Missing objects as Topic Drop[1]

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Abstract:

In this paper we argue that missing objects are to be analyzed in Information Structure terms as missing 'continued' topics referred to here as Topic Drop. We employ two cases to argue for this claim. First we show that missing objects in Russian adverbial gerunds are to be analyzed as Topic Drop rather than as Parasitic Gaps. Similarly, Topic Drop is solely responsible for the missing object in Hebrew structures which have also received structural analyses involving VP-ellipsis or a moved null operator. We argue against movement analyses of both constructions and propose that missing objects are to be analyzed as unvalued feature bundles that receive an interpretation from an available topic in the discourse.

Key words: Topic Drop, VP ellipsis, Parasitic Gaps, Russian, Hebrew, Differential Object Marking, strict and sloppy readings, subject-object asymmetry.

1. Missing arguments

In this paper we concentrate on the properties of missing objects in Russian (section 2) and in Hebrew (section 3) and argue that these are instances of Topic Drop. We outline the Information Structure properties of Topic Drop, making a distinction between continued and shifted topics. We argue that the missing objects we examine are instances of continued topics.[2] We argue that the missing objects in Russian adverbial gerunds, although they have been analyzed as parasitic gaps, are in fact instances of Topic Drop. 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. We argue against alternative syntactic analyses proposed for these cases and show that the trigger for deletion is the (continued) topichood of the missing object. In the conclusion we examine the consequences of our analysis for the crosslinguistic study of Topic Drop.

(1) and (2) illustrate missing objects in Russian and Hebrew respectively.

(1) Q: Maša uže   na stancii. Kto-to   pojexal   za nej?
         Masha already on station somebody drove.sg.m for her.ACC
         'Masha is already at the station. Has anyone gone to meet her?'

     A: Ne volnujsja, uže   vstretili ø/eë, i   vezut   ø/eë 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.'

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

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

Both examples exhibit criteria for the topichood of the missing objects: An antecedent is contextually available in the question and the missing object alternates with an overt pronoun. In the next section we show that these criteria hold of continued topics.

1.1 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). Topics are prototypically referential DPs with a discoursal antecedent. Weak 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 (including PPs) may function as topics.

The following two kinds of topics are commonly distinguished: continued topics, which refer back to an already mentioned referent, and shifted topics, which are

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[2] See Schulz, 2003 who also claims that missing arguments are continued topics.

derived from a discoursally available set.[3]

The model of discourse defined in Erteschik-Shir, 1997 assumes that the context is organized as a file containing a set of cards.[4] A set of discourse rules, determine the changes in the file induced by an utterance (where each utterance is marked for topic and focus features)[5]. Among these rules are the following two:

> TOPIC instructs the hearer to locate on the top of his file an existing card (or an existing set of cards) with the relevant index.

> FOCUS instructs the hearer to either
> (i)   Open a new card and put it on the top of the file. Assign it an index (in the case of an indefinite).
> (ii)   Locate an existing card and put it on the top of the file (in the case of a definite).

In the case of continued topics, a card matching the current topic is to be found on top of the file.

> (3)   a.   John$_{TOP}$ [saw a movie]$_{FOC}$
>
>   b.   He$_{TOP}$ [liked it$_{TOP}$]$_{FOC}$

In (3)a, following the topic rule, a card for *John* must be available on top of the file in order for the sentence to be interpreted. The focus rule applies to *a movie* by opening a new card for this referent and positioning it on top of the file. Since both the card for *John* and the card for *the movie* are now on top of the file, (3)b is licensed with both subject and object topics both instantiated as pronouns.[6]

The Focus rule is also triggered by deictic pointing. So if we point at a dog, a card for this dog is positioned on top of the file licensing (4).

> (4)   [this dog/it]$_{TOP}$ [is very cute]$_{FOC}$

Shifted topics are topics whose discourse referent constitutes a set. The italicized subjects in (5) illustrate restrictive topics.

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[3] Frascarelli and Hinterhölzl, 2007 distinguish Familiar Topics, Aboutness-shift Topics and Contrastive Topics. These are parallel to continued, shifted and contrastive topics respectively.

[4] This discourse model incorporates Heim's 1982 distinction between definites and indefinites and uses only Topic and Focus as its Information Structure primitives. It enables a distinction between continued and shifted topics without resorting to additional primitives. These properties made this model particularly suitable for the account of missing objects. This is not to say that other Information structure models could not be used.

[5] Structures with topic/focus feature annotations can be derived by assigning these features on a par with φ-features together with lexical selection or else they can be freely assigned at syntactic spell-out. The result is identical and so these two approaches are notational variants as shown in Erteschik-Shir , 2006.

[6] Importantly, several cards can accumulate on top of the file. Only those details of the framework necessary for our explication of topic drop are introduced. For more information see Erteschik-Shir, 1997.

(5)   Q: Where did you put my things?
       A: a. *Your book* is on the table.
             b. *Some of them* are on the table.

The focused 'my things' in the question positions a card representing this set of things on top of the file, making the set available as a topic in the following discourse. The italicized topics in the answers represent a subset (consisting of a single element or more) of this set, and not the set as a whole. According to the discourse rules, the cards for the subsets must be on top of the file in order for them to be licensed as topics and the only way they can get there is if they undergo the focus rule. And in fact, these subjects *are* foci as evidenced by the fact that they are stressed. The way this works, according to the discourse rules, is that a 'set' card is composed of a set of individual cards (very often vaguely defined; the set of things in this case) that can be manipulated by the focus rule. In this way the cards for the focused subjects in (5) can each be positioned on top of the file by the focus rule. In other words, Restrictive topics are focused members of a topic set. It follows that topics need not be definite as long as they are members of a discourse specified set.

Contrastive topics are analyzed along the same lines: here the 'set' card is portioned into two parts, one of which is eliminated from discussion:

(6)   Q: Would you like tea or coffee?
       A: I would like tea (not coffee).

What restrictive and contrastive topics have in common is that they are selected from a context specified set; their antecedent is therefore not directly available in the context. This is why they are often grouped together as shifted topics. Continued topics differ in having a coreferent antecedent in the context and are instantiated as pronouns.

1.2 Topic Drop

Topic drop is one way of marking topics. Topics can also be marked morphologically, by topicalization, by a weak or a clitic pronoun, or by intonation (including destressing). Most languages use several of these options and vary depending on the array of options as well as other language specific properties. In Danish, for example, both shifted and continued topics topicalize optionally and can also be left in situ as pronouns. Topic drop, however, is no more prevalent in Danish than it is in English. In Russian and Hebrew topicalization is reserved for shifted topics while continued topic pronouns are left in situ or drop.Topicalization of shifted topics is illustrated in (7) and (8) for Hebrew and Russian, respectively.

(7)   Raskažy mne ob   Ivanovyx
       Tell   me   about the Ivanovs

       *(Sergeja) ja znaju uže   davno,   a *(Mašu) vstretila tol'ko včera.
        Sergey   I know already long-ago but Masha met   only yesterday
        'I know Sergey since long ago, but I met Masha only yesterday.'

(8)   Dani   hevi   xalav ve-tapuxim   me-ha-super.
       Dani   brought   milk   and-apples   from-the-supermarket
       'Dani brought milk and apples from the supermarket.'

a. *(et ha-xalav)   hu   sam   ba-mekarer
   ACC the-milk   he   put   in-the-fridge
   'He put the milk in the fridge.'

b. *hu sam oto ba-mekarer
   he put   it   in-the-fridge

The question in (7) introduces the 'Ivanovs', a set of family members. In the response, the topicalized objects are interpreted as members of this set. These shifted topics cannot be replaced by pronouns and cannot be left out. Similarly, the first sentence in (8) introduces the set of 'milk' and 'apples'. Again a member of the set can be topicalized, but it cannot be left out as shown in the continuation in a. Neither can it be replaced by a pronoun as shown in the continuation in b. The following examples from Russian and Hebrew, respectively, show that continued topics cannot topicalize in these languages:

(9) Maša   privela   Sergeja   na vererinku.
     Masha brought.SG.F.PAST Sergey.ACC on party
     'Masha brought Sergey to the party.'

     *Sergeja   ja očen'   ljublju.
     Sergey.ACC I   very-much love.1SG
     'I love Sergey very much.

(10) Dani   hevi   xalav me-ha-super.
     Dani   brought   milk   from-the-supermarket
     'Dani brought milk from the supermarket.'

     *et   ha-xalav   hu   sam   ba-mekarer
     ACC   the-milk   he   put   in-the-fridge
     'He put the milk in the fridge.'

In both cases the first sentence introduces the object making it a continued topic. In the following sentence topicalization is ruled out. This demonstrates the division of labor between topicalization, which applies to shifted topics, and pronominalization, which applies to continued topics. As we show in this paper, object gaps pattern with pronouns in applying to continued topics and not to shifted topics. We show below that data of this sort presents an obstacle to the idea that topicalization underlies Topic Drop.

Our account of missing objects is inspired by in Sigurðsson and Maling, 2008; Sigurðsson, 2011. Their approach is particularly relevant to the current discussion in that it takes Information Structure into account. According to Sigurðsson and Maling 2008 "all pronominal arguments are syntactically computed feature bundles that may or may not be spelled out in PF, depending on PF parametric options and/or language-specific low-level PF spell-out rules and constraints." (Sigurðsson and Maling, 2008, 14).

Our implementation of this idea is however quite different. One difference is that for us the interpretation of the feature bundle is available in situ: It is interpretable if a suitable topic is available on top of the file (and does not involve feature matching with left peripheral elements). As was just demonstrated, an account in terms of leftward movement cannot hold for Russian and Hebrew, since it does not apply to continued topics.

Another difference is that for us overt and null pronouns are computed somewhat differently: Whereas a fully specified feature bundle is computed syntactically in the case of overt pronouns, null topics are merged as a set of unvalued φ-features.[7] This difference has consequences for the explanation of the strict/sloppy ambiguity (see section 3.2).

Since it is generally the case that missing objects can be replaced by pronouns, and since pronouns are necessarily topics, being replaced by an overt pronoun provides clear evidence that the missing argument is a topic. Those cases in Russian and Hebrew in which the alternation between an overt pronoun and a gap is not possible will be discussed in sections 2 and 3, respectively.

For us, null arguments thus enter the computation as a bundle of unvalued φ-features:

$$\begin{bmatrix} \alpha & person \\ \beta & number \\ \gamma & gender \end{bmatrix}$$

The PF interface accesses the discourse file and valuation of the feature bundle occurs by matching with a (topic) card from the top of the file, thereby also providing a reference. The assumption that the features are unvalued, forces a process of valuation where the only source of such valuation is the discourse. It is therefore not necessary to mark missing arguments with a topic feature. Topichood follows from the need for valuation.

Overt pronouns are merged as a bundle of valued φ-features:

$$\begin{bmatrix} \pm & person \\ \pm & number \\ \pm & gender \end{bmatrix}$$

In view of the fact that their features are valued, they can receive their reference from an argument with matching features in the sentence as well as from an available topic card. In fact, it is well known that unless the context forces it, pronouns necessarily find their antecedents within the sentence.

The discussion of missing arguments has centered on the so-called *pro*-drop parameter, which determines whether or not arguments can be dropped. Initially (Chomsky, 1981) the *pro*-drop parameter was connected to morphologically rich agreement between the dropped argument and T (in the case of subjects) and V (in

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[7] Sigurðsson and Maling also distinguish pronouns from null arguments: The former are spelled out because they are composed of a more complex feature structure. Sigurðsson, 2008, 405 in fact argues that PRO infinitives are silent because they are 'defective' with respect to (subject) Person", i.e. they are unvalued for this feature. They differ from cases of Germanic topic drop because they "cannot match and inherit values from infinitive external elements." 446 See also Herbeck, 2012 for a similar view. Rooryck and vanden Wyngaerd, 2011 argue that an anaphor enters a derivation with unvalued, but interpretable, features that become valued by forming an Agree relation with an antecedent. The unvalued feature bundle we propose for null topics is only interpretable by an available topic. An investigation of the array of null and overt pronouns and anaphors with respect to their feature composition is clearly required.

the case of objects) but at the same time it was clear that *pro*-drop was much freer in some (far-eastern) languages which did not have such agreement properties. Since Huang, 1984 such radical *pro*-drop has been associated with the topichood of the missing argument. Huang shows that null objects must be bound by the discourse topic ("someone or something that a given discourse is about" (541). Huang analyses null objects on a par with topicalized objects, the difference being that in the former case, the topicalized element is null as well (542):

(11)   [Top e_i], [Zhangsan shuo [Lisi bu renshi e_i]].
                Zhangsan say   Lisi not know
       '*[Him$_i$], Zhangsan said that Lisi didn't know e_i.'

It follows, according to Huang, that null objects are variables since they are bound by A' topic-operators. What distinguishes languages that allow null objects of this kind from those that do not, according to Huang, is that the former allow zero topics to bind variables. Following Tsao, Huang restricts the licensing of zero topics to "discourse oriented languages." Xu, 1986, however, argues that null objects cannot be variables since, among other properties, they do not adhere to island constraints. Since the null objects we discuss also violate islands, we reach a similar conclusion for Russian and Hebrew.

Saito, 2007 also views missing arguments as topics and assumes covert LF copying of elements available in the discourse (including *pro*) into argument positions. He relates this option to the lack of required agreement in East Asian languages as opposed to *pro*-drop in languages such as Italian and Spanish which have rich agreement. The languages we examine here don't allow missing objects to the extent of the East-Asian languages as described by Saito. A more finely tuned way of distinguishing the properties of languages with respect to Topic Drop is therefore called for.

Note also that approaches that search for the antecedent of dropped topics at LF or in the linguistic context cannot account for deictic antecedents of Topic Drop (e.g., Saito, 2007; Sigurðsson, 2011, 284 respectively). In our view, deictic pointing triggers the focus rule allowing the null object to seek its referent on top of the file as a continued topic. As shown for Russian and Hebrew (in section 2 and 3, respectively), non-deictic, extralinguistic context may also trigger the manipulation of the file.

Other attempts have been made to give unified accounts of null arguments (both subject and object) taking into account the various crosslinguistic instantiations of the phenomenon. Rizzi, 1986 analyzes missing arguments as *pro* licensed by a governing head. Languages are parameterized for the values of the licensing heads. The reason English, for example, has no *pro* is because it has no licensing heads. In Italian both Infl and V count as licensing heads allowing for *pro* subjects and objects. Rizzi separates out the availability of *pro* according to this parameter and its interpretation. Here feature specification (among other properties) comes into play allowing for referential null subjects in Italian, but only arbitrary reference for objects. This "recovery" procedure, according to Rizzi, is also parameterized. Languages which do not use φ-features (i.e., do not have any overt agreement) such as Chinese, allow for free interpretation of *pro* where it is licensed. The idea that there can be different "recovery" principles is an interesting one. Here we examine instances of missing arguments which are interpreted according to their discoursal status as

topics.[8] It follows that we seek to understand the crosslinguistic patterns in the realm of Information Structure.

This is also the theoretical stance taken in Frascarelli, 2007. Frascarelli offers a detailed account of the discourse requirements on null subjects in Italian arguing that both destressed and null pronouns "must refer to the current Aboutness-shift Topic" (713). Her analysis is couched in a cartographic framework in which such Topics are necessarily base-generated in a dedicated left peripheral position licensing null subjects, basically a notational variant of Huang's approach. Our aim is along similar lines in that we study the information-structural properties of missing objects and their interpretation, however we view the different properties of left peripheral topics and in-situ topics as evidence against both being generated in the left periphery. This would at least require two distinct left peripheral functional projections, one for each topic type. In addition there would have to be an account for why one type remains in its left peripheral base position and the other is pronounced in-situ as a pronoun. The fact that the properties of null arguments align with those of in-situ pronouns, argues against their base generation on the left periphery. Therefore the cartographic approach in which the null argument is bound by an element at the left periphery is not an option for either Russian or Hebrew.

We do, however, agree with both Saito and Frascarelli (among others) that discoursally available topics provide the interpretation of missing arguments. These topics, in our view, are derived by the model of discourse in Erteschik-Shir, 1997, 2007 and not by LF-syntactic or cartographic means.

2. Missing objects in Russian

As indicated in section 1.2, Russian objects can drop or pronominalize only if they are continued topics. This is illustrated in (12) in which *krusovuju* 'course-paper' in the first clause provides an available referent for the missing object.[9]

(12) Ja ne   sdala   kursovuju,   potomu čto ešče ne
      I   NEG hand-in.PAST course-paper-ACC because that yet NEG

      dopisala   ø/eë.
      write.SG.F.PAST   it.ACC
      'I haven't handed in the course paper, because I haven't finished writing it.'

(13) shows that the missing object is necessarily a continued topic. The sentence is grammatical only in the context indicated, but not if it is pronounced out of the blue.

(13) [*Otkuda u tebja èta kniga?* Where is this book from?]

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

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[8] See Roberts, 2010 for a more recent unified view of null arguments and Cole, 2010 for an extensive review of the literature.
[9] Some verbs in Russian, e.g., *čitat'* 'read', can be used intransitively (often in generic contexts). To control for this situation, we use optionally transitive verbs and gerunds formed from these verbs in perfective form and only in episodic contexts in which the object is not optional.

The referent of the continued topic can also be *extralinguistic.* Extralinguistic means, like pointing at the object, ensure that the attention of the hearer is drawn to it, allowing a card for this referent to be placed on top of the file and to supply a reference to the missing object:

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

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

2.1 Topic drop vs. overt pronouns

In the Russian examples used so far overt pronouns are interchangeable with missing objects. This is not always the case. In this section we show that a continued topic with a nonspecific antecedent can only be realized as a gap.
Russian lacks indefinite pronouns corresponding to English 'one' and 'some'. A gap is therefore the only available option.

In (15) the missing object of *buy* in the answer receives a partitive reading equivalent to 'some' and cannot be replaced by an overt pronoun.

(15) Q: Ty   kupila   kofe?
           you bought.SG.F coffee.ACC
           'Did you buy coffee?

      A: Da, kupila   ø/*ego   eščё   včera.
           yes bought.SG.F   it.ACC already yesterday
           Yes, I bought some already yesterday.'

Similarly, (16) has a nonspecific antecedent in the question and requires a gap.

(16) Q: Ty   kupila   kakoj-nibud' podarok?
           you bought.F.SG some   present.ACC
           'Did you buy any present?'

      A: Da, kupila   ø/*ego   eščё   včera.
           yes bought.SG.F   it.ACC already yesterday
           'Yes, I bought one already yesterday.'

In Russian, unlike in Hebrew (discussed in section 3.4) and in Brazilian Portuguese (Farrell, 1990; Schwenter and Silva, 2002), animate objects drop as freely as inanimate ones as shown in (17) and (18). Note, however, that the pronoun is grammatical only when the antecedent is specific.

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

b. Iskala (kakogo-to) advokata, no tak i ne našla ø/*ego.
looked-for.SG.F some attorney but part.and NEG found.SG.F him
'I was looking for an /some attorney, but I didn't find any.'

(18) a. Xotela kupit' ètu knigu, no tak i ne kupila ø/eë.
wanted.SG.F buy.INF this book but so and NEG bought.SG.F 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/*eë.
wanted.SG.F buy.INF some book but so and NEG bought.SG.F it
'I wanted to buy a/some book, but I didn't buy any.'

2.2 A restriction on Russian missing objects

In this section we discuss cases in which continued topics can only be realized as pronouns and not as gaps. We provide an account of these cases in terms of Information Structure.

It has been noted in the relevant literature (McShane, 2005, Gribanova, 2013, among others) that in Russian missing objects are highly restricted in the presence of an overt subject.[10] In the answer to the question in (19), for instance, an overt pronoun is required.

(19) Q: Kak Igor' otnositsja k Maše?
how Igor relate.3SG.REFL to Masha
'How does Igor feel towards Masha?'

A: (Ja dumaju) Igor'/on ljubit *(eë).
I think Igor/he loves.SG.M her.ACC

The acceptability of the missing object improves dramatically if the clausemate subject is null. This is shown in (20) which is a possible answer to the question in (19).[11]

(20) Ja dumaju, ø ljubit ø.
I think loves.SG.M

A missing object is allowed in the presence of focused subject. This is illustrated in (21) and (22) from the National Corpus of the Russian Language (NCRL).

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[10] McShane, 2005 analyses missing objects in Russian as resulting from DP-ellipsis, a process that can be affected by syntactic, semantic and discourse factors. According to McShane (45), object ellipsis is hampered by a subject which is a shifted topic because such a subject "decreases the expectation that that the direct object will remain the same."

[11] Anticipating the discussion of V-stranding VP-ellipsis in section 2.3, it is worth noting here that VP-ellipsis is not a possible derivation for (20). 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 (20).

(21) Stalo   byt', kto-nibud'   našel   na polu? -Ili iz karmana   poxitil!
    became be   someone.NOM found.SG.M on floor   or out-of pocket stole.SG.M
    'Can it be that someone found **it** on the floor? – Or stole **it** from the pocket!'

<div align="right">(F. Dostoyevsky. 'The Idiot', 1869)</div>

(22) … eë iskali   djadja Lënja, ded,   daže mama, ja
      her searched.3PL uncle Lënya grandfather even mom   I

    proboval triždy.   Nikto   ne našel ni   razu.
    tried   three-times nobody NEG found PART once
    '… uncle Lënya, grandfather and even mom searched for her, I tried it three
    times. Nobody found **her** even once.'

<div align="right">(*Znamja*, 2000)</div>

Quantificational subjects such as *kto-nibud'* 'someone', *nikto* 'nobody' provide foci
(they do not qualify as topics since they are not specific). Therefore, quantificational
subjects cannot drop yet they allow for missing objects.

(23) illustrates that the object can drop in the presence of a contrastively focused
subject. The pronominal subject 'he' in the last clause is a shifted topic picked from
the set 'we' consisting of the speaker and the referent for 'he'. For these reasons the
subject 'he' must be overt. Nevertheless, the missing object, which is a continued
topic, is grammatical.

(23) My byvali tam   mnogo-mnogo raz,   i   ètot žyvotnyj mir   mne,
    we were there many many   times and this animal   world.NOM me.DAT

    čestno govorja, uže   podnadoel,   no on ljubit   ø.
    truly   speaking already bore.SG.M.PAST but he love.3SG.PRES
    'We visited there for many times, and to tell the truth, I am already tired of this
    animal world, but he loves **it**.'

<div align="right">(Gorin, G. 'Sunday walks', 1974-1984)</div>

The only cases we have found where missing objects are allowed in the presence of
an overt non-focused subject involve verbs that select a location:[12]

(24) -Igor'   vse ešče išček   svoj telefon?
     Igor.NOM still look-for.2SG.PRES self phone.ACC
     'Is Igor still looking for his phone?'

    -(Ja   dumaju,) on   uže   našel   (ego)
     I   think   he.NOM already   found.SG.M it.ACC
     'I think, he has already found it.'

(25) Èto vaša podkovočka? … A   ja smotrju, ležyt   v salfetočke …
    this your horseshoe   and I   look.1SG. lie.3SG.PRES in napkin

    Ja narošno   pribrala   ø
    I   intentionally cleaned-away.SG.F
    'Is it your horseshoe? I noticed, (that) it lay (wrapped) in a napkin … I <u>took</u> **it**
    <u>away</u> on purpose …'

<div align="right">(Bulgakov, M. "Master & Margarita" 1929-1940)</div>

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[12] These are analyzed as subordinate (implicit) stage topics in Erteschik-Shir, 1997.

If the phenomenon is indeed limited to such verbs, we have a way of predicting it based on the lexical structure of verbs of this type. In order to proceed with this line of research we must first verify that no instances of this phenomenon with other verb types can be found.

Sigurðsson, 2011; Sigurðsson and Maling, 2008 propose the Empty Left Edge Condition to account for a partially similar constraint on V2 Germanic Topic Drop. According to the Empty Left Edge Condition, Sigurðsson, 2011:293 any category that moves into Spec,C blocks Topic Drop, regardless of its feature content: Sigurðsson illustrates this for Swedish in (26) for object drop. (27) from Sigurðsson and Maling, 2008:14 provides further examples.

(26) a.   ___Skulle'ja troligen vilja   se ___ ofta, i så fall.
            Would'I probably want see   often in such case
      'That/It, I would probably want to see often, in that case.'

      b.   Jag skulle troligen   vilja   se *(*det*) ofta, i   så   fall.
            I   would probably want see *(*it*) often in such case

      c.   Troligen skulle jag vilja se *(*det*) ofta, i så   fall.
            Probably would I   want see   it   often, in such case

      d.   I så   fall   skulle jag troligen vilja   se *(*det*) ofta.
            In such case would I   probably want see   it   often

(27) a.   * Jetzt kenne'ich __ nicht.   German
              Now know-I   (it) not

      b.   * Nu känner'ja(g) __ inte.   Swedish
              Now know-I   (it) not

      c.   * Núna þekki'é(g)   __ ekki. Icelandic
              now recognize'I (that) not

Let us first compare (26)a and b: In (26)a the subject is cliticized onto the verb which is parallel to dropping it in other languages. In this case the object can drop. In (26)b, however, the subject is a full pronoun and the object cannot drop. According to Sigurðsson this is because the subject is in Spec,C, blocking successful C/edge linking of the object. Sigurðsson notes in a footnote (36:291) that if the subject is an (overt) contrastive topic, the object can drop. This is very reminiscent of the Russian data.

The similarity does not carry over to the remaining examples, which illustrate cases in which the preverbal element is not a subject. We argue contra Sigurðsson that what blocks Topic Drop of the object in Germanic is the Information Structure of these sentences, not their syntactic structure. The examples in (26)d and (27) show this clearly. In the former a PP is topicalized and in the latter the fronted 'now' provides a stage topic. Both have in common with (26)b that the preverbal element is an overt topic. (26)c, a case of so-called 'stylistic' fronting, is slightly different: the fronted adverbial does not provide a topic. However, fronting the adverb is not purely stylistic: it does signal a (thetic) Information Structure with a stage topic as argued in Erteschik-Shir, 2007:114-115. One piece of evidence presented there is the fact that an initial adverb is possible in sentences in which all arguments are indefinite and therefore cannot be interpreted as topics.

(28)　Glücklicherweise hat ein Mädchen einem alten Mann geholfen.　German
　　　　Fortunately　　　has a　girl　　　an　old　man　helped
　　　　'Fortunately a girl helped an old man.'

Since having a topic is a requirement for interpretation, these sentences must be interpreted as having a stage topic. Fronting a non-topic thus signals a particular Information Structure, namely one in which none of the overt elements is a topic. The sentence is rather interpreted with an implicit stage topic. It follows that the constraint on Topic Drop in Germanic can be viewed as a constraint on Information Structure such that any element in preverbal position designates either itself or another element as a topic, blocking topic-marking by omission of other arguments.

Russian has in common with Germanic that an overt (non-focused) subject disallows a missing object but differs in that other fronted elements do not. This is to be expected since Russian is not a V2 language and the preverbal position therefore does not play the same role with respect to Information Structure as it does in Germanic. (29) shows that an overt initial stage topic does not block Topic Drop (as long as the subject is null).

(29)　Q:　　Igor' prislal　　pis'mo?
　　　　　　Igor sent.SG.M letter.ACC

　　　　A:　　(Da,) včera　　　ø　prislal　　ø
　　　　　　yes　yesterday (he)　sent.SG.M (it)

Preverbal subjects, however, have a special status as unmarked topics as demonstrated in King, 1995:102. The generalization for Russian therefore is that when both subject and object are continued topics, they have to be marked in the same way, either both are pronouns or both are missing. Overt topic subjects in Russian play the same role as overt preverbal topics in Germanic, both block the missing object. Differences of this sort can therefore be seen to vary according to the particular syntax-Information Structure alignment in each language. Although the dependency of the missing objects on the overt subject has been mentioned in the literature (e.g.,Gribanova, 2013), no syntactic account of this effect has been provided.

2.3 Syntactic accounts of the missing objects in Russian

In this section we consider two alternative 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 after the lexical verb vacates the VP. We reject both these analyses for Russian.

The null operator movement analysis, as it is known, was originally proposed to account for missing objects in Chinese (Huang, 1984), and adopted, among other languages, for E(uropean) P(ortuguese) (Raposo, 1986). In Chinese and EP, similarly to Russian, missing objects require a discourse antecedent (either linguistic or situational). The missing objects in EP obey island constraints. (30), Raposo's (18), shows that the gap within the sentential subject is ungrammatical even if the antecedent of the null object is available in the discourse:

(30)　*Que a IBM venda e_i a particulars　　　　surpreende-me.
　　　　that　IBM sells　e_i　to private individuals surprises me

In Russian the grammaticality of the missing objects within an island is gradable. We show in this section that the grammaticality of Topic Drop depends on discourse conditions rather than on a syntactic constraint.

The second analysis, termed V-stranding VP-ellipsis (VVPE), posits that a missing object results from ellipsis of the 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. VVPE has been proposed to account for missing objects in Hebrew (Doron, 1990), Finnish (Holmberg, 2001), Chinese (Otani and Whitman, 1991)[13]. A version of this account is also argued for in Gribanova, 2013 for Russian.[14]

According to Gribanova, finite lexical verbs in Russian undergo short movement out of the vP to an aspectual projection (AspP) below TP.[15] The availability of short verb movement opens up the possibility that VVPE also exists in Russian. It has been notoriously difficult to distinguish between VVPE and a missing 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. (31) and (32), her (40) and (37) respectively, are both good, but only (32), according to the first diagnostic, is a case of a missing object.

(31)   Kažetsja,   čto nikto   ne podnjal   tu   vazu.
       seem.3SG.REFL that no one.NOM NEG *under*-hold.SG.M that.ACC vase.ACC
       'It seems that no one picked up that vase.'

       Tot fakt, čto nikto   ne podnjal,   menja   očen' ogorčajet.
       the fact that no-one NEG *under*-hold.3SG. me.ACC   very upsets.3SG
       'The fact that no one picked it up very much upsets me.'

(32)   [something falls; no one wants to get it]
       Ne vstavaj.   Sejčas pridët   papa, poprosim   ego
       NEG get-up.2SG now   come.3SG.FUT dad   ask.1PL.FUT him.ACC

       podnjat' _.
       under-hold.INF
       'Don't get up. Soon dad will come, we'll ask him to pick it up.'

The second diagnostic employs the different behavior of VVPE and missing objects in islands. Ellipsis can target a vP embedded in an island (ex. (31)). In the same environment the missing object with a situational antecedent is only marginally possible:[16]

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[13] But see Kim, 1999 for an alternative view.

[14] Bailyn, 2011 however argues that Russian V-stranding constructions discussed in Gribanova do not involve VVPE.

[15] For short verb movement of finite verbs in Russian see Bailyn, 1995, Svenonius, 2004, and Romanova, 2004.

[16] According to the survey reported in Gribanova, (33) was rated lowest (2.9 on a 1 to 7 scale), other island-internal null objects were judged more acceptable. Note also that there is a difference in grammaticality between (33) and the parallel (30) from EP.

(33) [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.'

Gribanova concludes that genuine Topic Drop can only occur within an island and only when no linguistic VP-antecedent is available. Because of the relative unacceptability of certain island internal missing objects, Gribanova, following Huang, 1984, concludes that they are variables bound by a topic operator.

Regarding the first diagnostic, we agree with Gribanova. The second diagnostic is, however, invalid as shown in (34) from the NCRL.

(34)   A   možet sygral [rol'] tot fakt [čto kogda vozila   ø   na privivku
       but maybe played role that fact that when drive.1SG.PAST   on vaccination

       neskol'ko dnej nazad, ostavila   ø   odnu v čužoj   komnate],
       a-few   days back   left.1SG.PAST   alone in strange room,

       ona až   zaplakala.
       she even cry.3SG.PAST
       'Maybe the fact that when I took **her** to be vaccinated a few days ago, I left
       her alone in a strange room played a role; she even started to cry.'

(34) 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) and therefore they are continued topics. The rightmost gap is a direct object of 'leave', the leftmost missing object is embedded in the adjunct clause. Neither of the gaps in (34) can result from VP-ellipsis for two reasons. First, there is no VP-antecedent in the preceding context (diagnostic 1). A reviewer points out that a linguistic VP-antecedent could possibly be found in a broader context of (34). This seems to us implausible for the VP headed by 'leave' because it introduces new information. Moreover, the missing object cannot be a part of the elided VP because VP-ellipsis deletes all VP-internal material. This is not what happens in (34). In the VP headed by 'drive' the prepositional phrase 'on vaccination' is overt and 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 missing objects in (34).

Finally, wh-movement out of either of the gap positions in (34) is ungrammatical. This is shown in the examples in (35) which are simplified versions of (34).

(35) a.   *Kakuju sobaku sygral rol' tot fakt čto kogda vozila na privivku,
             which   dog   played role that fact that when drove   on vaccination

             opozdala?
             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
	which dog	played role that fact that left	alone in strange

komnate?
room
*'Which dog did the fact that I left her alone in a strange room play the
role?'

If either of the gaps in (34) were a trace of a null operator, (34) would be as bad as (35), contrary to fact. We conclude therefore that a missing object is not a variable.

It is still necessary to explain why (33) is marginal. With the absence of a linguistic antecedent, the context must force a topic reading of the missing object. A grammatical result is obtained when such a situation is provided. Five Russian speakers judged (36) good.

(36) [pointing on a banknote which is lying on the floor]
	- Smotri-ka, von tam, na polu. – Tot fakt, čto do six
	 look PART there	 on floor that fact that till this

por ne	podnjali,	- uže	podozritelen. Naverno fal'šyvyje.
time NEG	picked-up.3PL	already suspicious probably fake
' - Look, there, on the floor.– The fact that until now they didn't pick it up is already suspicious. Probably it is fake.'

The contrast in acceptability between (33) and (36) and the variation in judgments depend on the extent to which the background context allows the hearer to interpret the situational antecedent as salient. If the context is not explicit enough, the hearer will assign topic status to the whole subject NP (the subject 'fact'-phrase in (33)) rather than the object. In such cases Topic Drop will fail as our analysis correctly predicts.

Summing up, the grammaticality of examples with island-internal missing objects presented in this section indicates that Topic Drop in Russian cannot be analyzed either as VVPE or as a variable.[17] Before concluding this section, it is essential to point out that our concept of Topic Drop differs from that of discourse NP-ellipsis. The two are similar in that they both follow the basic intuition that arguments in Russian drop under certain discourse conditions. However, only the former, but not the latter, attempts to specify the discourse conditions involved and to use these conditions to formalize a mechanism that allows the implementation of this intuitive idea.

2.4 Missing objects in gerundive adjuncts

In the preceding sections we have shown that continued topics can drop in Russian. In what follows we show that Topic Drop is also responsible for the missing objects in gerundive adjuncts.

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[17] The situation is not unique for Russian; In section 3.4 we show that it holds in Hebrew as well. See also Farrell, 1990 who 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.

Russian has constructions exemplified in (37) which are parallel to English parasitic gaps in (38).

(37) a.   Kakie 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 Petja podpisal ø [ne   čitaja   ø/*ego/*èto]?
              what Peter signed   NEG read.IMPRF.PRTC   it   this
              'What exactly did Peter sign without reading?

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

The bracketed constituent in (37), henceforth a 'without adverbial' or simply a 'gerund', includes a negation particle, a verb in the form of *Perf./Imprf. Participle* and a gap.[18] Gerundive phrases function as adverbial modifiers of the matrix verbal phrase; structurally they are VP-adjuncts.[19]

The sentences in (37) 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 (39) from Engdahl, 1983 show.

(39) 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.

(40) 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   kakie pis'ma, [ne   čitaja   ø/*ix]?
              Peter burned which letters NEG read.IMPRF.PRTC   them
              'Peter burned which letters without reading them?'

The examples in (40) differ in acceptability. (40)a is widely used in both colloquial and formal registers and is judged to be perfect. (40)b is less natural and is only good as an echo question about the object that was previously mentioned in the discourse.

An in situ antecedent can also license a gap in finite adjuncts:

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

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[18] Babby and Franks, 1998 refer to these phrases as 'adverbial participles ', the gloss given in the examples, pointing out that that the terms 'gerund' and 'verbal adverb' are also applicable to them.
[19] 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.

      b.   Oleg vnimatel'no pročital stat'ju   pered tem kak otoslal
           Oleg attentively   read   article.ACC before that how send.3SG.M.PAST

           v redakciju.
           in publishers
           'Oleg had attentively read the article before he sent it to the
           publishers.'

The gerundive gaps display a number of properties which can be successfully accommodated within the Topic Drop analysis, but fail to be described in syntactic terms. Topic drop also explains examples such as (37), in which overt wh-movement of the antecedent has taken place. It is essential to point out that we do not differentiate between the sentences in (40), without wh-movement, and those in (37) (i.e. with wh-movement regarding the nature of the missing object. What distinguishes the sentences in (37) and (40)b is that they are only acceptable as clarification and echo questions, respectively, about an object that has been mentioned previously in the discourse. It follows that the missing object in the gerund is necessarily a continued topic and therefore can drop. Consequently, there is no reason to propose different accounts for the gerundive gaps in (37) and those in (40).

2.5 The position of the antecedent

The first step in the argumentation is to show that the matrix object in (40) 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. 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 (42) with the possible positions of the object in parenthesis.

(42)   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 (40)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 (40)b. It follows that missing objects within adverbials are licensed independently of the overt movement of their antecedent.[20] We argue that the only condition that licenses the missing object in adverbials is its status as a continued topic. So far this status has been supported by the availability of a linguistic antecedent. In the following section we provide more evidence.

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[20] Ivlieva raises the possibility that the missing object can be licensed by covert movement of the antecedent. Our investigation of this possibility shows that in a crosslinguistic perspective it is still a matter of much controversy. PGs are not licensed by covert movement in Chinese (Lin 2005) or Japanese (Takahashi 2006). In English, constructions where PGs where argued to be licensed by covert movement (Nissenbaum, 2000) are quite different from Russian. We do not discuss this further in this paper.

2.6 The properties of the missing gerundive object

We now consider properties of the missing objects in the 'without' adverbials. We will show that these properties are identical to those of the non-adverbial Topic Drop discussed in sections 2-2.1. We further show that syntactic analyses discussed in section 2.3 fail to account for these properties.

2.6.1 A missing object with an extralinguistic antecedent

The missing object in the gerund generally has an overt antecedent in the matrix clause. However, just like the continued topic in non-adverbial context, the missing object in the gerund is also licensed by an *extralinguistic* antecedent. Compare (43) with (14).

(43)   [showing the unpaid phone bill]
       Posmotri, postojal'cy   uexali   ne   oplativ.
       look.2SG   tenants.NOM   leeve.PL.PAST   NEG   pay.PERF.PRTC.
       'Look, the tenants left without paying it.'

Note that according to Gribanova's diagnostics discussed in section 2.3 the missing object in (43) cannot be analyzed either as resulting from a VVPE (diagnostic 1) or a variable (diagnostic 2).

Another property assimilates a gerundive gap with Topic Drop: it cannot precede its antecedent. The gerundive adjunct can be positioned not only sentence finally but also before the matrix VP, as in (44). This can only happen in a context where the object has an antecedent in the preceding discourse and can be a continued topic. (44) should be compared with (13).

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

       Oleg, [ne pročitav   (eë) (ni   razu)], otnes   (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 having read it (even once).'

The answer in (44), 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 Topic Drop.

An anonymous reviewer points out that (44) can be a case of genuine backward NP-ellipsis. However, a nonlinguistic antecedent may also license a pre-verbal adjunct gap. This is demonstrated in (43), where the missing object of 'install' in the answer has a situational antecedent, namely *washing machine*. Crucially, there is no NP-antecedent that can license backward ellipsis.

(45)   [a man arrives home and finds out that a washing machine that was bought a
           few days ago is still standing in the middle of the kitchen; pointing at the
           machine, the man addresses his wife]
       Q: Texnik   prixodil?
            technitian.NOM   arrive.SG.M.PAST
            'Did the technician arrive?'

A: Prixodil, no [ne ustanoviv]   opjat' kuda-to   ušel.
       arrived but NEG install.PERF.PRTC again somewhere went
       '(He) arrived, but without having installed (it) he went somewhere
       again.'

In sum, evidence presented in this section shows that syntactic analyses fail to
account for the properties of the missing gerundive object with a situational
antecedent. These properties follow from our analysis of Topic Drop.

2.6.2 Topic Drop within gerund-internal islands

This section provides evidence against the analysis of missing adverbial objects as
variables. The analysis of missing objects as variables predicts that if the adverbial
gap is embedded in an additional island, the result will inevitably be bad. In English
the PG is ungrammatical if it appears in an island within the adjunct that contains it.
This is shown in (46) from Emonds, 2001(e=PG).

   (46) a.   *Which guest did John criticize t while recalling [$_{DP}$ the fact that
                 Sue supported e]?
         b.   *Which one did Bill encourage t without saying [$_{CP}$ where he would
                 publicly support e]?

The Topic Drop analysis does not make such a prediction. In fact, this analysis
predicts that Topic Drop in an island is possible provided all conditions on Topic Drop
are satisfied. This prediction is borne out. In (47) Topic Drop occurs in a finite
interrogative clause which is a complement of the gerund.

   (47) On razobral   pribor   na časti, ne   pointeresovavšys'
         he took-to-pieces device.ACC on parts NEG inquire.PERF.PRTC

         kto soberët   (ego)   obratno.
         who assemble.3SG.FUT it.ACC 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 (47) with (48) where the wh-object is extracted overtly.

   (48) *Kakoj pribor   on ne pointeresovalsja kto soberet   obratno?
          which device.ACC he NEG inquire   who assemble.3SG.FUT back
          *'Which device did he inquire who would put it together?'

(49) shows that Topic Drop can occur in an adjunct-internal complex NP, but wh-
movement out of the complex NP is disallowed.

   (49) a.   On razobral   pribor   na časti, ne prinjav
                 he took-to-pieces device.ACC on parts NEG take.IMPRF.PRTC.

                 vo vnimanie tot fakt čto ne   smožet   potom
                 into attention   that fact that NEG will-be-able then

                 sobrat'   (ego).
                 put-together.INF it.ACC
                 'He broke the device into pieces, without taking into account the fact
                 that he would not be able to put it together later on.'

b. *Kakoj probor on ne prinjal vo vnimanije tot fakt
which device he NEG took into attention that fact

čto ne smožet potom sobrat' (ego).
that NEG will-be-able then assemble.INF it.ACC
*'Which device didn't he take into account that he would not be able to put it together later on?'

The grammaticality of (47) and (49)a on the one hand and the ungrammaticality of (48) and (49)b on the other, shows that the missing object cannot be a variable.

Note also that grammaticality of (47) and (49)a eliminates the possibility suggested by an anonymous reviewer that the topic object moves to the left periphery of the gerundive phrase prior to deletion, since such movement out of an island would result in ungrammaticality, contrary to fact.

2.6.2 The overt subject restriction

The Russian sentences in (47) and (49)a differ from English (46): in the former, the subject of the most embedded clause is null. Ivlieva, 2006 correctly points out that the null object is licit in subjectless adjuncts (both finite and non-finite) but is ungrammatical in finite adjuncts with an overt subject. The latter type of adjunct is shown in (50), her (6a and 7a).

(50) a. Petja$_j$ vybrosil [ètu knigu]$_i$, posle togo kak on$_j$ /Kolja
Petja threw.away this.ACC book.ACC after that how he/ Kolja

pročital *(eë)$_i$.
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 *(eë)$_i$?
which book Petja throw-away after that how 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 reduce the acceptability of parasitic gaps, and crucially assumes that this is a distinguishing property of parasitic gaps.

Recall however (from section 2.1) that Topic Drop is also blocked in the presence of an overt subject in non-adverbial contexts. This, therefore, is a general property of continued topics and is not a distinguishing property of parasitic gaps. Notably, the missing objects in both sentences in (51) are judged considerably better. These sentences minimally differ from those in (50) in that in the former the embedded subjects are focused.

(51) a. Petja vybrosil [ètu knigu]$_i$, posle togo kak
Petja. NOM threw-away.SG.M this book.ACC after that how

KOLJA pročital (eë)$_i$.
Kolya.NOM read.SG.M it.ACC
'Petya threw away this book after Kolya had read it.'

b.　　[Kakuju knigy]ᵢ　　Petjaⱼ　　vybrosil　　　　tᵢ　posle togo kak
　　　which　book.ACC　Petja.NOM throw-away.SG.M　　after　that　how

　　　KOLJA　　　pročital　　(eë)ⱼ?
　　　Kolya.NOM　read.SG.M　it.ACC
　　　'Which book did Petya throw away after Kolya had read it?'

In section 2.1 we provided an account of the overt subject restriction in terms of
Information Structure. Importantly, the syntactic accounts do not relate to this
restriction and therefore cannot explain the facts presented in this section.

3. Missing objects in Hebrew

Hebrew object gaps are typically found in clausal conjunction (example (52),
repeated from the introduction) and conjoined VPs (example (53)), a configuration
referred to as COD (Conjunct Object Drop) in Sigurðsson and Maling, 2008. It is also
common in answers to questions, as in (54).

(52)　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.'

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

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

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

As in Russian, an extralinguistic antecedent can also license a missing object. In
such cases a situational antecedent is made obvious in the discourse through
nonlinguistic means, like pointing or even just looking at an object. In example (55),
the speaker presents a new bag, drawing the interlocutor's attention to it.

(55)　yafe? kaniti　　　ø / et　　ze　　　be-mivca
　　　 nice　bought.1SG　ACC　this　　in-sale
　　　 'Is this nice? I bought it on sale.'

In the above examples, the null object is a continued topic whose antecedent has
been placed on top of the file. This is done linguistically, by mentioning the
antecedent either in the first conjunct, as in examples (52) and (53), or in the
question as in (54). It can also be done deictically, by pointing, as in (55). A non-
linguistic context, just as a linguistic context, triggers the manipulation of the file
cards.

Hebrew object gaps of the type discussed here are optional, and induce non-uniform
judgments across speakers[21]. While the (continued) topichood of the object is a

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[21] For the data presented here at least five native Hebrew speakers were consulted.

necessary condition on its ability to drop, it is not a sufficient condition; not all topic object gaps are acceptable. There seem to be several factors involved which affect the acceptability of the gap, and this study does not attempt to map them all out. We will, however, discuss one important factor - the animacy of the dropped object (see section 3.3). Note also that a gap moves up on the scale of acceptability when it is followed by overt material. Compare the utterances below:

(56) Dina hepila   et   ha-arnak   ve-Yosi   herim   ?ø / oto.
     Dina dropped ACC   the-purse   and-Yosi   picked up   it
     'Dina dropped the purse and Yosi picked it up.'

(57) Dina hepila   et   ha-arnak ve-Yosi   herim   ø ve-hexzir ø   la
     Dina dropped ACC   the-purse and-Yosi   picked up   and-returned to-her
     'Dina dropped the purse and Yosi picked it up and returned it to her.'

In our view, these dropped objects merge as unvalued feature bundles, whose content is retrieved by searching for an available topic in the linguistic or non-linguistic context. Note that our proposal does not involve leftward movement of the topic prior to deletion. As shown in the introduction, Hebrew topicalization is common with shifted topics, i.e. elements that derive from a topic set, whereas Topic Drop is impossible with shifted topics and is reserved for continued topics, i.e. those that refer to a single card at the top of the file.

Previous studies of Hebrew missing objects (Doron, 1990, 1999, Goldberg, 2005) explain the phenomena with two different mechanisms. Both authors believe that two separate derivations occur in Hebrew which result in the surface appearance of a null object: V-stranding VP-ellipsis and A'-movement of a null operator. We argue in section 2.3 above against similar approaches to Russian missing objects; in section 3.4 below we point to the problems they pose for the Hebrew data.

In general, these proposals have neglected to explore the Information Structure involved in the account of missing objects. In this paper we attempt to fill in this gap. Furthermore, we offer a unified solution that encompasses all instances of missing objects, rather than accounting for the phenomenon with two distinct derivations. In our proposal, an unvalued feature bundle is merged in object position, and goes unpronounced in the phonological component. Its topichood allows the recovery of its content by searching for the antecedent on top of a file, either in the linguistic or nonlinguistic context.

3.1 The properties of Hebrew missing objects

Before we explore the previous proposals in more depth, let us observe some of the characteristics of Hebrew object gaps. First note that in each of the examples (52)-(55), the object gap can alternate with an overt pronoun, providing indication of its topichood. This is not always the case, however. Let us consider two types of object gaps which cannot alternate with a pronoun. One such case is when the object gap refers back to a nonspecific mass noun referent. Unlike in Russian (section 2.1), Hebrew speakers do make use of nonspecific pronouns corresponding to English 'one' and 'some' (*exad* and *kama*, respectively). However, unlike 'some', *kama* only has the meaning 'a few' and cannot be used for mass nouns. Note the contrast below where *kama* is used for the count noun *sfarim* 'books' but is impossible with the mass noun *kafe* 'coffee', leaving the gap as the only available option to mark the topichood of the object (compare to the Russian example (15)):

(58) Q: kanita   sfarim?
         bought.2SG   books
         'Did you buy books?'

     A: ken,   kaniti   ø /   exad / kama
         yes   bought.1SG   one   some
         'Yes, I bought one/some.'

(59) Q: kanita   kafe?
         bought.2SG   coffee
         'Did you buy coffee?'

     A: ken,   kaniti ø /   *kama
         yes   bought.1SG   some
         'Yes, I bought some.'

An object gap referring back to a mass noun antecedent, therefore, does not alternate with a pronoun. The examples in the rest of the paper are restricted to specific antecedents.

3.2 Hebrew object gaps and sloppy readings

Another instance where a gap does not alternate with an overt pronoun deserves a closer look. Some object gaps induce an ambiguity between sloppy and strict readings, as noted in Doron, 1990, 1999. In the example below, taken from an actual dialogue, speaker B employs an object gap and speaker A is unsure to which antecedent the gap refers.

(60) A: šaxaxti   et   ha-kod   ha-sodi   šeli.
         forgot.1SG   ACC   the-code   the-secret   my
         'I forgot my secret code.'

     B: ani   zoxeret.
         I   remember
         'I remember (the secret code)'

     A: et   šeli?
         ACC   my?
         'Mine?'

     B: lo,   et   šeli.
         no   ACC   my
         'No, mine.'

The object of 'remember' has two potential antecedents: the previously mentioned secret code of speaker A (strict reading) or the secret code of speaker B (sloppy reading). This latter reading was intended by speaker B; it would have been unavailable had she used the pronoun 'it' in object position. Let us see how our proposal accounts for this with the example below:

(61) ha-banot   sidru   et   ha-xeder.
      the-girls   tidied-up ACC   the-room

      Dina sama et   ha-simla   šela   al   ha-kise
      Dina put   ACC   the-dress   her   on   the-chair

      ve-Mixal talta   Ø   ba-aron
      and-Mixal hung   in-the-closet

a. 'Dina$_i$ put her$_i$ dress on the chair and Mixal$_j$ hung her$_j$ dress in the closet.'
b. 'Dina$_i$ put her$_i$ dress on the chair and Mixal$_j$ hung her$_i$ dress in the closet.'

The object gap in (61) can receive either the sloppy reading in a. or the strict reading in b. The initial sentence introduces a topic set: a card for the set of girls composed of individual cards for Dina and Mixal. Each conjunct positions one of them on top of the file (by the focus rule), making them both available as a topic. The unvalued feature bundle in the second conjunct is now in search of an available topic. Since there are two potential ones, both readings are derived

Sloppy readings thus require an antecedent which is a member of a set. This is why they are limited to contexts which provide such sets.

(62) shows that an overt pronoun only gets the strict reading:

(62) ha-banot   sidru   et   ha-xeder.
      the-girls   tidied-up   ACC   the-room

      Dina   sama et   ha-simla   šela   al   ha-kise
      Dina   put ACC   the-dress   her   on   the-chair

      ve-Mixal   talta ota   ba-aron
      and -Mixal   hung   it   in-the-closet

a. 'Dina$_i$ put [her$_i$ dress]$_k$ on the chair and Mixal$_j$ hung it$_k$ in the closet.'
b. *'Dina$_i$ put [her$_i$ dress]$_k$ on the chair and Mixal$_j$ hung it$_m$ in the closet.'

Since the φ-features of pronouns are valued, their antecedent can be sentence internal. Here *her (Dina's) dress*, which has matching features, is introduced in the first conjunct, undergoes the focus rule, and thus provides an antecedent for the pronoun in the second conjunct. No card for Mixal's dress is available in the sentence or in the discourse, hence the sloppy reading is ruled out.

We thus see that an object gap with a sloppy interpretation does not alternate with an overt pronoun, since such pronoun, while grammatical, produces a different meaning. To sum up, Hebrew object gaps alternate with overt object pronouns unless they have a nonspecific mass noun antecedent or a sloppy reading.

3.3 Hebrew object gaps and animacy

A robust tendency 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 (63) and (64), in which an animate dropped object is less acceptable than an inanimate one.

(63) 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.'

(64) 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 missing objects be inanimate, which doesn't pertain to Russian, is not unique to Hebrew. 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 follow Schwenter, 2006 in viewing this distinction in terms of differential object marking (DOM) and extend this insight to Topic Drop. DOM is employed by languages to mark atypical objects. Both definiteness and animacy are atypical properties for objects. Hebrew is known to mark definite objects with an accusative marker (*et*)[22]. This is in contrast to indefinite objects, which receive no overt case marking. We believe that additionally, Hebrew DOM manifests itself in not allowing animate objects, which constitute atypical objects, to drop, but rather requires that they are marked by being overt. The consequence is that Hebrew animate objects 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 (65)[23] and (66) show.

(65) Q:　　ma　　Dina　osa?
　　　　　what　Dina　does
　　　　　'What is Dina doing?'

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

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[22] See, for example, Aissen, 2003
[23] A reviewer is concerned that (65) may actually be an instance of fragment answer. Indeed in this case a fragment answer is impossible to distinguish from a null subject.

(66) 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   ø/oto.
           yes   returned.1SG to-her   it
           'Yes, I did.'

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.[24] 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, objects are unmarked secondary or subordinate topics (just as subjects are unmarked main 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. In any case, it is the interaction between the objecthood and topichood of the animate DP which plays a role.

Having examined some of the properties of Hebrew missing objects, we will now consider the previous analyses proposed for it.

3.4 Previous accounts of Hebrew missing objects

It has been proposed in 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, which has also been adopted for Russian as discussed above, VP-Ellipsis does not affect the verb because the verb is positioned in I (either by base generation as in Doron, 1990 or by raising). VVPE 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).

An additional syntactic analysis of Hebrew object gap 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 VVPE occur in Hebrew. This means that 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 VVPE or Null Object. Note that some of the diagnostics are different than the ones proposed for Russian (see section 2.3).

When examined carefully, each of these diagnostics is problematic with respect to Hebrew data, as we show below. Our conclusion is that neither the VP-ellipsis nor

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

the Null Object accounts can fully explain the phenomenon. We now survey some of the proposed diagnostics and point to their problems.

3.4.1 Diagnostic 1: Two missing arguments

This diagnostic exploits ditransitive verbs, which are revealing since the VP contains additional material to the direct object. Doron and Goldberg both maintain that when other VP-internal elements besides the direct object are null, we have a clear case of VP-ellipsis. We 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 continued topics.

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. In (67), the question places both the direct object (DO) and the indirect object (IO) on top of a file, thus each can be interpreted as a continued topic in the answer. In A1 the DO is interpreted as a topic and drops, and in A2 the IO does the same. Note that the gap may alternate with an overt pronoun in A1 and with a locative expression ('to there'), in A2, a further indication that they are each a continued topic.

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

     A1:   lo,   ba-sof   lakaxti   ø / otam   le-ima   šeli.
           no   in-the-end   took.1SG them   to-mother   my
           'No, in the end I took them to my mother's.'

     A2:   lo,   lakaxti   ø   le-šam   rak   et   ha-magavot .
           no   took.1SG   to-there   only   ACC   the-towels
           'No, I only took the towels there.'

A reviewer is concerned that example A2 does not demonstrate IO Topic Drop, since dative arguments in general tend to be optional in Hebrew, unlike PP arguments of 'put'-type verbs, which are not optional. However, when interpreted as a continued topic, a PP locative of 'put' may also be null:

(68) Q: samta   rak   et   ha-sfarim   al   ha-šulxan?
            put.2SG   only   ACC   the-books   on   the-table
            'Did you put only the books on the table?'

     A: lo,   samti   gam   et   ha-maxbarot ø
           no   put.2SG   also   ACC   the-notebooks
           'No, I also put the notebooks there.'

The data above establish that both the DO and the IO can be independently silent when they are topics. We therefore expect both to be able to drop together, when both are interpreted as topics. In such a case, the VP remains intact. This possibility is demonstrated in (69), an utterance which under Doron and Goldberg is necessarily a case of VP-ellipsis because all VP-internal material is missing (the verb being in I). Note that since both the DO and IO in the answer are continued topics, the answerer may choose to realize each of them, independently, as either a gap or an overt pronoun.

(69) 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 argued, contrary to Doron and Goldberg, that ditransitive verbs with two missing internal arguments are not necessarily to be analyzed as VP-ellipsis. The inverse claim can, however, be maintained: a ditransitive verb followed by one null and one overt internal argument cannot be analyzed as VP-ellipsis: the overt VP-internal material indicates that the VP is in place, as observed in both Doron and Goldberg. Example (70) illustrates such an utterance.

(70) 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 VP-ellipsis *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 apply to English pseudo-gapping which do not hold in the Hebrew construction. The first restriction is that pseudo-gapping cannot occur in question-answer pairs, in obvious contrast to Hebrew missing objects, and the second restriction requires that the remaining elements be contrastively focused. While many Hebrew utterances with missing direct objects do involve contrast between the remaining elements, this is by no means a condition on their formation, as is evident in examples (53), (63)a, and (64)a, among others, which lack such contrast. We thus reject the possibility that the IO raises out of the VP and conclude that an overt IO indeed eliminates the VP-ellipsis analysis. We therefore treat a ditransitive verb followed by a DO gap and an overt IO as not involving VP-ellipsis.

3.4.2   Diagnostic 2: Animacy

As discussed in section 3.3, Hebrew animate objects do not drop as easily as inanimate objects. Goldberg argues that animate object gaps 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-VP-ellipsis utterances, i.e. a sentence containing overt VP-internal material following the object gap. 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:

(71) 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 VP-ellipsis analysis, as argued above, yet the missing direct object is animate. Such cases are indeed hard to come by, and are disfavored by some speakers, due to the animacy restriction, but they are not impossible. This particular example was deemed acceptable by several speakers. Thus the generalization that animate objects cannot drop independently of other VP-internal material does not hold.

The fact that the object above can drop despite its animacy should be explained. 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 (71) by the use of the verb š*alax* 'send', normally reserved for inanimate objects.[25]

3.4.3   Diagnostic 3: Sloppy readings

VP-ellipsis 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 VP-ellipsis from the Null Object construction, which allows only a strict identity reading. For Japanese and Korean, this claim has been challenged by several authors, among them Hoji, 1998, Oku, 1998, Farrell, 1990, and Kim, 1999. These authors, as summarized in Goldberg, 2005, have shown that a null DP alone may induce a sloppy reading. For Hebrew, Doron's claim is examined here—as before—with a construction that cannot be VP-ellipsis since the missing DO is followed by an overt IO. As discussed above, the missing argument can potentially co-refer to either the subject of the antecedent clause (strict reading) or the subject of the target clause (sloppy reading).

```
(72)  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'
```

```
(73)  Dina_i   talta    et    ha-simla      šela_i   ba-aron
      Dina     hung ACC  the-dress      her    in-the-closet
      ve-Dorit_k      hixnisa     ø_{i/k}    la-mgera
      and-Dorit       inserted               to-the drawer
      'Dina hung her dress in the closet and Dorit put her dress in the drawer.'
```

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[25] There are additional contexts where animate object drop is tolerated, such as in answers to yes/no questions. For example:
```
(i) Q:    xipasta          et    Dina?
          searched.2SG ACC    Dina
          'Did you look for Dina?'
```

```
    A:    ken,  xipasti ø /ota kol  ha-boker     ve-lo  macati ø / ota
          yes   searched.1SG her all the-morning    and-no found.1SG her
          'Yes, I looked for her all morning and didn't find her.'
```

(74) Dani$_i$ her'a   et   ha-širim   šelo$_i$ le-Dina
     Dani showed   ACC   the-muscles his   to-Dina
     ve-Moše$_k$ her'a   ø$_{i/k}$ le-Mixal
     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
Doron's assumption. It should be pointed out 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 (75):

(75) ha-yeled$_i$ nitek   et   ha-maxšev   šelo$_i$ me-ha-xašmal
     the-boy   disconnected ACC the-computer   his from-the-electricity
     ve-ha-aba$_k$ xiber   ø$_{i/k}$ baxazara
     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
non-VP-ellipsis constructions. The availability of a sloppy reading therefore does not
indicate that the utterance in question contains VP-ellipsis. The current proposal
handles both interpretations, as detailed above (see section 3.2).

3.4.4   Diagnostic 4: Locality constraints

Another test that has been proposed is sensitivity to islands. VP-ellipsis is known to
be free of island effects. Doron, 1999 assumes that Null Object constructions, in
contrast to VP-ellipsis, 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 as we have shown cannot contain VP-ellipsis. The gaps
are positioned within islands. (76)-(79)**Error! Reference source not found.** were
judged grammatical by five native speakers.

Complex NP Constraint:
(76) her'eti   et   ha-tmuna   le-Dina,   ve-mišehu
     showed.1SG ACC   the-picture   to-Dina   and-someone
     hefic šmu'a [še-her'eti   ø / ota   gam   le-Yosi]
     spread rumor 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:
(77) fiksasnu   et   ha-mismaxim   le-London
     faxed.1PL   ACC   the-documents   to-London
     [$_{Adjunct}$ lamrot še-kvar   šalaxnu ø / otam le-Berlin]
             despite that-already   sent.1PL   them to-Berlin
     'We faxed the documents to London even though we had already sent them
     to Berlin.'

Subject Island:

(78) ani   yodea še-her'et   et   ha-tmuna   le-Dani,
     I   know that-showed.2SG   ACC   the-picture   to-Dani
     aval [ze   še-her'et   ø / ota le-Yosi] ze   mamaš lo beseder
     but   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.'

Relative Clause:

(79) hine ha-baxur se-maca   et   ha-taba'at   ve-hexzir ø / ota le-sarit
     here the-guy   that-found   ACC   the-ring   and-returned it to-Sarit
     'There's the guy who found the ring and returned it to Sarit

Like in Russian (see examples (34), (36)), the missing object in Hebrew is not island-
bound. This result clearly shows that it does not involve movement of a null operator.

We have shown that neither the Null Object nor the V-stranding VP-ellipsis analyses
can ultimately account for the behavior of missing objects. However, an account in
terms of Topic Drop as proposed here addresses the full array of issues. More than
one internal argument is allowed to drop as long as it is interpreted as a continued
topic. Since no movement is involved, island configurations do not affect the
acceptability of null objects. Furthermore, an account of null arguments in terms of
unvalued feature bundles allows the flexibility in interpretation found in sloppy/strict
ambiguities. And finally, this proposal unifies all instances of referential object gap in
Hebrew without resorting to two separate mechanisms - a considerable simplification
of the theory.

4. Conclusion

The influence of Information Structure on elliptical phenomena in general is well-
known (e.g., Konietzko and Winkler, 2010 and the references cited therein). Here we
have shown that, missing object are also best analyzed in Information Structure
terms, as Topic drop. Topic drop is, however, far from a uniform phenomenon. One
of the things that puzzle us in particular is crosslinguistic differences. Our initial
examination of Hebrew Topic Drop in adverbial adjuncts indicated that Hebrew does
not allow it. (84), parallel to the Russian (40)a, shows that Hebrew does not allow
Topic Drop where Russian does.

(84) 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 (85) the
dropped object appears in a conjunction and is followed by additional material,
environments that tolerate Topic Drop more easily.

(85) Yosi zarak et   ha-kufsa bli   liftoax   ø / ota ve-lirot
     Yosi threw ACC   the-box without   open.INF   it   and-see.INF
     ma   yeš 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 in this respect may therefore not be as
extreme as we initially thought.

There are however two ways in which they differ. In section 2.2 we pointed out that Russian object topics do not drop in the presence of overt preverbal subject topics. We explained this phenomenon as a consequence of the status of Russian subjects as unmarked topics. We further argued that the unmarked Information Structure of Germanic V2 languages differs in that an overt preverbal element determines the Information Structure in these languages blocking Topic Drop of the object. We argue that the same forces are at play in these languages and that the differences are due to differences in the unmarked Information Structure. Interestingly enough, no such constraint is to be found in Hebrew: preverbal elements in Hebrew are generally interpreted as topics and postverbal elements as foci, this is true of both subjects and objects. (86) illustrates the order SVO, (87) the order OVS and (88) the order OSV. In none of these orders can an indefinite argument which doesn't qualify as a topic occur preverbally, be it subject or object.

(86) a.   ha-yeled   pagaš yalda
             the-boy   met   girl
             'the boy met a girl.'

      b.   *yeled pagaš et   ha-yalda
              boy   met   ACC   the-girl
             'a boy met the girl.'

(87) a.   et   ha-yalda   pagaš yeled.
             ACC   the-girl   met   boy
             'a boy met the girl.'

      b.   *yalda pagaš ha-yeled
              girl   met   the-boy
             'the boy met a girl.'

(88) a.   *et   ha-yalda   yeled pagaš.
             ACC   the-girl   boy   met
             'a boy met the girl.'

      b.   *yalda ha-yeled   pagaš
              girl   the-boy   met
             'the boy met a girl.'

Hebrew thus differs from Germanic in not having a dedicated topic position and also differs from Russian in that the subject doesn't have a particular status as an unmarked topic. This is why the constraint that topics do not drop in the presence of another overt topic, does not apply in Hebrew.

We also demonstrated in section 3.3 that animate object topics do not drop in Hebrew because of DOM. We suspect that languages such as Hebrew which have minimal overt marking to distinguish subjects and objects (only definite objects are marked) may be subject to DOM, but a language with pervasive case marking such as Russian will not.

As argued in Erteschik-Shir, 2005b, 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 as well as access to the file system allowing for the retrieval and valuation of the merged feature bundle. 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, as well as Information Structure properties come into play at PF.

We agree with Culicover, this volume, that processing is a factor in the computation of pronominal dependencies. Just as pronouns in weak crossover constructions require an 'identifiable' antecedent in order to be processed with ease, so does the processing of a null argument. This requirement is met, we claim, by the topichood of the null argument. We argued that this requirement follows from the availability of unvalued feature bundles in the syntactic enumeration which, when merged, can only be valued through access to a (topic) card from the top of the file, thereby also providing a reference. The assumption that the features are unvalued, therefore, forces a process of valuation where the only source of such valuation is the discourse.

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