc. where he them put
        'He was looking for keys all the morning without being able to recall where
        he had put them.'

In (22), the gerund contains a finite CP with a preposed wh-phrase (i.e., a wh-island).[10] The sentence is good only with an overt pronoun. However, Russian speakers judge (23) with the contrast between the locations to be much better.

(23)   On iskal   ključi VEZDE,   [ne   pripominaja
        he looked-for keys   everywhere neg. recall.imprf.prtc.
        [KUDA (IMENNO) (ix)   položyl]].
        where exactly   them put
        'He was looking for keys everywhere without being able to recall where
        exactly he had put them.'

(23) differs from (22) in that the subject in the former is missing in the most embedded clause and the locative phrases are contrasted. Recall that subject drop and the presence of contrast repaired ungrammaticality of non-adverbial topic drop in (7). Crucially, an additional island in the adjunct does not lead to complete ungrammaticality of a null object as the Op-movement analysis of NP-Drop predicts.

2.6 Alternative analyses of gerundive gaps

There have been proposals in the literature that parasitic gaps can be licensed by covert A'-movement of the antecedent (Nissenbaum, 2000; Wahba, 1995). Ivlieva, 2006, argues along these lines that the gerundive gaps in non-A'-movement cases such as (14) are true parasitic gaps, just like the gaps in (11), and are licensed by covert topic movement of the antecedent. We agree with the basic intuition that for the object to be null, it must be discourse 'given'. However, the implementation of this idea which employs covert movement of the linguistic antecedent is not without flaws. First, it is still a matter of controversy whether covert movement can license a parasitic gap. Wh-questions in Chinese and Japanese are generally assumed to be formed by covert Op-movement, which, however, fails to license a parasitic gap as shown in (24) and (25).

(24)   Chinese
        *Laowang [zai huijian pgi zhiqian] jiu kaichu-le sheii?
         Laowang at meet before already fire-PERF who
        'Who did Laowang fire before meeting?'   Lin, 2005

(25)   Japanese
        *[e yonda gakusei]-ga dono ronbun-ni unzarisita   no?
          read student-Nom which paper-Dat got-bored-with Q
        'Which paper did the student who read got bored with?'   Takahashi, 2006

Note that the impossibility of covert wh-movement to license a parasitic gap can also explain the ungrammaticality of the English example in (26) from Engdahl, 1983 without additional assumptions.

(26)   I forget who filed which articles, without reading *t/them.

Second, on the analysis proposed in Ivlieva, the gerundive gap is a variable bound by a null operator. Relying on Franks, 1995 and Babby and Franks, 1998, we assume that Russian gerunds are structurally reduced clauses which lack a CP

---

[10] In Russian, extraction out of finite CPs is generally degraded, especially when they are embedded under non-bridge verbs and are headed by an overt complementizer.

projection. On this assumption, the Op-movement analysis becomes impossible because there is no projection within the gerundive phrase that can host an operator.

Third, Ivlieva proposes a unified analysis for the gaps in the adjuncts. In her comparison of a variety of clausal adjuncts, she observes that in both finite and nonfinite subjectless adjuncts an object gap is licensed. In finite clauses with an overt subject, however, the gap is ungrammatical. The latter type of adjunct is shown in (27), Ivlieva's (6a and 7a).

(27) a. Petja$_j$ vybrosil [ètu knigu]$_i$, posle togo kak on$_j$ /Kolja pročital *(jeë)$_i$.
          Petja threw.away thisACC bookACC after   he/Kolja   read   it
          'Petja threw away this book after he/Kolja had read it.'

      b. [Kakuju knigu]$_i$ Petja$_j$ vybrosil t_i posle togo kak on$_j$/Kolja pročital *(jeë)$_i$?
          which book   Petja throw-away after   he/Kolja read it
          Which book did Petja throw away after he/Kolja had read it?

Ivlieva cites Culicover, 2001 who observes that in English the intervention of an overt uncontrolled subject in tensed subordinate clauses can play a role in determining the acceptability of parasitic gaps, and crucially assumes that this is a distinguishing property of parasitic gaps.

As noted in section 2.1, non-parasitic topic drop can also be blocked in the presence of an overt subject. This, therefore, is a general property of object topics and is not a distinguishing property of parasitic gaps. Notably, null objects in both sentences in (28) are judged considerably better.

(28) a. Petja VYBROSIL [ètu knigu]$_i$,   posle togo kak Kolja
          Petja threw.away thisACC bookACC after   Kolja

          PROČITAL (jeë$_i$).
          read   it
          'Petja threw this book after Kolja had read it.'

      b. [Kakuju knigy]$_i$ Petja$_j$ VYBROSIL t_i posle togo kak   Kolja
          which book   Petja throw-away   after   Kolja

          PROČITAL (jeë$_j$)?
          read   it
          'Which book did Petja throw away after Kolja had read it?'

The sentences in (28) minimally differ from those in (27) in that in the former the matrix and the embedded subjects are contrasted and the verbs are focused. (28) should be compared with (10) where similar effects were observed.

Finally, the sentence in (29), Ivlieva's (5), is supposed to show that the gerundive gap cannot be realized as *pro*, therefore it must be a true parasitic gap.

(29) [Kakuju knigu]$_i$ ty,   ne   čitaja pg$_i$ /*jeë$_i$, vybrosil t_i?
      whichACC bookACC you neg. read   it   threw.away
      'Which book did you throw away without reading?'

In (29), the gerund appears in the position between the matrix subject and the VP. According to Ivlieva's explanation, the ungrammaticality of the sentence with the overt pronoun in the adjunct results from a weak cross-over (WCO) violation. If the

gap in the adverbial were *pro*, it would cause the WCO effect much in the same way as the overt pronoun.

However, (29) only shows that an object topic in this configuration cannot be realized as an overt pronoun. It doesn't follow that the null object is not a case of topic drop. Recall in this connection that overt pronouns in gerundive gaps are redundant or ungrammatical even if the gerund follows the matrix verb, as in (11)b and (16), repeated below as (30) and (31) respectively.

(30)   Čto (imenno) Petja podpisal ø [ne čitaja   ø/*jego/*èto]?
        what (exactly) Peter signed   neg. read.imprf.prtc. it   this
        'What exactly did Peter sign without reading?

(31)   Maša vybrosila *jego* ne pročitav   ø/*jego.
        Masha threw-out it   neg. read.perf.prtc. it
        'Masha threw it out without having read it.'

Whatever the reason for the ungrammaticality of the pronoun in (30) and (31), it cannot be due to a WCO violation.

Summing up, we have shown that null objects in Russian gerunds are a result of topic drop. Topic drop is independently attested in Russian and does not rely on movement. We also showed that a syntactic explanation of null objects in gerunds fails to account for its properties and distribution. The analysis in terms of topic drop, on the other hand, can not only provide such an explanation, but also accounts for variations in speakers' judgments regarding the acceptability of null objects in different environments.

3. Object topic drop in Hebrew

Hebrew resembles Russian in allowing topic drop in general, and object topic drop in particular. A dropped object topic is found in various types of utterance, among them conjoined sentences (example (32)) and conjoined VPs (example (33)). In both instances the content of the dropped object is recoverable through its identity with an antecedent—the direct object in the first conjunct. Note that the gap can alternate with a pronoun.

(32)   Dani katav et   ha-šir   ve-Miriam tirgema ø / oto
        Dani wrote ACC the-song and-Miriam translated   it
        'Dani wrote the song and Miriam translated it.'

(33)   Dani kisa   et   ha-salat   ve-hixnis ø / oto la-mekarer
        Dani covered ACC the salad   and-put   it   to-the-fridge
        'Dani covered the salad and put it in the fridge.'

Additionally, and similarly to Russian, the antecedent of a dropped object topic can be uttered by a different speaker, in a question-answer pair, as in (34):

(34)   Q: macata   et   ha-maftexot?
               found.2SG ACC the-keys
               'Did you find the keys?'

        A: ken, macati   ø / otam
               yes found.1SG   them

12

'Yes, I found them.'

As in Russian, an extralinguistic antecedent can also license object topic drop. In such cases the antecedent is not mentioned but is made obvious in the discourse through other means, like pointing or even just looking at an object. In example (35), the speaker presents a new bag, drawing the interlocutor's attention to it. In example (36) the speaker looks at a dish, e.g. a cake.

(35) yafe? kaniti   ø be-mivca
      nice bought.1SG in-sale
      'Is this nice? I bought it on sale.'

(36) nir'a me'ule! efšar   litom   ø?
      looks great   possible taste-inf
      'This looks great, may I taste it?'

Moreover, the object can drop even when its antecedent is not visually present but is known to be around and is relevant, as in the following scenario. A woman walks into a car rental agency holding a set of keys. The clerk welcomes her with the question in (37). The antecedent is a rented car which is not visually present:

(37) maxzira   ø?
      return.2SG
      'Are you returning it?'

We would like to stress that Hebrew object drop is of an informal nature. While it is not prevalent in written or formal speech, it is often used in natural, informal conversations.

Hebrew object drop has not been studied extensively. It has been proposed, however (Doron, 1990, 1999 and Goldberg, 2005) that what underlies a subset of Hebrew utterances with missing objects is Verb Phrase Ellipsis. According to this analysis, prior to VP Ellipsis (VPE) the main verb raises out of the VP into the I node. When deletion of the VP occurs, it takes along with it the direct object and all other VP-internal material; but the verb itself is now stranded in a higher position, external to the VP, and thus remains overt. This analysis, dubbed by Goldberg V-Stranding VPE, crucially leans on the existence of V to I movement in Hebrew, and indeed such movement has been independently motivated for the language (Doron, 1983, Shlonsky, 1987).

A competing syntactic analysis of Hebrew object drop is the Null Object analysis, according to which the direct object is null but the rest of the VP is intact. Doron, 1999 follows Huang, 1984 in assuming that in a Null Object construction, the null object is a variable bound by a null operator. Both Doron and Goldberg assume that Null Object as well as V-stranding VPE occur in Hebrew. We will return to their proposals in section 3.2. As an alternative, we propose that all of the discussed occurrences of Hebrew object drop, similarly to the Russian ones, can be unified under a topic drop treatment. In our proposal the deletion is not syntactic but occurs at PF, the interface where various information structural processes take place.

We next survey some of the properties of Hebrew topic drop, before taking a closer look at the syntactic accounts mentioned above.

3.1 The properties and constraints of Hebrew object topic drop

Hebrew object topic drop shows some similarities as well as differences when compared to the parallel Russian phenomenon. One similarity is in its distinction between specific and nonspecific referents. Like Russian, Hebrew does not canonically employ nonspecific pronouns equivalent to the English 'one' and 'some', and so a nonspecific object topic is not realized overtly. This is demonstrated below. In the discourse in (38), the topic of the conversation is a specific newspaper. The answerer can refer to it with either the overt object pronoun *oto* 'it' or a with gap. Compare this with the answer in (39), in which the topic is a nonspecific newspaper, and thus an overt pronoun in the object position is impossible and a gap is the default device.

(38) Q: Kanita   et   ha-iton?
          bought.2SG ACC the-newspaper
          'Did you buy the newspaper?'

      A: Ken, kaniti   ø / oto
          yes bought.1SG   it
          'Yes, I bought it.'

(39) Q: Kanita   iton?
          bought.2SG newspaper
          'Did you buy a newspaper?'

      A: Ken, kaniti   ø / *oto
          yes, bought.1SG   it
          'Yes, I bought one.'

It follows, then, that just like in Russian, a gap in object position can be interpreted as having either a specific or a nonspecific referent, whereas an overt object pronoun can only have a specific referent. This difference between a gap and a pronoun can resolve an ambiguity between a specific and a nonspecific meaning, as demonstrated in (40). The use of the verb *xipes* 'serach' allows both an extensional and intensional (i.e. specific and nonspecific) readings. The following example is modeled on example (23) in Keller and Lapata, 1998.

(40) xipasti   kartis la-te'atron. ba-sof   macati   ø / oto
      searched.1SG ticket to-the-theatre in-the-end found.1SG   it
      'I looked for a theatre ticket. In the end I found one / it.'

Both a gap and an object pronoun can be used in the second sentence to refer back to the object *kartis la-teatron* 'theater ticket'. However, each enforces a different interpretation: a pronoun disambiguates the sentence by allowing only an extensional reading, i.e. a reading where a specific theater ticket was searched and found. A gap, however, allows both the extensional and intensional interpretations (a specific and a nonspecific ticket, respectively). Interestingly, some speakers report that the gap encourages the nonspecific reading. This is expected since a gap, as discussed above, is the canonical way of referring back to a nonspecific object, whereas with a specific referent the use of a gap is not canonical but an informal, conversational choice.

Another parallelism between Russian and Hebrew is the interaction of object topic drop with subject topic drop. In certain contexts, when both the subject and object are

topics, Hebrew allows the object to drop only when the subject drops as well.[11] This is shown in (41), with a question that evokes both the subject *Dani* and the object 'the apple' as topics. Both subject and object are thus candidates for topic drop; however, several speakers reported that a null object sounds natural only if the subject is null as well.

(41)   Q: ma   dani asa im ha-tapu'ax?
            what Dani did with the-apple
            'What did Dani do with the apple?'

       A: hu zarak oto la-pax /   ø zarak ø la-pax /   hu zarak *ø la-pax
            he threw it   to-the-trash /   threw to-the trash / he threw   to-the-trash
            'He threw it to the trash.'

This restriction, however, does not apply in answers to yes-no questions. In that environment the object topic can be overt or null but the subject topic must be overt regardless of the form of the object, as (42) shows.

(42)   Q: dani maca et   ha-mafte'ax?
            Dani found ACC the-key
            'Did Dani find the key?'

       A: ken, *ø /hu maca ø / oto
            yes   he found   it
            'Yes, he did.'

In some contexts, Hebrew shows a slight preference for topic drop with continued topics versus shifted topics. Compare examples (43) and (44), both presenting object topic drop in the second conjunct of an answer to a wh-question. In (43) the dropped object is a continued topic, since its antecedent *otam* 'them' is the topic of the first conjunct (topic chaining). In (44) the dropped object is a shifted topic, since its antecedent *ha-yerakot* 'the vegetables' in the first conjunct is within the VP focus, which answers the wh-question (focus chaining). In such a case dropping the object topic is slightly less acceptable.

(43)   Q: ma   Dani asa im ha-yerakot?
            what Dani did with the-vegetables
            'What did Dani do with the vegetables?'

       A: hu xatax ?ø / otam ve-sam ø / otam ba-mekarer
            he cut   them and-put   them in-the-fridge
            'He cut them and put them in the fridge.'

(44)   Q: ma   Dani asa?
            what Dani did
            'What did Dani do?'

       A: hu xatax et   ha-yerakot   ve-sam ?ø / otam ba-mekarer
            he cut   ACC the-vegetables and-put   them in-the-fridge
            'He cut the vegetables and put them in the fridge.'

This preference is not across the board; In some contexts shifted topics can drop:

---

[11] Subject topic drop is examined here with 3rd person subjects, for which there is no morphological agreement on the verb.

(45) Q: Ma   asita   mi-kodem?
            what did.2SG from-before
            'What did you do earlier?'

      A: Kilafti   et   ha-tapuxim ve-xataxti   ø / otam le-prusot
            peeled.1SG ACC the-apples and-cut.1SG   them to-slices
            'I peeled the apples and sliced them.'

A robust restriction in Hebrew, as observed in Goldberg, 2005, is that an object drops more freely when it is inanimate. This is demonstrated below with the minimal pairs in (46) and (47), in which an animate dropped object is less acceptable than an inanimate one.

(46) a.   raxacti   et   ha-ke'ara ve-axar-kax   nigavti   ø / ota
            washed.1SG ACC the-bowl and-after-that dried.1SG   it
            ve-samti   ø / ota ba-aron
            and-put.1SG   it   in-the-cupboard
            'I washed the bowl and then dried it and put it in the cupboard'

      b.   raxacti   et   ha-tinok ve-axar-kax   nigavti *ø / oto
            washed.1SG ACC the-baby and-after-then dried   him
            ve-hiškavti *ø / oto ba-mita
            and-laid him in-the-bed
            'I washed the baby and then I towel-dried him and laid him in the bed.'

(47) a.   ni'arti   et   ha-štixim ve-hoceti   ø / otam la-xacer
            shook.1SG ACC the-rugs   and-took-out   them to-the-yard
            'I shook the rugs and took them out to the yard.'

      b.   he'arti   et   ha-yeladim ve-hoceti   *ø / otam la-xacer
            woke-up.1.SG ACC   the-children and-took-out   them to-the-yard
            'I woke up the kids and took them out to the yard.'

The preference that dropped objects be inanimate, which doesn't pertain to Russian, is not unique to Hebrew. As mentioned in the introduction, Brazilian Portuguese also treats animate objects differently from inanimate ones with respect to object drop. Farrell, 1990 and Schwenter and Silva, 2002 show that Brazilian Portuguese has a strong preference for an inanimate interpretation of an empty object position. We join Schwenter, 2006 in viewing this distinction in terms of differential object marking and extend this insight to topic drop. DOM is employed by languages to mark atypical objects. Hebrew is known to mark definite objects with an accusative marker. We believe that additionally, Hebrew DOM manifests itself in not allowing animate objects—which constitute atypical objects—to drop, but rather requires that they be marked by being overt. The consequence is that Hebrew animate object topics do not generally drop.

This account is further supported by the fact that the animacy restriction does not apply to subjects nor to indirect objects, which are obviously not subject to DOM. Both subject topics and indirect object topics that are animate can drop, as (48) and (49) show.

(48) Q: ma   Dina osa?
            what Dina does

'What is Dina doing?'

A: ø / hi rokedet.
she dance.3SG.F
'She is dancing.'

(49) Q: hexzarta le-dina et ha-sefer?
returned.2SG to-Dina ACC the-book
'Did you return the book to Dina?'

A: ken, hexzarti ø / la oto.
yes retuend.1SG to-her it
'Yes, I did.'

Having examined some of the properties of Hebrew object topic drop, we will now consider the syntactic analyses proposed for Hebrew object drop.

3.2 The syntactic accounts of Hebrew null objects

As mentioned above, Hebrew utterances with dropped objects have been claimed by Doron, 1990, 1999 and Goldberg, 2005 to involve either VPE (with a raised verb) or a moved null operator, a derivation modeled on Huang's 1984 proposal for Chinese. If indeed those two accounts are possible, then the same surface string can potentially have two derivations that underlie it. Both Doron and Goldberg attempt to draw the distinction between the two underlying structures, and suggest diagnostics that, they claim, can determine whether a particular utterance is a case of VPE or Null Object.

However, when examined carefully, each of these diagnostics is problematic with respect to Hebrew data. Our claim is that it is topic drop that underlies Hebrew null objects, and thus neither the VPE nor the Null Object accounts can fully explain the phenomenon.

We will now survey some of the proposed diagnostics and point to their problems.

3.2.1 Diagnostic 1: Two missing arguments

This diagnostic exploits ditransitive verbs, which are revealing since they have more VP-internal material than just the direct object. Doron and Goldberg both maintain that when other VP-internal elements besides the direct object are null, we have a case of VPE. The logic is quite clear: If the VP contains other material besides the direct object—such as an indirect object or an adjunct—and those are missing as well, then it makes sense to assume that the entire VP has been deleted. We will argue, however, that a second internal argument such as an indirect object (for instance, a PP goal) can drop alongside the direct object, without necessitating deletion of the entire VP. This occurs when both the direct object and indirect object are topics and drop independently.

The data below show that when a verb takes two internal arguments, each argument can drop independently, leaving behind the other argument and obviously, the entire VP. First it will be shown that a direct object (DO) can drop independently, and then, countering Goldberg, that an indirect object (IO) can do the same. (50) illustrates an omitted DO with an IO in place:

17

(50) Q: lakaxta et   ha-sdinim la-maxbesa?
           took.2SG ACC   the-sheets to-the-cleaners
           'Did you take the sheets to the cleaners?'

      A: lo, ba-sof   lakaxti ø le-ima   šeli.
           no in-the-end took.1SG   to-mother my

Here the DP *ha-sdinim* 'the sheets' is the topic and is free to drop in the answer. (51)
is an example of an omitted IO with a DO in place:

(51) Q: lakaxta   et   ha-sdinim la-maxbesa?
           took.2SG ACC   the-sheets to-the-cleaners
           'Did you take the sheets to the cleaners?'

      A: lo, lakaxti   rak et   ha-magavot ø.
           no took.1SG only ACC   the-towels
           'No, I only took the towels to the cleaners.'

In this example, the topic is the PP *la-maxbesa* 'to the cleaners' and can drop.
These examples establish that both the DO and the IO can be independently omitted.
We therefore expect both of them to be able to drop, when both are interpreted as
topics. In such a case, the VP remains intact. This possibility is demonstrated in (52),
an utterance which under Doron and Goldberg is necessarily a case of VPE because
all VP-internal material (but the verb) are missing. Note that since both the DO and
IO in the answer are topics, the answerer may choose to drop either one of them,
both, or neither.

(52) Q: natatem et   ha-sefer le-Dorit?
           gave.2PL ACC   the-book to-Dorit
           'Did you give the book to Dorit?'

      A: ken, natanu ø / la   ø / oto
           yes, gave.1PL   to-her   it
           'Yes, we did.'

We have shown, contrary to Doron and Goldberg, that ditransitive verbs with two
missing internal arguments are not necessarily to be analyzed as VPE. The inverse
claim can, however, be maintained: a ditransitive verb with one null and one overt
internal argument cannot be analyzed as VPE: the overt VP-internal material
indicates that the VP is in place, as observed in both Doron and Goldberg.
Example (53) illustrates such an utterance.

(53) Q: bikaštem   et   ha-išur   me-ha-menahelet?
           requested.2PL ACC the-approval from-the-manager
           'Did you request the approval from the manager?'

      A: lo, bikašnu ø / oto me-ha-mazkira   šela
           no asked.1PL   it   from-the-secretary hers
           'No, we requested it from her secretary.'

Goldberg acknowledges an alternative account, suggested to her by Jonathan
Bobaljik, in which VPE *is* a possible analysis for such utterances. The proposal is that
in addition to the verb, the remaining argument itself raises out of the VP prior to VP
Ellipsis, an analysis analogous to that of English pseudo-gapping. Goldberg rejects
this possibility, however, because the Hebrew construction in question (overt verb,

null DO, overt IO) has different characteristics than English pseudo-gapping. Particularly, two restrictions that apply to English pseudo-gapping—it cannot occur in question-answer pairs and its remaining elements must be contrastively focused—are irrelevant to the Hebrew construction (For further details the reader is referred to Goldberg, 2005 and references therein.) We agree with Goldberg on this point and conclude that an overt IO indeed eliminates the VPE analysis. We therefore treat a ditransitive verb followed by a null DO and an overt IO as not involving VPE.

3.2.2   Diagnostic 2: Animacy

As discussed in section 3.1, Hebrew animate objects do not drop as easily as inanimate objects. Goldberg argues that animate objects cannot drop independently, in Null Object constructions, but only as part of VP Ellipsis. This claim is based on ungrammatical occurrences of null animate objects in non-VPE utterances, i.e. a sentence containing overt VP-internal material following the dropped object. Goldberg generalizes that such utterances are always ungrammatical, and concludes that animate objects cannot drop while other VP-internal material remains overt. However, although rare, such examples do exist:

(54)   Q: šalaxta   et   ha-yladim le-boston?
           sent.2SG ACC the-kids   to-boston?
           'Did you send the kids to Boston?'

       A: lo, šalaxti   ø / otam le-nyu-york
           no sent.1SG   them to new york
           'No, I sent them to New York'

The overt PP goal *le-boston* 'to Boston' excludes a VPE analysis, as argued above, yet the null direct object is animate. Such cases are indeed hard to come by, due to the animacy restriction, but they are not impossible. Thus the generalization that animate objects cannot drop independently of other VP-internal material does not hold.

The fact that the object topic above can drop despite its animacy should be explained. First, note that the IO is contrastively focused—'to New York' in the answer versus 'to Boston' in the question. Focusing on the IO enables the topic to drop. This demonstrates how, like in Russian (section 2.1), topic drop is part of the bigger picture of information structure. Secondly, within animate objects we find an internal hierarchy within which humans are ranked higher than other animates and among humans, children are 'less animate' than adults. To some extent children can be treated, linguistically, like inanimates. Such treatment is further highlighted in (54) by the use of the verb š*alax* 'send', normally reserved for inanimate objects.[12]

3.2.3   Diagnostic 3: Sloppy readings

VPE is known to allow a sloppy reading (Doron, 1999) alongside a strict reading. According to Doron and to Otani and Whitman, 1991, this trait distinguishes VPE from the Null Object construction, which allows only a strict identity reading. This claim is examined here—as before—with a construction that cannot be VPE: a sentence with two internal arguments of which one is null and one overt. The null argument can potentially co-refer to either the subject of the antecedent clause (strict reading) or the subject of the target clause (sloppy reading).

---

[12] There are additional contexts where animate object drop is tolerated, such as after certain verbs and in affirmative answers to yes/no questions.

(55) Dani$_i$ her'a   et   ha-xatima   šelo$_i$ le-Rina ve-Šlomo$_k$ her'a
      Dani showed ACC   the-signature his to-Rina and-Šlomo showed
      ø$_{i/k}$ le-Mixal
          to-Michal
      'Dani showed his signature to Dina and Shlomo showed his signature to Mixal'

(56) Dina$_i$ talta et   ha-simla šela$_i$ ba-aron   ve-Dorit$_k$ hixnisa ø$_{i/k}$ la-mgera
      Dina hung ACC the-dress her in-the-closet and-Dorit inserted   to-the drawer
      'Dina hung her dress in the closet and Dorit put her dress in the drawer.'

(57) Dani$_i$ her'a   et   ha-širim   šelo$_i$ le-Dina ve-Moše$_k$ her'a ø$_{i/k}$ le-Mixal
      Dani showed ACC the-muscles his   to-Dina and-Moshe showed   to-Michal
      'Dani showed his muscles to Dina and Moshe showed his muscles to Michal.'

Hebrew speakers give the above sentences sloppy identity readings, weakening Otani and Whitman's as well as Doron's assumption. It should be observed that the situations described in these examples encourage sloppy readings for pragmatic reasons: it is more plausible for someone to show their own muscles rather than someone else's. In a context where a strict reading is pragmatically more plausible, speakers react accordingly and give the utterance a strict interpretation. This is demonstrated in (58):

(58) ha-yeled nitek   et ha-maxšev šelo me-ha-xašmal
      the-boy disconnected ACC the-computer his   from-the-electricity
      ve-ha-aba   xiber   ø$_{i/k}$ ba-xazara
      and-the-father connected   back
      'The boy unplugged his computer and the father re-plugged his computer.'

Here a strict reading, in which the computer in both clauses is the boy's, is more salient for pragmatic reasons. The conclusion is that sloppy reading is not blocked in Null Object constructions. The availability of a sloppy reading therefore does not indicate that the utterance in question contains VPE.

3.2.4   Diagnostic 4: Locality Constraints

Another test that has been proposed is sensitivity to islands. VPE is known to be free of island effects. Doron, 1999 claims that Null Object constructions, in contrast to VPE, are subject to such effects as they involve movement of a null operator, as in Huang, 1984. However, the data below will show that Null Object *can* occur inside an island.

As before, this will be established with the use of ditransitive verbs with one null and one overt argument, which we assume cannot contain VPE. Such Null Object examples are tested below in five island environments:

CP coordination:
(59) [$_{CP}$ Dina he'evira et   ha-meser   le-Yosi] [$_{CP}$ ve-Dani he'evir ø / oto le-Mixal]
          Dina passed ACC the-message to-Yosi   and-Dani passed   it to-Michal
      'Dina passed the message to Yosi and Dani did to Michal'

VP coordination:
(60) Mixal [$_{VP}$ kibla   et   ha-mafte'ax mi-Dani] [$_{VP}$ ve-natna ø / oto le-Sarit]
      Michal received ACC the-key   from-Dani   and-gave it   to-Sarit
      'Michal received the key from Dani and gave it to Sarit.'

Complex NP Constraint:
(61)   Her'eti   et   ha-tmuna le-Dina, ve-mišehu   hefic   šmu'a
       showed.1SG ACC   the-picture to-Dina and-someone spread rumor
       [NP complement še-her'eti   ø / ota gam le-Yosi]
              that-showed.1SG   it   also to-Yosi
       'I showed the picture to Dina and someone spread the rumor that I also
       showed it to Yosi.'

Adjunct Island:
(62)   fiksasnu et   ha-mismaxim le-London [Adjunct lamrot še-kvar   šalaxnu
       faxed.1PL ACC   the-documents to-London   despite that-already sent.1PL
       ø / otam le-Berlin]
            them to-Berlin
       'We faxed the documents to London even though we had already sent them
       to Berlin.'

Subject Island:
(63)   ani yodea še-her'et   et   ha-tmuna le-Dani, aval
       I   know that-showed.2SG ACC the-picture to-Dani but
       [CP subject ze še-her'et   ø / ota le-Yosi]   ze mamaš lo   beseder
              this that-showed.2SG   it to-Yosi   it really   no all-right
       'I know that you showed the picture to Dani, but showing it to Yosi was really
       wrong.'

The same point is illustrated for Russian in example (21).

Relative Clause Island:
(64)   ze ha-baxur [RC še-maca   et   ha-taba'at ve-hexzir   ø / ota le-Dina]
       this the-guy   that-found ACC   the-ring   and-returned   it to-dina
       'This is the guy who found the ring and returned it to Dina.'

The grammatical data above show that this non-VPE construction is not island
bound. This result casts serious doubt on the idea that this construction involves
movement of a null operator.

We have shown that neither the Null Object nor the V-stranding VPE analyses can
ultimately account for the behavior of object drop. However, an account in terms of
topic drop addresses the full array of issues raised here. In particular, it allows the
missing constituent to appear inside an island and to provide sloppy reading since its
presence in the syntax allows such interpretation. The only constraints that apply to it
are those that apply to Hebrew object topic drop in general.

4. Conclusion

The purpose of this paper was to show that topic drop plays a major role in
explaining the distribution of object ellipsis in those languages that allow it. Topic
drop is, however, far from a uniform phenomenon. One of the things that puzzle us in
particular is cross-linguistic differences. Our initial examination of Hebrew topic drop
in adverbial adjuncts indicated that Hebrew does not allow it. (65), parallel to the
Russian (14)a, shows that Hebrew does not allow topic drop where Russian does.

  (65)   Yosi saraf   et   ha-mixtavim ha-ele   bli   likro   otam / *ø
         Yosi burned ACC   the-letters   the-these without read-inf   them

'Yosi burned these letters without reading them.'

A closer inspection of the data in Hebrew, however, shows that the same contexts that ameliorate topic drop in other Hebrew constructions also help here. In (66) the dropped object appears in a conjunction and is followed by additional material, environments that tolerate topic drop more easily.

(66)   Yosi zarak et   ha-kufsa bli   liftoax   ø / ota ve-lirot
        Yosi threw ACC the-box without open-inf   it   and see-inf
        ma   yesh ba
        what exists in-it
        'Yosi threw away the box without opening it and seeing what's in it.'

The differences between these two languages may therefore not be as extreme as we initially thought.

We assume that further research can link these differences to other morpho-phonological differences between the two languages and that this type of research will lead to interesting insights into the nature of ellipsis as a whole, and topic drop in particular.

The influence of information structure on ellipsis is well-known (e.g., Konietzko and Winkler, 2010 and the references cited therein). Here we have shown that certain elliptical phenomena are best analyzed as topic drop, a way of marking the topichood of an argument in languages that allow it.

Neeleman and Szendröi, 2005 (following Perlmutter, 1971 and Holmberg, 2004) argue that "null arguments are regular pronouns that fail to be spelled out at PF." We agree with this view, although our reasons differ from those of these authors: As argued in Erteschik-Shir, 2005, 2006, all information structure triggered processes are accounted for at the PF interface. These include other ways of marking topics, such as dislocation (topicalization, scrambling) and prosodic marking. The fact that topic drop is constrained differently in the two languages we discuss, as well as in other languages that have been studied follows naturally on this view since the idiosyncratic morpho-phonological properties of each language come into play at PF.

References:

Aissen, J., 2003. Differential object marking: Iconicity vs. Economy. Natural Language & Linguistic Theory 21, 435-483.

Babby, L.H., Franks, S., 1998. The Syntax of Adverbial Participles in Russian Revisited. Slavic and East European Journal 42, 117-149.

Bošković, Ž., 1997. The syntax of nonfinite complementation: an economy approach. The MIT Press.

Culicover, P.W., 2001. Parasitic Gaps: A History, in: Culicover, P.W., Postal, P.M. (Eds.), Parasitic Gaps. The MIT Press, Cambridge, Ma., pp. 3-68.

Dalrymple, M., Nikolaeva, I., 2011. Objects and Information Structure. Cambridge University Press, Cambridge.

Daneš, F., 1974. Functional sentence perspective and the organization of the text, in: Daneš, F. (Ed.), Papers on Functional Sentence Perspective. Academia, Prague, pp. 106-128.

Doron, E., 1983. Verbless Predicates in Hebrew, Ph.D. thesis, University of Texas at Austin.

Doron, E., 1990. V-Movement and VP-Ellipsis. The Hebrew University of Jerusalem.

Doron, E., 1999. V-movement and VP-ellipsis, in: Lappin, S., Benmamoun, E. (Eds.), Fragments: Studies in Ellipsis and Gapping. Oxford University Press, Oxford, pp. 124-140.

Engdahl, E., 1983. Parasitic Gaps. Linguistics and Philosophy 6, 5-34.

Erteschik-Shir, N., 1997. The Dynamics of Focus Structure. Cambridge University Press, Cambridge.

Erteschik-Shir, N., 2005. What is Syntax? Theoretical Linguistics 31, 263-274.

Erteschik-Shir, N., 2006. On the architecture of topic and focus, in: Molnár, V., Winkler, S. (Eds.), The architecture of focus. Mouton de Gruyter, Berlin, pp. 33-57.

Erteschik-Shir, N., 2007. Information Structure: The Syntax-Discourse Interface. Oxford University Press, Oxford.

Farrell, P., 1990. Null objects in Brazilian Portuguese. Natural Language and Linguistic Theory 8, 325-346.

Franks, S., 1995. Parameters of Slavic Morphosyntax. Oxford University Press, Oxford.

Frascarelli, M., Hinterhölzl, R., 2007. Types of topics in German and Italian, in: Winkler, S., Schwabe, K. (Eds.), On Information Structure, Meaning and Form. John Benjamins, Amsterdam.

Goldberg, L.M., 2005. Verb-stranding VP-ellipsis: A cross-linguistic study, PhD thesis thesis, McGill University.

Gribanova, V., 2010. On diagnosing ellipsis and argument drop: the view from Russian, Paper presented at the MIT Linguistics Department Colloquium.

Holmberg, A., 2004. Null subjects and uninterpretable features: evidence from Finnish. Ms., University of Durham.

Huang, C.-T.J., 1984. On the distribution and reference of empty pronouns. Linguistic Inquiry 15, 531-574.

Iemmolo, G., 2010. Topicality and differential object marking: Evidence from Romance and beyond. Studies in Language 34, 239–272.

Ivlieva, N., 2006. Parasitic Gaps in Russian. , Formal Approaches to Slavic Linguistics, Toronto.

Keller, F., Lapata, M., 1998. Object Drop and Discourse Accessibility, in: Shahin, K., Blake, S., Kim, E.-S. (Eds.), Proceedings of the 17th West Coast Conference on Formal Linguistics Publications. CSLI, Stanford, pp. 362–374.

Konietzko, A., Winkler, S., 2010. Contrastive ellipsis: Mapping between syntax and information structure. Lingua 120, 1436-1457.

Lin, J., 2005. Does Wh-in-situ License Parasitic Gaps? Linguistic Inquiry 36, 298-302.

McShane, M.J., 2002. Unexpressed Objects in Russian. Journal of Slavic Linguistics 10, 291–328.

McShane, M.J., 2005. A Theory of Ellipsis Oxford University Press, Oxford.

Neeleman, A., Szendröi, K., 2005. Pro Drop and Pronouns, in: al., J.A.e. (Ed.), Proceedings of the 24th West Coast Conference on Formal Linguistics Cascadilla Proceedings Project, Somerville, MA, pp. 299-307.

Nissenbaum, J., 2000. Covert movement and parasitic gaps, in: Masako Hirotani, A.C., Nancy Hall, Ji-yung Kim (Ed.), Proceedings of the 30th annual meeting of the North East Linguistics Society. GLSA Publications, Amherst, MA.

Otani, K., Whitman, J., 1991. V-Raising and VP-EllipsisLinguistic Inquiry 22.2: 345-358. Linguistic Inquiry 22, 345-358.

Perlmutter, D.M., 1971. Deep and surface constraints in generative grammar. Holt, Rinehart and Winston, New York.

Reinhart, T., 1981. Pragmatics and linguistics: an analysis of sentence topics. Philosophica 27, 53-94.

Romanova, E., 2004. Superlexical vs. lexical prefixes Nordlyd 32 (special issue on Slavic prefixes, ed. Peter Svenonius), 255-278.

Ross, J.R., 1967. Constraints on Variables in Syntax, thesis, M.I.T.

Schulz, B., 2003. Crossing the borders of functional and formal linguistics: an optimality theoretic account of German topic drop, in: Ikeda, K., Robideau, J. (Eds.), Selected papers from the seventh college-wide conference for students in languages, linguistics and literature, University of Hawaii, Manoa, pp. 188-201.

Schwenter, S.A., 2006. Null objects across South America, in: Face, T.L., Klee, C.A. (Eds.), Selected Proceedings of the 8th Hispanic Linguistics Symposium. Cascadilla Proceedings Project, Somerville, MA, pp. 23-36.

Schwenter, S.A., Silva, G., 2002. Overt vs. Null Direct Objects in Spoken Brazilian Portuguese:A Semantic/Pragmatic Account. Hispania 85, 577-586.

Shlonsky, U., 1987. Null and Displaced Subjects, Ph.D. thesis, MIT.

Stepanov, A., 1998. On wh-fronting in Russian, in: Tamanji, P.N., Kusumoto, K. (Eds.), NELS 28. GLSA, University of Massachusetts, Amherst, pp. 453-467.

Strahov, N., 2000. A Scrambling Analysis of Wh-questions in Russian, in: King, T.H., Franks, S., Yadroff, M. (Eds.), Formal Approaches to Slavic Linguistics: The Bloomington Meeting. Michigan Slavic Productions, Ann Arbor, pp. 293-310.

Strawson, P.F., 1964. Identifying reference and truth-values. Theoria 30, 86-99.

Svenonius, P., 2004. Slavic prefixes inside and outside VP. Nordlyd 32, 205-253.

Takahashi, D., 2006. Apparent Parasitic Gaps and Null Arguments in Japanese. Journal of East Asian Linguistics 15, 1-35.

Vallduví, E., 1990. The informational component, thesis, University of Pennsylvania.

Wahba, W.A.-F.B., 1995. Parasitic Gaps in Arabic, in: Eid, M. (Ed.), Perspectives on Arabic Linguistics V: Fifth Annual Symposium on Arabic Linguistics. John Benjamins, Amsterdam, pp. 59-68.