Null Complement Anaphora and null object in Hebrew

MA Thesis submitted by:

Moshe Ziat

Thesis Advisor:

Prof. Tal Siloni

Linguists Department, Tel-Aviv University

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Abstract

Null Complement Anaphora (NCA) constructions involve a covert clausal complement whose interpretation derives from an in-context element. This kind of complement was classified by Hankmar & Sag (1976) as deep anaphora, which means that it has no internal structure and was not created as a consequence of deletion. This element, they claim, is null at all stages of the derivation.

My goal is three-fold. First, I will examine the behavior of NCA in Hebrew and compare it to that of its English counterpart. I will show that NCA in Hebrew is a case of deep anaphora, just like in English.

Second, I will show that Doron’s (2012) claim that Hebrew, in contrast to other languages that have been discussed in the literature, has a nominal NCA is untenable. I will argue that Hebrew is not different in this respect. The nominal construction does not show the syntactic behavior of an NCA. The null nominal, unlike the NCA, is an object that has been deleted in the course of the derivation under identity with a topic in SpecCP. The findings of an experiment I conducted show that the object does not raise to topic position prior to deletion (as originally suggested by Huang 1984 for Chinese), but is deleted in situ (as proposed by Ertechik-Shir et al (2013).

Last, I will examine the Hebrew NCA in order to shed light on the question whether the NCA is syntactically realized as a pro-form or is represented only at the semantics. Dapiente (2000) claims that the NCA has a syntactic representation involving no internal structure. She claims that it shows a behavior similar to that of pro-forms, and is in fact a sentential null pro-form. In contrast, Grimshaw (1979) argues in favor of a semantic approach, where the complement is constructed only in
the discourse phase. I will provide evidence from Hebrew that weakens Grimshaw's (1979) semantic approach.
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1 The Phenomenon of NCA

1.1 Introduction

In general, an anaphor is an element, overt or covert, with an interpretation that depends on elements appearing in the same context. Over the years, linguistic literature has discussed several types of anaphora. The simplest and most common ones involve NPs that depend referentially on other NPs in the same sentence, see (1).

1. John doesn't like carrots, in fact he doesn't like vegetables at all.

In this sentence, the anaphora he refers to the NP John, that appears earlier in the sentence.

Another more complex case of anaphora occurs when we replace (or delete) a constituent inside the IP, the whole IP, the VP, or one of the V complements. One of these well-studied structures is labeled Do-So anaphora and is illustrated in (2).

2. John ate Pizza and Jane did so too.

In this sentence, we replaced the VP with the phrase did so which refers to the VP of the first clause. Similarly, we can build a structure where the VP is covert:

3. John wouldn't eat a pizza, but Jane would eat a pizza.

In (3), the VP does not appear in the second clause, however, it is clear that the complement of the head I of the second phrase (would, is identical to the VP in the first clause (eat). This is termed a null anaphora. It is an anaphoric phrase that does not appear overtly, rather inheriting its meaning from another element in the sentence, in this case the VP itself. This phenomenon is called VP Ellipsis (Deletion), and involves the deletion of a nonfinite VP introduced either by an auxiliary verb, or by the infinitival marker to.
In this paper, I will focus on structures that involve a covert complement with an interpretation deriving from an in-context element. In other words, constructions that involve a null complement that behaves as an anaphor. This phenomenon is known as **Null Complement Anaphora** (NCA). Unlike cases of VP-ellipsis, here the covert element does not have to be a VP. A variety of constituents can be a Null Complement Anaphora (NCA), but the literature mostly concentrates on cases of sentential complements of verbs. Sentence (4) is an example of a NCA.

4. They asked her to stay but she refused ø.  

θ = to stay.

The Theta grid of the verb *refused* contains an obligatory Theme role. According to the Theta criterion (Chomsky 1981), each argument bears one and only one θ-role, and each θ-role is assigned to one, and only one, argument. In (4), we do not see the Theme argument of the verb *refused*, and yet the sentence is grammatical. The Theme of *refused* is implicit and is interpreted as identical to that of the verb *asked* in the first clause (*to stay*). The covert complement is represented here by ø.

The phenomenon of NCA is distinct from that of VP-ellipsis. In the next section I will discuss the distinctions between the two phenomena.

### 1.2 NCA vs. VP-Ellipsis

At first glance, (4) looks similar to the VP Ellipsis case in (3). Both are heads with a null complement that gets its interpretation from a previous constituent. There are however a number of distinctions that separate VP Ellipsis from NCA. One of these is the fact that VP Ellipsis is restricted to the complements of the head I. The following are other distinctions between the two.

#### 1.2.1 Pragmatic control
While the elided VP must have its antecedent in the sentence, a NCA can appear both with a linguistic antecedent and with a non-linguistic one. Shopen (1972) shows that an NCA can be pragmatically controlled (see (5)). In this case, the null complement anaphor gets its meaning from the non-linguistic context.

(Context: Moshe is trying to score a basket from distance.)

David:

5. I don't believe you'll succeed $\varnothing$ $\varnothing$ = to score a basket

In (5), the verb *succeed* has a null complement anaphor, which we interpret based on the non-linguistic context.

In (6), we show a case of VP-ellipsis. The context is the same as in (5), and David says:

6. # I don't think you will be able to $\varnothing$ $\varnothing$ = score a basket

In this case, unlike in (5), the elided VP is not interpreted based on the non-linguistic context. In sum, unlike the example of NCA illustrated in (5), VP Ellipsis must get its interpretation from the linguistic context.

### 1.2.2 Containing an antecedent

As first observed by Grinder and Postal (1971) and Bresnan (1971), a pronoun cannot co-refer to an alleged antecedent within an NCA. It can however refer to an antecedent within an elided VP.

Hankmar & Sag (1976) discuss the following example (the pronoun and antecedent are in boldface):

7a. *He said that one of us had to give up his seat, so Sue volunteered $\varnothing$, because it was too narrow for her anyway.

$\varnothing$ = to give up *her seat*
Compare it to the grammatical full version below:

7b. He said that one of us had to give up his seat, so Sue volunteered to give up her seat, because it was too narrow for her anyway.

In (7b), unlike in (7a), the antecedent of it appears in the sentence and the latter refers to it. Similarly, in cases of VP Ellipsis, an element inside the elided VP can serve as antecedent:

8. I didn't give up my seat, but Sue did ø, because it was too narrow for her anyway.

ø = give up her seat

In (8), it refers to an antecedent contained within the elided VP.

1.2.3 Extraction

Dapiente (2000) observes another distinction. He observes different behavior with regard to syntactic extraction. Consider sentences (9) and (10) below, involving extraction from the elided VP and the NCA, respectively.

9. I know which book Mary read and Peter knows which book Sally did ø.

10. * I know which book Mary volunteered to read and Peter knows which article Sally volunteered ø.

The WH-movement out of the null complement in NCA constructions is impossible in (10), but a parallel movement out of an elided VP in (9) is grammatical.

We may conclude then, that VP Ellipsis and NCA are different phenomena.1

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1 Hankmar & Sag (1976) claim that there is yet another distinction. They claim that while an elided VP must be syntactically identical to its antecedent, NCA does not have to be syntactically identical. But Merchant (2007) and Merchant (2008) shows that VP Ellipsis, too, does not have to be syntactically identical to its antecedent.
This paper will shed new light on the phenomenon of NCA, concentrating specifically on Hebrew, a language that has not yet been examined in this context.

In the next section, I will present the analysis of Hankmar & Sag (1976) and show how it explains the difference between the phenomenon of NCA and VP Ellipsis. I will also show that an NCA is a definite null complement, and not a matter of object drop. In section 3, I will examine which verbs allow an NCA, what type of complement the NCA can refer to, and how these properties fit the Hankmar & Sag’s (1976) analysis. In section 4 I will present two possible models that explain the creation of an NCA. Section 5 presents the phenomenon of NCA in Hebrew. In section 6 I will examine the claim that Hebrew, in contrast to other languages, allow nominal NCA. I will show that the null objects that were claimed to be NCA behave differently than clausal NCA and will support different analysis for it.
2 NCA as a Deep anaphora Case

2.1 Deep vs. surface anaphora

Hankmar & Sag’s (1976) seminal article on anaphora argues that NCA and VP-ellipsis constitute two distinct types of anaphora: deep and surface anaphora, respectively. The claim is that anaphora can be divided into two classes, according to whether they are formed in the course of the derivation or not (deletion vs. non-deletion). The distinction they propose is as follows:

1. Surface Anaphora. The anaphoric phrase is merged as a phonetically realized constituent, but deleted during the derivation.

2. Deep Anaphora. The anaphoric phrase is an element with no internal structure, and was not created as a consequence of deletion.

In other words, surface anaphors start out as a full constituent and undergo deletion in the course of derivation. Deep anaphors, in contrast, do not have an internal makeup at any stage of the derivation. This raises the question what is the nature of the element that constitutes deep anaphora. Two options come to mind:

A. Deep anaphora are a syntactic null element.

B. Deep anaphora are not syntactically realized, but rather directly inserted into the semantic representation.

Hankmar & Sag (1976) do not take a clear stand as to whether option A or B is the correct one. This question will be discussed in depth in chapter 6.

Let us return to NCA and VP-ellipsis. With Hankmar & Sag’s idea in mind, we can explain their different behavior, presented in section 1.2. As we recall, NCA is
considered to be a deep anaphora, while VP Ellipsis considered to be a surface anaphora.

2.2 Accounting for the distinctions between VP-ellipsis vs. NCA

Since surface anaphora involves full syntactic internal structure at some stage of the derivation, it may participate in processes that require syntactic realization. In contrast, since the deep anaphora does not have internal structure at any stage of the derivation, it cannot participate in these processes, but only in the ones that refer to non-decomposable semantic units.

This understanding allows us to explain the patterns of behavior we saw in the previous section:

1. **Extraction.** Extraction of an element out of an NCA results in ungrammaticality, while extraction from the elided VP is possible ((10) vs. (9) above, respectively). If the elided VP is deleted at the level of PF, as suggested by Ross (1969) and Chomsky (1995) among others, nothing prevents movement of a constituent out of it during the syntactic derivation. An NCA, in contrast, does not have an internal syntactic structure. Therefore, no element can be extracted out of it.

2. **Containing an Antecedent.** An element inside an elided VP can be the antecedent of a pronoun, but there does not seem to be a parallel element inside an NCA, see (7) vs. (8) above, respectively. Since an NCA is a deep anaphora, which has no internal makeup, it obviously cannot include an antecedent for a pronoun. the elided VP, on the other hand, is a surface anaphora, which has an internal structure and can include a noun phrase serving as antecedent for co-reference.

3. **Pragmatic Control.** As we saw above, an NCA can refer to the non-linguistic context, while an elided VP cannot. Hankmar & Sag (1976) suggest that only when deletion is involved, the null element has to be controlled directly by the linguistic
context. This is the case with VP Ellipsis, which must have a linguistic antecedent associated with it. An NCA, in contrast, as a non-deleted entity, can have its interpretation from any entity that is present in the context, whether it is a linguistic entity or an entity present in the non-linguistics context.

Hankmar and Sag (1984) propose that the above distinction is anchored in the procedure of processing. They hypothesize that sentence processing involves two kind of representations:

I. Representation of the sentence being processed, which is called Prepositional Representation.

II. Representation of the discourse and world knowledge.

While an NCA can be interpreted based on content that appears in either of these representations, an elided VP must be interpreted based on the representation of the sentence.

To sum up, Hankmar & Sag (1976) and Dapiente (2000) show that NCA cannot include an element able to participate in co-reference relationship, and does not allow extraction of any element out of it. In addition, it does not have to be associated with an entity in the sentence. These facts led them to the conclusion that NCA does not have an internal structure, and is not the result of a deletion process. In the next section, I will shed some light on the interpretation of NCA's.

2.3 Specific null complement

We have seen that cases of NCA differ substantially from cases of VP-ellipsis. It is important to note here that cases of NCA cannot be considered instances of object drop of the type allowed by various verbs such, eat, drink, read among others.
Hankmar and Sag (1976) and Fillmore (1986) discuss an additional type of distinction among the set of covert complements: a definite null complement vs. an indefinite null complement. The former must be retrieved from something in the context, and is, therefore, definite, while the reference of the later is unknown.

Consider (11) below from Hankmar & Sag (1976).

11. I play cards and shoot dice, and my wife doesn’t approve.

In (11), the null complement of the verb approve is retrieved from the context, as the meaning is that the speaker’s wife doesn’t approve of playing cards and shooting dice. (11) is a case of NCA, and it falls under the definite complement case, since its meaning is retrieved from the context.

Compare it to (12), also from Hankmar & Sag (1976).

12. I bring him soup and potatoes, but he won’t eat.

In (12), the complement of the verb eat is null and is not retrieved from the context, since the sentence means he won’t eat anything, not just soup and potatoes. Its’ complement is not a specific one.

So, while approve in (11) allows an NCA, eat in (12) doesn’t allow NCA. It turns out that certain verbs allow NCA while others do not. Section 3 will discuss the distribution of NCA constructions in more depth.
3 Distribution

3.1 Lexical Information

The set of verbs that enable NCA is discussed in length in the literature. Fillmore (1986) points out that definite null complements are restricted to particular lexical items, and even to a particular meaning of these items. Consider (15). Even if the hearer is concerned only in one particular door, (13) will still be ungrammatical:

13. *Did you lock?

This is because lock is not a verb that allows definite null complements. In contrast, the verb won seems to allow it, but just for one of its meanings. won can mean won the competition / the race / the election, or won the second prize, the silver medal etc. Fillmore claims that only when using won in the first sense, i.e. won a competition, (14) is possible. For any other use of won such as winning a prize, the use of (14) is unacceptable.

14. He won!

Thus, it seems that definite null complements are not only verb specific, but also verb-meaning specific.

The restricted group of verbs that can bear definite null complements cannot be distinguished by its concept. Two verbs with similar concepts can differ in their ability to enable a definite null complement. This conclusion can be reached based on the different grammatical status of the following sentences:

Q: Why did you marry her?

15. Because mother insisted.

16. *Because mother demanded.
Fillmore gives a few more examples of pairs of verbs with the similar meanings where one enables null complement but the other doesn't. For example, *found out* and *discovered*, and *promised* and *vowed*, where the former allows null complement and the latter doesn't.

This division suggests that the ability to take a NCA is verb-meaning specific and is unrelated to the semantic content. For that reason, this ability cannot be generalized by a syntactic rule.

With this in mind, we can conclude that the option to take a null complement is encoded within each verb.

It has already been suggested that verbs impose various selectional restrictions on their internal arguments (see Chomsky 1965). We may now expand it to +/- nullability, which determines whether a specific argument in a specific meaning of verb can be null or not. Note that this idea by itself won't be enough, because a verb can allow a null complement and still disallow an NCA, as we saw in (12) in section 2.3. We still have to explain why the verb *approve* in (11) allows NCA, while *eat* in (12) doesn't, and both can have a null complement.

### 3.2 Complement Types

It is commonly claimed that an NCA cannot be a DP. Examples are the verb *know* in (17) and (18). The latter can take either a CP or a DP as complement, but its NCA can refer to a sentential complement only (Dapiente 2000).

17. The teacher told the children that it was time to leave even though they already knew ø

18. *The children learned the song on Monday but on Friday they no longer knew ø*
In (17), ø is a sentential complement, while in (18) it is a nominal one. The different grammatical status of (17) and (18) results from the fact that in (17), the NCA refers to a proposition, while in (18) it refers to a noun phrase.

Even in sentences like (19), where the NCA might at first glance appear to be nominal, it is actually a sentential complement. According to Grimshaw (1979), ø here is not “the time”, but rather “what time it was”, which is sentential.

19. Mary asked the time, so I inquired ø

This is so because inquired, the verb introducing the NCA in (19), cannot take the nominal the time as a complement, but only the sentential one what the time was, as shown in (20).

20 a. *Mary inquired the time.
   b. Mary inquired what the time was.

Haynie (2009) argues that unlike DP, PP can be an NCA, as illustrated in (21).

21. The board considered the new proposal but half of the members objected ø

ø = to the new proposal

In (21), the NCA is a PP. So, while it can be a CP as we saw earlier, or a PP, it seems it cannot be a DP.

In section 6, I will examine examples from Hebrew that shed more light on this DP restriction. In the next section, I will present two models that propose an answer the question whether or not NCA is represented in the syntax, based on the attributes we have seen up to now.
4 Approaches to the NCA

As mentioned in section 2.1, Hankmar & Sag (1976) left the question whether NCA is represented in the syntax or not, unanswered. Few researchers have tried to answer this question. In general, there are two main approaches, which are divided on the question whether NCA has a syntactic realization or not. Dapiente (2000) advances a syntactic approach, which claims that NCA does have syntactic realization. This approach will be discussed in section 4.1. On the other hand, Grimshaw (1979) suggests a semantic approach, which claims that NCA does not have syntactic realization, as discussed in section 4.2.

4.1 The syntactic approach

Dapiente (2000) claims that NCA has a syntactic representation, which involves no internal structure. His claims are based on the fact that pro-forms exhibit the same behavior as NCAs.

He compares NCAs to the pro-forms *it and so, illustrated in the examples below.

22. Mary believes that Anne is pregnant but I don't believe *it.

23. Mary think that Susan is a liar but I don't think so.

First, Dapiente shows that a pronoun cannot have its antecedent within the pro-form as shown in (24), just like an NCA construction, see (7)m repeated as (25) below.

24. *My uncle has never ridden a camel, but his brother finally managed *it, although *it was lame. [*it=camel] (Bresnan 1971)

25. *He said that one of us had to give up his seat, so Sue volunteered ø, because *it was too narrow for her anyway.
ø = to give up her seat

Second, extraction out of a pro-form is impossible, as show in (26b), the same way it is impossible in the case of NCA, see (10), repeated as (27).

26a. Mary believes that John read a book and I also believe it.

26b * I remember which book Mary believes that John read but Mary doesn't remember which book I believe it.

27. * I know which book Mary volunteered to read and Peter knows which article Sally volunteered ø.

In (27), we tried to extract an element from the null complement of volunteered, which resulted in an ungrammatical sentence. In the same way, we tried to extract an element from pro-form it in (26b), that was derived from (26a).

Indeed, pro-forms behave on a par with NCAs with regard to extraction and the ability to contain an antecedent. However, this does not help us decide whether NCA is realized syntactically or only at the semantic representation. These characteristics only show that both pro-forms and NCAs do not have any internal structure. The question that remains is whether this is so because they are syntactic categories with no internal makeup, or rather semantic elements with no syntactic realization (which obviously would not have internal makeup either).

Dapiente also mentions that pro-forms, just like NCAs, can have a pragmatic control. Dapiente (2000) gives (28) as an example of pragmatic control of the pro-form it.

[Context: Mary sees John during commencement, finally getting his diploma]

Mary:

28. I don't believe it.

The sentential pro-form it, refers to a non-linguistic eventuality of John getting his diploma. (5) repeated as (29) illustrate the same for NCA
[Context: Moshe is trying to score a basket from distance.]

David:

29. I don't believe you'll succeed \( \varnothing \) \( \varnothing \) = to score a basket

Given Hankmar & Sag’s proposal that only deleted phrases require linguistic control is on the right track, then the fact that pro-forms allow pragmatic control just like NCAs follows directly if the former (just like the latter) do not involve deletion. Yet, this does not help us decide whether or not NCA is syntactically realized.

4.2 The semantic approach

Grimshaw (1979) suggests that the NCA does not have a syntactic realization at all. She illustrates her analysis with (30).

30. Question: Has the mayor resigned?

Response: I don't know.

The response in (30) is interpreted first by lexical selection and rules of sentence grammar, yielding an empty complement position for *know*. Under this analysis, the verb *know* has no complement in the syntactic representation, not even a null one. It just has an empty slot, that requires a specific type of complement according to the verb properties. This complement is constructed only in the phase of Logical Form, which is a discourse phase.

Then, she claims, the distinction between verbs that allow an NCA and verbs that don't, can be explained in terms of subcategorical selection. Compare the verb *know* in (30), to the verb *discover* in (31), from Grimshaw (1979).

31. Question: Has the mayor resigned?
Responses: ‘I haven't discovered yet.
   I don’t know.

While the verb *know* enables NCA, the verb *discover* doesn't. Grimshaw suggests, that this is so due to the fact that certain verbs, such as *know*, take an optional CP while others, e.g., *discover*, demands an obligatory CP, see (32):

32. know \[\_ (CP)\]

   discover \[\_CP\]

Grimshaw, however, does not provide evidence in favour of her approach.

In section 7, I will claim against Grimshaw’s analysis using examples from Hebrew. In the next section, I will discuss NCA constructions in Hebrew, and examine whether they behave like NCA constructions in the English examples from the previous sections.
5  NCA constructions in Hebrew

5.1 Examples of NCA in Hebrew

Doron (2012) introduced few cases of NCA in Hebrew. She gave examples of sentential complement of verb, see (33), sentential complement of P, see (34), and DP complements of verb, see (35).

33. רציתי לפתוח את היין, אבל אימה לא מרשה

 requiti li-floax et ha-yayin aval ima

 want.PAST.1S to-open ACC the-wine, but mom

 lo marša
 not allow.PRES.FS

 ‘I wanted to open the wine, but mom does not allow ø’  ø = to open the wine

34. תמיד תחשוב לפני שאתה מדבר, לא תוך כדי

 tamid taxšov lifney še-ata medaber, lo tox kede
 always think.FUT.2MS before that-you talk, not while

 ‘Always think before you talk, not while ø’  ø = you talk

35. הבאת בקבוק יין. תודה, שים ø על השולחן.

 heveti bakbuk yayin. toda, sim al ha-šulxan
 bring.PAST.1S bottle.CNSTR wine. thanks, put.IMP.2MS on the-table

 ‘I brought a bottle of wine. thanks, put ø on the table.’  ø = the wine bottle
While (33) and (34) are examples of NCA that refers to sentential complements, Doron (2012) gives (35) as an example of NCA that refers to a nominal complement. In section 3.1 we saw that it is widely claimed in the literature that NCA cannot refer to a DP in English, so this example of DP as NCA in Hebrew demands a deeper look.

First, we must make sure that (35) is indeed an NCA structure. The theta grid of the verb *sim* contains two obligatory complements - Theme and Location. The Location argument of *sim* is *al ha-šulxan*, but there is no overt Theme argument, and yet the sentence is grammatical. The Theme here is interpreted as identical to that of the verb *heveti* in the first clause, that is, *bakbuk yayin*. It is not a case of indefinite complement drop. The complement here is known and refers to element that appears in the text, meaning, it is definite.

It seems that (35) is indeed a case of an NCA that refers to a DP. I will examine this difference in behavior between English and Hebrew in my work.

In section 1, we discussed three attributes of NCA, resulting from its nature as elements with no internal structure that wasn't created by deletion:

1. NCA elements can be pragmatically controlled.
2. NCA elements can't contain antecedent.
3. We can't extract element from an NCA.

I will first examine the first attribute. We saw on section 1.2.1, that an NCA can get its meaning from element that exists in the non-linguistic context. (36) show that it is valid also in Hebrew.

[Context: Moshe stands with the ball in front of the basket and prepare to throw]

David says:

36. אתה לא תצליח ø
ata lo tacle’ax
you no succeed.FUT.2MS

‘You will not succeed.’

The complement of the verb tacle’ax, which is null, is interpreted by the context - you won’t succeed in scoring a basket. The null complement here is anaphoric to an envisioned event not mentioned in the sentence.

This example suggest that NCA can get its interpretation from a non-linguistic context also in Hebrew2.

In the section 5.3, I examine the other two characteristics of NCA constructions. Prior to that however, I will set apart NCA constructions and VP-Ellipsis cases in order to be able to compare their behavior regarding these characteristics.

5.2 Ellipsis in Hebrew

Based on the adverb placement3 among other behaviors, Doron (1990) assumes that V raises to I in Hebrew and therefore VP-Ellipsis cases include phonetically realized verb.

\[ \text{Hebrew VP-ellipsis is different than its English counterpart and cannot be tested with regard to }^2 \text{ pragmatic control. That is relates to the ungrammaticality of VP-Ellipsis with auxiliary in Hebrew, as I will explain in note 4 in section 5.2. The absence of first clause in pragmatic control cases, will make it difficult to determine that it is indeed VP-Ellipsis case if the auxiliary do not exist.} \]

\[ ^3 \text{ Hebrew allow adverbs to intervene between the verb and its complement, in contrast with English, where adverbs are to the left of the adverb. Sentences (2a-b) in English and the parallel sentences (3a-b) in Hebrew, show this different behavior between the languages. Assuming the adverb occupies the spec VP position, which is the most left border of the VP, this behavior is considered to be an evidence that the verb moved to I position in Hebrew, but not in English.} \]

(2) A. He often comes to university parties.
   B. * He comes often to university parties.

(3) A. הוא מגיע פעמים קרובות למסיבות אוניברסיטה
   hu magia le-itim krovot le-mesibot oniversita.
   He comes often to parties-University
In VP-Ellipsis in Hebrew, the verb moves to I, and then the VP is deleted. See (37) from Doron’s paper.

שלוחת את הילדם ללบท הס퍼? שלחתني.

שלאקח et הילד le-beyit ha-sefer? שלאקחתי

send.PAST.2FS ACC the-kids to-the school? send.PAST.1S

‘Did you send the kids to school? I did’

In the ‘answer’ in (37), the verb moves to I and then all the VP is removed. The parallel question in English would be answered ‘I did’, just like we see in the translation. This is because the verb does not move to the I position, and is not removed.

Thus, in cases of VP-Ellipsis, in languages where the verb move to I like Hebrew, the verb introducing the ellipsis must be the same verb as the verb in the remnant. If

He Often comes to University parties.

יושע לולך כל בוקר לבית קפה, גם דוד היה

Josef was-PAST.3S.M walk.PROGRESSIVE.3S.M every morning to coffee, and also David was

‘Josef was walking every morning to a coffee, and David was too’.

This limited auxiliary appearance makes the cases in which the verb move to I, the only plausible way to show ellipsis in Hebrew.

---

4 Otherwise we will not be able to prove that this is case of ellipsis. Auxiliaries won’t help: in Hebrew, VP-ellipsis is ungrammatical with auxiliary. Sentence (1) is an example of such case.

1. יוסף היה הלך כל בוקר לעבש קפה, גם דוד היה

Josef was-PAST.3S.M walk.PROGRESSIVE.3S.M every morning to coffee, and also David was

‘Josef was walking every morning to a coffee, and David was too’.

This limited auxiliary appearance makes the cases in which the verb move to I, the only plausible way to show ellipsis in Hebrew.
another verb is used as an answer, it is not a case of ellipsis, but rather of NCA, as I will show in the next section.

5.3 NCA vs. VP Ellipsis in Hebrew

With this in mind, we can compare VP Ellipsis to NCA in Hebrew with regard to attributes 2 and 3 that was mentioned above - the ability to contain an antecedent and the ability to extract an element from it.

5.3.1 Containing an antecedent

As I mentioned in section 1.2.2, in English, a pronoun cannot co-refer to an alleged antecedent within an NCA (7) above, while it can co-refer to an elided VP (8) above.

(38) and (39) demonstrates such cases with NCA and VP Ellipsis, respectively, in Hebrew.

'He said that someone had to give up his seat, so Sue volunteered, because it was too narrow for her anyway'.
'I didn't give up my seat, but Sue did, because it was too narrow for her anyway.'

In (38), the pronoun *hu* refers to an alleged antecedent within the NCA - the null complement of *hitnadva*. This sentence is grammatically controversial, and is parallel to (8) above, which claimed to be ungrammatical. However, Hankmar & Sag (1976) also note that "missing antecedent judgments are admittedly delicate", this seems to be valid in Hebrew too.

I propose that this parallelism effect is what makes the sentence controversial.

Callahan, Shapiro & Love (2010) suggested that in conjunctions sentences, the first clause material, the subject, the verb and its' complements, are re-activated in the second clause. The conjunction word, usually "and", is the trigger for the re-activation. This stays activated until the processor finds a place to "put" this material.

It might be that in (38), what helps the reader identify *it* in the last clause as "her seat", is in fact the phrase "his seat" in the first clause, and not the possible existence of the complement of the verb volunteered in the second clause.

On the other hand, (39) is perfectly good. The pronoun *hu* co-refers to an antecedent within an elided VP, and the sentence is perfectly grammatical. Just like in the English case, the pronoun can refer to an antecedent within an elided VP, and the sentence is grammatical.
5.3.2 Extraction

As discussed in section 1.2.3, with regard to English, while a WH-movement out of an elided VP is possible (see (9) above), a parallel movement out of an NCA will result in an ungrammatical sentence ((10) above).

Indeed, extraction out of the NCA in (40) result in ungrammaticality, as shown in (41).

40. דינה התנדבה להכין פסטה בולונז גם דוד הסכים

\[
dina \ hitnadva \ le-haxin \ pasta \ bolonez \ ve-gam
\]
Dina volunteer.PAST.3FS to-prepare pasta Bolognese and-also

david \ hiskim
David agree.PAST.3MS

‘Dina volunteered to prepare pasta Bolognese and David also agreed.’

41. אני יודע איזה פסטה דינה התנדבה להכין, ושני יודעת איזו פסטה דוד הסכים

\[
ani \ yode'a \ eize \ pasta \ dina \ hitnadva \ lehaxin,
\]
I know.PRES.1S which pasta Dina volunteer.PAST.3FS to-prepare,

\[
ve-šani \ yodrat \ ezo \ pasta \ david \ hiskim
\]
and-šani know.PRES.3FS which pasta David agree.PAST.3MS

‘I know which pasta Dina volunteered to make, and Shani knows which Pasta David agreed’

In contrast, the elided VP? (which contains the same verb in the two clauses) allows a parallel extraction, see (42).

42. אני יודע איזו פסטה דינה הסכימה להכין, ושני יודעת איזו פסטה דוד הסכים.

\[
a\ yode'a \ eize \ pasta \ dina \ hitnadva \ lehaxin
\]
I know.PRES.1S which pasta Dina volunteer.PAST.3FS to-prepare

\[
ve-šani \ yodrat \ ezo \ pasta \ david \ hiskim
\]
and-šani know.PRES.3FS which pasta David agree.PAST.3MS

‘I know which pasta Dina scim to make, and Shani knows which Pasta David agreed’
In sum, the behavior of VP-Ellipsis and NCA in Hebrew is just like their behavior in English, as presented in section 1.2.2 and 1.2.3.

In the next section, I will examine Doron's (2012) claim that Hebrew, in contrast to other languages, allow nominal NCA. I will falsify her analysis and will claim that Hebrew do not allow nominal NCA. I will examine alternative analyses of these null objects and will support one of them.
6 Null nominal object in Hebrew

We saw in section 3.1 that in English an NCA cannot refer to a nominal complement. Doron (2012) claimed, as we saw in section 5.1, that in Hebrew it can. See (35), repeated here as (43).

heveti bakbuk yayin. toda, sim al ha-šulxan
bring.PAST.1S bottle.CNSTR wine. thanks, put.IMP.2MS on the-table

‘I brought a bottle of wine. Thanks, put ø on the table’. ø = the wine bottle

It is widely agreed in the literature that nominal NCA is impossible (see Shopen 1972, Grimshaw 1979). Cases that were suspected to be nominal NCA were later analyzed as other phenomena (see Rizzi 1986 for Italian, Dapiente 2000 and Campos 1986 for Spanish). In this section, I will examine the phenomenon that was claimed by Doron (2012) to be nominal NCA in Hebrew. I will check whether Hebrew behaves differently from other languages and allows nominal NCA, or if what looks like nominal NCA in Hebrew is, in fact, a different phenomenon. In the course of this chapter, I will refer to what was claimed to be a nominal NCA in Hebrew simply as a null nominal object and I will check if it has similar attributes to those of clausal NCA.

One important feature of NCAs, as we saw in section 1.2.1, is that they can get their interpretation from non-linguistic contexts. (44) shows that the null nominal object can also get its interpretation from an element that exists in the non-linguistic context.

[Context: Max stands outside the door with a bottle of wine. Lucy opens the door and says:]
As (44) illustrates, a null nominal complement is possible since it can get its interpretation from the non-linguistic context, just like we found for NCA. In the next section, I will compare the behavior of null nominal objects to that of clausal NCA in Hebrew and show that they behave differently.

### 6.1 Null Nominal Object vs. Clausal NCA in Hebrew

In this section, I will compare the behavior of the Hebrew null nominal object with that of the clausal null complement.

#### 6.1.1 Secondary predication

A secondary predicate is possible only with elements that are syntactically realized (see Rothstein 2016 for an overview of secondary predication and the secondary predication test). Sentences (45) - (47) demonstrate this claim.

45a. 
*John axal et ha-gezer*

John eat.PAST.3MS ACC the-carrot

‘John ate the carrot.’

45b. 
*John axal et ha-gezer mevušal*

John eat.PAST.3MS ACC the-carrot perf
John eat. PAST.3MS  ACC  the-carrot  cooked

‘John ate the carrot cooked.’

46. גנ, הﺑטוי ﻦ ﻞدًة ﻣﻛح
John  hivti'ax  [linhog  pike'ax]
John promise. PAST.3MS  to.drive  sober

‘John promised [PRO; to drive sober].’

47. ﺗﺣدرأ ﻥوؤه ﺕوؤ
ha-xeder  nuka  yaxef
the-room  clean. PASS.3MS  barefoot

‘The room was cleaned barefoot.’

Sentence (45b) shows that the secondary predicate mevušal can be realized because the object, ha-gezer, is phonetically realized. In (46), we see that it does not have to be phonetically realized, but it must be syntactically realized – the covert subject PRO is syntactically realized, and can serve as an antecedent to the secondary predicate pike'ax. In sentence (47), the secondary predicate yaxef refers to the demoted agent of a passive verb, resulting in ungrammaticality. This is due to the fact that the agent is not syntactically realized, and therefore it cannot serve as an argument to a secondary predicate.

Sentences (45) - (47) show that a secondary predicate is possible only with a syntactically realized argument. Now consider (48), which illustrates a secondary predicate of a null nominal object in Hebrew.

48. ﻟ: ﻪبأة ﺪد ﻣﺣأً ﻦم ﻣبدًي ﻣم؟
Q: heveta  dag  me-ha-super  kmo  še-bikašti  mimxa?
bring.PAST.2MS  fish  from-the-supermarket like  that-asked.1S  from.you?
'Q: Did you bring a fish from the supermarket like I asked you to?'

A: ken, aval kaniti ø kafu ki nigmeru
   yes, but buy.PAST.1S frozen because finish.PASS.3PL

lahem ha-dagim ha-triyim
  to-them the-fish.PL fresh.PL

'A: Yes, but I bought frozen because they ran out of fresh fish.'

The secondary predicate kafu is possible with the null nominal complement of the verb kaniti. It indicates that this complement is syntactically realized.

Sentence (49) is an example of a secondary predicate with a null clausal complement.

49. Lucy bikša mi-Max liknot dag, aval Max serev
    Lucy ask.PAST.3FS from-Max to-buy fish, but Max refuse.PAST.3MS

(liknot dag) kafu
  (to-buy fish) frozen

'Lucy asked Max to buy fish, but he refused (to buy fish) frozen.'

As we can see in (49), omitting the clausal complement of the verb serev makes the sentence ungrammatical, indicating that a secondary predicate is impossible with a null clausal complement. This is reasonable if we are taking into consideration the fact that a clausal NCA in Hebrew has no internal structure, as I showed in section 5.3. Thus, when the secondary predicate refers to an element that is within the clause, ungrammaticality is expected.
Comparing (48) with (49) leads us to the conclusion that the clausal NCA and the null nominal object behave differently regarding secondary predication - while the null nominal object allows secondary predicates, the clausal NCA does not.

Nevertheless, while (48) indicates that the null nominal object in Hebrew has a syntactic realization, (49) does not necessarily mean that the clausal NCA does not have a syntactic realization as null pro-form. It simply indicates that the clausal NCA does not have internal structure. The question of whether the clausal NCA has a syntactic realization as an empty clausal category will be dealt with in Chapter 7, but for the null nominal object, it seems clear that it is syntactically realized.

In the next two sections, I will show that not only does the null nominal object in Hebrew have a syntactic realization, but in addition, its realization has an internal structure, in contrast to the Hebrew clausal NCA. This difference is a significant one and will lead us to analyze these two phenomena differently.

### 6.1.2 Containing an antecedent

In section 5.3.1 we saw that sentences with a pronoun that co-refer to an alleged antecedent within an NCA are grammatically controversial. Sentence (38), repeated as (50) below, demonstrates this claim.

50. ??הוא אמר שאחד מאיתנו חייב לוותר על המושב שלו, אז סו התנדבה, כי הוא היה ממילא הצר מדי עבודה

\[\begin{align*}
    hu & \quad amar & \quad še-exad & \quad me-itānu & \quad xayav & \quad le-vater \\
    \text{he} & \quad \text{say.PAST.3MS} & \quad \text{that-one} & \quad \text{of-us} & \quad \text{must.PRESENT.3MS} & \quad \text{to-give.up}
\end{align*}\]

\[\begin{align*}
    al & \quad ha-mośav & \quad šelo, & \quad az & \quad Sue & \quad hitnadva, & \quad ki \\
    \text{on} & \quad \text{the-seat} & \quad \text{his,} & \quad \text{so} & \quad \text{Sue} & \quad \text{volunteered.PAST.3FS} & \quad \text{because}
\end{align*}\]

\[\begin{align*}
    hu & \quad haya & \quad mimele & \quad tsar & \quad miday avura \\
    \text{he/it} & \quad \text{was} & \quad \text{anyway} & \quad \text{narrow too} & \quad \text{for.her}
\end{align*}\]
‘He said that someone had to give up his seat, so Sue volunteered, because it was too narrow for her anyway.’

In (50), the pronoun *hu* refers to an alleged antecedent within the NCA - the null complement of *hitnadva* - thus yielding controversial judgments. I explained these controversial judgments via the parallelism effect and compared it to VP-Ellipsis sentences where such co-reference is perfectly grammatical (see section 5.3.1). Null nominal objects with parallel co-reference are also perfectly grammatical, as (51) shows.

In (51), the pronoun *hi* refers to an antecedent, *parit levuš šel ha-me’atzevet ha-ahuva alav* (‘an item of clothing from his favorite designer’), within the null object of *mazmin* (‘order’). The grammaticality of sentence (51) indicates that in Hebrew a null nominal...
object has an internal syntactic structure. This stands in contrast to the controversial judgments we saw for clausal NCA in Hebrew.

The fact that a pronoun can refer to an antecedent within a null nominal object shows that not only does the null nominal object in Hebrew have a syntactic realization - its realization has an internal structure. For the clausal NCA, while its syntactic realization is still in question, it has been shown that it has no internal structure (see section 5.3 above and Dapiente’s (2000) proposal elaborated in section 4.1). This different attribute of the null nominal object and the clausal NCA leads us to conclude that these are two different phenomena.

So what is the correct analysis of the null nominal object in Hebrew? Huang (1984) discusses the null object in Chinese and analyzes it as a zero topic. In the next section, I will present his analysis and show that what was considered by Doron (2012) to be a nominal NCA in Hebrew behaves more like a zero topic.

6.2 Huang’s proposal - Zero Topic

Huang (1984) proposes an analysis of empty pronouns in Chinese. His analysis relies on the differences between languages as to how freely they enable dropping arguments. Chinese, for example, is a radical pro-drop language, which is at the most liberal end of the scale, because it allows dropping arguments quite freely. On the other hand, English is a ‘no pro-drop’ language, which is at the most conservative end of the scale, because in general it does not allow dropping arguments. Hebrew is considered a partial pro-drop language since it allows dropping arguments in certain configurations but not in others.

Huang gives the following examples of argument drop in Chinese:

52. Speaker A:  
Zhangsan  kanjian  Lisi  le  ma? 
Zhangsan  see  Lisi  le  Q
‘Did Zhangsan see Lisi?’

a. \( ta \ kanjian \ ta \ le \)
   
   ‘He saw him’

b. \( e \ kanjian \ ta \ le \)
   
   ‘[He] saw him’

c. \( ta \ kanjian \ e \ le \)
   
   ‘He saw [him]’

d. \( e \ kanjian \ e \ le \)
   
   ‘[He] saw [him]’

e. \( wo \ cai \ [e \ kanjian \ e \ le] \)
   
   ‘I guess [he] saw him’

f. \( Zhangsan \ shou \ [e \ kanjian \ e \ le] \)
   
   ‘Zhangsan said that [he] saw [him]’

As is clear from (52), the subject can be omitted in the matrix clause (52b) as well as in the embedded one (52e). In (52c) the object is omitted, and in (52d-e) both the subject and the object are dropped. These omissions are possible only when the omitted element (or elements) constitutes a topic in the discourse. Huang defines topic simply as ‘someone or something that a given discourse is about’. Below I explain Huang’s analysis of the zero object, which is relevant to this work.

Huang shows that there is a certain restriction on the distribution of zero object anaphora. Compare (53a) to (53b):
53a. 
\[ \begin{align*} 
&\text{Zhangsan shuo } [\text{Lisi } \text{bu renshi e}] \\
&\text{Zhangsan say Lisi not know} \\
\end{align*} \]

‘Zhangsan said that Lisi did not know [him]’

53b. 
\[ \begin{align*} 
&\text{Zhangsan shuo } [\text{Lisi } \text{bu renshi ta}] \\
&\text{Zhangsan say Lisi not know him} \\
\end{align*} \]

‘Zhangsan said that Lisi did not know him’

Both (53a) and (53b) are grammatical - but while him in (53b) can refer to the matrix subject Zhangsan, the empty object in (53a) must refer to someone other than Zhangsan who is a topic in the discourse. This distinction has led Huang to the conclusion that a zero object cannot be bound by an argument in an A-position. Just like in structures of topicalization, a null object is bound by an element in A'-position. An example of topicalization is shown in (54).

54. 
\[ \begin{align*} 
&\text{nei } \text{ren, Zhangsan shou } [\text{Lisi } \text{bu renshi e}] \\
&\text{that man, Zhangsan said Lisi not know} \\
\end{align*} \]

‘That man, Zhangsan said Lisi didn’t know e,’

In (54), an object underwent topicalization, and the null object refers to the element that man in the topic position. Chinese enables omitting the topic after it has undergone topicalization. (55) demonstrates the result of such removal:

55. 
\[ \begin{align*} 
&[\text{Top e}] [\text{Zhangsan shou } [\text{Lisi } \text{bu renshi e}]] \\
&\text{Zhangsan say Lisi not know} \\
\end{align*} \]

‘*[Him], Zhangsan said that Lisi didn’t know’
Note that (54) and (55) are similar in that in both sentences, the empty object refers to the topic of the sentence - not to the matrix subject. In (54) this topic is overt, while in (55) this topic is covert. Since Chinese is a radical pro-drop language, it enables the topic to be omitted if it exists in the context. As we will see in the next section, Hebrew, which is a partially pro-drop language, also allows zero topics.

So what type of empty category is this element? Since this omitted object cannot be bound by an element in an A-position and is bound by an element in A'-position, it is a variable.

In the next section, I will try to analyze the null nominal object in Hebrew, relying on the analysis that Huang suggests for Chinese.

6.2.1 Zero topic in Hebrew

Let me now return to a null nominal object in Hebrew and examine whether it behaves like a zero topic. Consider (44), repeated as (56) below.

[Context: Max stands outside the door with a bottle of wine. Lucy opens the door and says:]

56. מעולה, שים ø על השולחן
me’ule, sim ø al ha-šulxan
great, put.IMP.2MS on the-table

‘Great, put (it) on the table.’

(57) depicts its structure under Huang’s (1984) analysis.

57. me’ule, [ø] sim e, al ha-šulxan
If it is a zero topic as in Chinese, then the direct object of the verb *sim* must have undergone topicalization and was then deleted in the topic position.

In section 6.1.1, I showed that null objects enable secondary predication. Under Huang’s analysis, it is easy to explain this attribute. The null object enables secondary predication since it is syntactically realized.

Furthermore, just like in Chinese (see example (52a)), the null object in Hebrew cannot be bound by an argument in A-position. Consider (58):

58a. מקס אמר שלוסי לא מכירה ø

*max amar še-Lucy lo makira ø*

Max say.PAST.3MS that-Lucy not know.PAST.3FS

‘Max said that Lucy doesn’t know ø’

58b. מקס אמר שלוסי לא מכירה יומי

*max amar še-Lucy lo makira oto*

Max say.PAST.3MS that-Lucy not know.PAST.3FS him

‘Max said that Lisa doesn’t know him’

In (58a), the object of *makira* is covert and the only possible referent of its null object is someone (or something) that is a topic in the discourse, but not the matrix subject *Max*. In (58b), unlike in (58a), the object of *makira, oto*, is overt, and can refer to both the matrix subject *Max* and to someone other than Max that is a topic in the discourse. This behavior is parallel to that of the zero topic in Chinese illustrated in (53b). That is, the null object behaves on par with topicalized objects as illustrated in (59).

59. את התארח הודה, מקס אמר שלוסי לא מכירה ø

*at ha’avesh hode, makṣ amar šelši la makira ø*
et ha-iš ha-ze, max amar še-Lucy
ACC the-man the-that, Max say.PAST.3MS that-Lucy

lo makira ø
not know.PAST.3FS

'That man, Max said that Lisa doesn't know ø'

In (59), the object of amar was topicalized. In both (58a) and (59), the empty object refers to the topic of the sentence and not to the matrix subject. But while in (59) the topic is overt, in (58a) the topic is covert. The idea would be that just as in Chinese, also in Hebrew both sentences were derived in the same way - by topicalization. But while in (59) the topic remains in topic position, in (58a) it was removed, which is possible due to its existence in the context.

In this section, I showed that what was claimed by Doron (2012) to be a nominal NCA in Hebrew, behaves more like a null object in Chinese. In section 6.1.2, I showed that the null nominal object has internal syntactic structure. One option is indeed that, along the lines of Huang’s analysis, the Hebrew null object is the trace (copy) of the topic that has moved to topic position and has been removed there. But another possibility could be that the null object is deleted in situ (again, its internal structure is available in the syntax). In the next section, I will present the analysis of Erteschik-Shir, Ibnbari & Taube (2013) that advances this second option.

6.3 Erteschik-Shir et al. proposal

Erteschik-Shir et al. (2013) suggest an analysis of the null object in Hebrew which they label Topic Drop. They start by dividing discourse topics into two groups: shifted topics and continued topics. The latter refers back to an already mentioned referent, while the former is derived from a discoursally available set.
(60a) and (60b) illustrate a shifted topic, since the topic derives from a discoursally available set. The discourse set here contains ‘xalav’ and ‘tapuxim’, and (60a) and (60b) select ‘xalav’ to be the sentence topic.

(61a) and (61b) illustrate a continued topic. In these examples, ‘xalav’, which is the topic, is an already mentioned referent, and the only available topic in the discourse.

60. דני הביא חלב ותפוחים מהסופר

*Danny hevi* xalav ve-tapuxim me-ha-super
Danny bring.PAST.3MS milk and-apples from-the-supermarket

‘Danny brought milk and apples from the supermarket’

a. יאת החלב הוא שם במקרר

*et* ha-xalav *hu* sam *ba-mekarer*
(ACC the-milk) he put.PAST.3MS in.the-fridge

‘The milk he put in the fridge’

b. הוא שם אותו

*hu* sam *oto ba-mekarer*
he put.PAST.3MS it/ø on.the-fridge

‘He put it/ø on the fridge’

61.Danny hevi xalav me-ha-super

ден הביא חלב ותפוחים מהسوق
Languages have several ways of marking topics: topicalization, intonation and weak pronouns are some examples. Dropping the topic is another way. The division of labor between these ways is as follows: while topicalization applies to shifted topics, weak pronouns and dropping apply to continued topics. As we can see in (60), 'xalav', which is a shifted topic, can be subject to topicalization but can neither be dropped nor serve as an antecedent to a weak pronoun. In (61), 'xalav' is a continued topic. Therefore it cannot be a subject of topicalization (61a), but it can be dropped and can serve as an antecedent of a weak pronoun (61b).

The trigger for the deletion of the object in (61b) is the "topic-hood" of the missing object. This analysis is similar to one advanced by Huang (1984) in that both argue that the object refers to the topic of the discourse, and it can be removed due to that. But while Huang (1984) claims that the object moves to topic position and is deleted there,
Erteschik-Shir et al. (2013) claim that it is dropped in its original position as a complement. They suggest that an unvalued feature bundle is merged in the object position and goes unpronounced in the phonological component. Its topic-hood allows the recovery of its content by searching for an antecedent which is a continued topic.

To reinforce their assumption that no movement is involved here, Erteschik-Shir et al. (2013) show that these null objects can be found inside islands without resulting in ungrammaticality. If this is indeed so, then the Hebrew null object cannot have undergone movement to the topic position prior to its removal since movement cannot cross an island (Ross 1967). Erteschik-Shir et al. (2013) rely on four examples; the first is brought below in (62) and demonstrates an omitted object inside a CNPC island.

62.

\[
\begin{align*}
\text{hereti} & \quad et & \text{ha-tmuna} & \quad le-Dina, & \quad ve-mišu & \quad hefis \ šmuva \\
\text{show.PAST.1S} & \quad \text{ACC} & \quad \text{the-picture} & \quad \text{to-Dina} & \quad \text{and-someone} & \quad \text{spread} \ \text{rumor} \\
\text{še-hereti} & \quad o/a & \text{ota} & \quad \text{gam} & \quad le-Yossi \\
\text{that-show.PAST.1S} & \quad o/it & \quad \text{also} & \quad \text{to-Yossi} \\
\end{align*}
\]

‘I showed the picture to Dina and someone spread the rumor that I also showed it to Yossi’

Their examples were judged by five native speakers. However, judgments on these examples are not so clear.

In contrast to their examples, consider (63) for instance which sounds to me and to the speakers I have consulted ungrammatical.

63.

\[
\begin{align*}
\text{ke’arat} & \quad \text{ha-salat} & \quad še-heveti & \quad hayta \ \text{me’at} \ \text{meluxlext}, \ \text{az}
\end{align*}
\]

*קערת הסלט שהבאהתי היהתה מעכ墉 מלוכלכת, ולא אהר כל ייךתי את השולחן שם שמשמי 0 עדלי*
bowl.CNST the-salad that-bring.PAST.1S was little dirty, so

axar-kax nikiti et ha-šulxan še-samti alav

later clean.PAST.1S ACC the-table that-put.PAST.1S on.it

‘The salad bowl I brought was a little dirty so I cleaned the table I put it on’

Examples like (63) raise doubts regarding Erteschik-Shir et-al.’s (2013) intuition that null objects in Hebrew do not show an island effect, and this gives a strong motivation to check it further with a larger group of native speakers.

In the next section, I will present an experiment I made to examine Erteschik-Shir et al.’s (2013) intuition that zero topics in Hebrew do not show island effects. The results will help us decide whether the object was deleted in situ or in topic position.

### 6.4 Nominal NCA - Sensitivity to Islands Experiment

The goal of the experiment was to test whether a null objects shows an island effect. It was tested by checking if sentences with island structure that contain a null object are grammatical. The island test will indicate whether the null object moved to topic position, since such movement cannot cross an island. For this purpose, I compared native speakers judgments on sentences that contained a null object within islands, with two kinds of sentences: sentences with a null object in a neutral environment (i.e. without island structure) and sentences with a realized object - both within an island structure and in a neutral environment. Note that for the realized object in a neutral environment, the sentences are not expected to show an island effect although the objects are within an island structure. This is due to the fact that the object is realized, and no movement is expected out of the island structure.
If there is an island effect in null-within-island sentences, we would expect to see that the difference between the scores obtained by the null-within-island sentences and those obtained by the null-no-island sentences will be significantly bigger than the difference between the scores obtained by the realized-within-island sentences and those obtained by the realized-no-island sentences.

The conclusion was clear - null-within-island sentences do not show any island effect. They were judged significantly less grammatical than null-no-island sentences, but with the exact same difference of scores as between realized-within-island sentences and realized-no-island sentences.

6.4.1 Participants

Two hundred and seventy-five native Hebrew speakers completed an online acceptability judgment survey built using Google Forms (205 female, 70 male, mean age = 31.1, range 17-65). Participants were recruited via social networks and voluntarily agreed to take the survey. One hundred and thirty-eight participants filled the first version of the survey, and one hundred and thirty-seven participants filled the second version of the survey.

6.4.2 Materials and design

The experimental design involved two factors, each one with two levels: island (yes/no) and null object (yes/no). Therefore, the materials were designed to compare between sentences with a null object vs. sentences with a realized object - both within an island structure and in a neutral environment (i.e., not in an island structure). To
test these factors’ effect, I created 16 sentence sets for each of the two types: null object sentence sets and realized object sentence sets. Each set contained two sentences: a base sentence and an island sentence. Hence, realized object sentences were also tested within an island structure, despite the fact that the object is realized and no real island effect could be found. These sentences were added to check the general effect of the island structure, in order to verify that any reduction in grammaticality in the null object island case is due to the omission of the object, rather than the existence of the island structure.

(64) is an example from the null object set. While (64a) is an example of a null object in a neutral environment, (64b) is an example of a null object within an island - in this case the Complex NP island. Importantly, the two sentences use the same verb and arguments. (65) is an example from the realized object set.

64a.

אני יודע מה משה עשה עם המבנה של, הוא מכר לרום

ani yode’a ma Moše asa im ha-mexonit

I know what Moshe did with the-car

šelo, hu maxar le-roni

his he sell.PAST.3MS to-Roni

'I know what Moshe did with his car, he sold (it) to Roni'

64b.

אני לא יודע מה משה עשה עם המבנה של. מקס שלל את הרעיון שהוא מכר לרום

ani lo yode’a ma Moše asa im ha-mexon

I no know.PRES.MS what Moshe do.PAST.3MS with the-car
I don't know what Moshe did with his car. Max denied the idea that he sold to Roni.'

'This fancy pen didn't just come to Max. He stole it from Miki yesterday in class.'

'I don't know how this ball got to Uri, but the claim that he stole it from Max made me laugh.'
The island sentences were constructed based on three kinds of islands: 25% of the island sentences were of the Complex NP island involving a sentential complement, 25% were Complex NP involving a Relative Clause island and 50% were Subject island sentences.

Alongside the null and realized object sets, 8 ungrammatical island sentences were included as filler sentences. These sentences were clearly ungrammatical due to an island violation, and served to compare to the null object island sentences, as well as to provide participants with clearly ungrammatical sentences in the experiment.

Overall, 72 sentences were created: 16 sets of null object sentences (simple and within islands, 32 sentences overall); 16 sets of realized object sentences (simple and within islands, 32 sentences overall); and 8 clearly ungrammatical island sentences.

They were divided into two lists in the following way: in each set, one sentence was added to the first list and the other sentence to the second list. Each list thus contained 8 null objects in simple sentences, 8 null objects within island sentences, 8 realized objects in simple sentences, 8 realized objects within island sentences, and 4 clearly ungrammatical filler sentences. Each list contained 36 sentences overall.

### 6.4.3 Procedure

The survey was carried out over the web, using the Google Forms platform. Participants were randomly assigned to one of the two lists following a question of whether or not they were born in an even month. Participants were instructed to rate the acceptability of each sentence on a 7-point scale where 1 stands for completely unnatural and 7 stands for completely natural. The instructions included an
explanation about the scale. Each sentence was presented followed by the acceptability scale. Participants completed the survey at their own pace.

### 6.4.4. Results

The overall average rating of the experimental sentences was 4.88. The ungrammatical filler sentences got an average rating of 1.46.

The average rating in the different experimental conditions is provided in Table 1 and Figure 1 below.

#### Table 1

<table>
<thead>
<tr>
<th>Object</th>
<th>Environment</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Realized object</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral sentence</td>
<td>6.32</td>
<td>0.36</td>
<td></td>
</tr>
<tr>
<td>Within Island structure</td>
<td>5.36</td>
<td>0.81</td>
<td></td>
</tr>
<tr>
<td><strong>Omitted object</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral sentence</td>
<td>5.29</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td>Within Island structure</td>
<td>4.28</td>
<td>0.82</td>
<td></td>
</tr>
</tbody>
</table>

A by-items ANOVA revealed a main effect of the factor Island (F(1,60) = 31.439, p < .001), such that sentences with no island structures received higher ratings than those with an island structure. There was also a main effect of the factor Null object (F(1,60) = 36.207, p < .001), such that sentences with null objects were in general less acceptable than those with a realized object. Crucially, however, the interaction between the two factors was not significant (F < 1).

#### Figure 1
6.4.5 Discussion

The results show an effect of null object, suggesting that object omissions reduce grammaticality. The results also show an effect of island structure. Note that in the sentences with a realized object within an island structure, no island effect is expected, but they were still significantly less grammatical than the 'neutral' sentences with a realized object. This is due to the fact that these sentences where longer and more complex than the neutral ones, which probably rendered them less acceptable.

Crucially, however, the interaction between the null object factor and the island factor was not significant. In other words, null objects within islands were rated as less grammatical than their counterparts in a neutral environment, but a similar reduction in grammaticality was observed with realized objects.

The results show that there is no island effect in null object sentences. This finding leads us to the conclusion that the null object in Hebrew was not created by movement, which is in line with Erteschik-Shir et al.’s (2013) approach.

According to Erteschik-Shir et al.’s analysis, the object is deleted in situ due to identity with a continued topic in the context. Let me now return to the attributes of
the null object in Hebrew, which were presented earlier, and try to explain them under their analysis.

First, I showed in section 6.1.1 that null objects in Hebrew have a syntactic realization. This conclusion was drawn based on the ability of null objects to be subjects of a secondary predicate, as sentence (48), repeated here as (66), demonstrates.

66. ש: הבאת דג מהסופר כומ שבקתיقم: קмо שלבייבאשטי

Q: heveta dag me-ha-super kmo še-bikašti
   bring.PAST.2MS fish from-the-supermarket like that-ask.PAST.1S

   mimxa?
   from-you?

‘Q: ‘Did you bring a fish from the supermarket like I asked you to?’

ת: כן, אבל קניתי כף כי נגמרו להם הדגים הטריים

A: ken, aval kaniti ø kafu ki nigmeru lahem
   yes, but buy.PAST.1S frozen because finish.PASS.3P to-them

   ha-dagim ha-triyim
   the-fish fresh

‘A: ‘Yes, but I bought it frozen because they had run out of fresh fish.’

The grammaticality of (66) indicates that the null object referring to dag (fish) can serve as an argument of the secondary predicate kafu. This argument-predicate
relation is possible only when the argument is syntactically realized, which means that the null object has a syntactic realization.

But not only do null objects in Hebrew have a syntactic realization, they also have an internal syntactic structure. To demonstrate this, I showed in section 6.1.2 that null objects in Hebrew can contain an antecedent for a pronoun (see sentence (51), repeated as (67) below).

67. The design teacher asked the students to bring an item of clothing from their favorite designer for tomorrow. So Max ordered ø (it) from the official site because she sold items only there.'

The grammaticality of (67), that is the ability of a secondary predicate to refer to an antecedent within the null object shows that the latter has an internal syntactic structure.

The above properties can be easily explained under Erteschik-Shir et al.’s (2013) analysis. In their analysis, the object was removed under identity with the continued
topic. That is, it existed in the first stage of the derivation and was deleted later. Elements that exist in the first stage of the derivation are syntactically realized and have an internal structure. The deletion happens due to discursive reasons, later on in the derivation. Thus, there is syntactic structure which can be modified and referred to.

Another behavior that requires an explanation is the fact that the null object cannot refer to the matrix subject of the sentence. Consider sentence (58a), repeated as (68) below.

68. מקס אמר שלוסי לא מכירה ø

$max amar \text{še-Lucy } lo makira ø$

Max say.PAST.3MS that-Lucy not know.PAST.3FS

'Max said that Lucy doesn't know ø'

In (68), the null object of the verb makira ('know') cannot refer to Max, which is the matrix subject of the sentences. Just like in Chinese (see (52)), also in Hebrew the null object cannot refer to the matrix subject of the sentence.

Raposo (1984) discusses null objects in Portuguese and shows that when the spec CP position is occupied by a WH element, a null object is impossible. (69) demonstrates this.

69a. OP a Joana viu e na televisao ontem a noite

'Joana saw (him) on TV last night'

69b. *Quando OP e que Joao vai oferecer e a Maria t?

'When is Joao going to offer (it) to Maria?'
(69a) shows that when a null object exists in the sentence, a WH element cannot occupy the spec CP position. Raposo (1984) suggests that the null object is bound by a null operator in the spec CP position. Therefore, a null object is not possible when the position of its bounder is occupied by another element.

Consider (70) below, which demonstrates a similar behavior of the null object in Hebrew.

[Context: There are 3 brothers in the Cohen family - Itay, Tzvika and Ofri. Their father went to the warehouse, where the ball is usually stored, but the ball is not there. The father asks Tzvika where the ball is.]

[Tzvika to his father:]

70a. איתי לקחה אתון למגרש

Itay lakax oto la-migraš

'Itay took it to the court'

70b. איתי לקחה אתון למגרש

Arik amar še-Itay lakax ito

Arik say.PAST.3MS that-Itay take.PAST.3MS with-him

la-migraš
to.the-court

'Arik said that Itay took (it) with him to the court'

[Tzvika, calling to Ofri:]

70c. ¿מא שואל על המדור. לאַי אוט לַקאַה אוטה?
Ofri, aba šoel al ha-kadur. le'an Itay lakax oto?

Ofri, dad ask.PRES.3MS about the-ball. where Itay take.PAST.3MS it?

'Ofri, dad is asking about the ball. Where did Itay take it?'

70d. עפרי, אבא שואל על הכדור. לאן איתי לקחה את?*

Ofri, aba šoel al ha-kadur. le'an Itay lakax ito?

Ofri, dad ask.PRES.3MS about the-ball. where Itay take.PAST.3MS (it) with-him?

'Ofri, dad is asking about the ball. Were did Itay take (it) with him?'

We can see that in the answer to the father’s question, both a pronoun (70a) or a null object (70b) can refer to the ball. But when another element moves to the spec CP position, the ball can be referred to by a pronoun (70c) but not by the null object (70d). This behavior can be straightforwardly explained assuming that in Hebrew too the null object is bound by a null operator in Spec CP. In the case that Spec CP is occupied by a WH element, as in (70d), the result is ungrammaticality.

If this is indeed so, then the null object in Hebrew is a variable. Since a variable cannot be bound by an argument in an A-position, the null object in (68) cannot refer to the matrix subject of the sentence.

In this section I have shown that the null object in Hebrew behaves differently from the NCA and is in fact a case of topic drop. Null objects are omitted in situ under identity with a topic, and they are bound by a null operator in Spec CP. In the next section, I will return to the NCA and show that the behavior of the NCA in Hebrew weakens Grimshaw's (1979) semantic approach to the NCA (as presented in section 4.2 above).
Chapter 4 presents two approaches to the NCA: the syntactic approach and the semantic approach. The main conflict between the two is regarding the question of whether the null element has syntactic realization or not. In this chapter, I will provide evidence from Hebrew that casts doubt on the semantic approach advanced by Grimshaw (1979).

Grimshaw (1979) suggests that NCA has no syntactic realization at all. It only involves an empty semantic slot that is being reconstructed – attributed content – in the discourse phase (see section 4.2 for further details). Consider the question in (71) and the answers (a) and (b), which both involve an NCA. While (a) constitutes an impossible answer, (b) is a possible one. The structure of the answer in (b) is represented in (72).

71. Question: Has the mayor resigned?

Responses: a. *I haven't discovered yet.
             b. I don’t know.

72.
The difference then, according to Grimshaw (1979), between verbs that allow NCA and verbs that do not allow it lies in their subcategorization frame. While verbs that allow NCA, like *know*, have an optional CP in their frame, verbs that disallow NCA have an obligatory CP in their frame. Furthermore, Grimshaw also claims that if a predicate subcategorizes for an obligatory CP, it must take an overt CP complement. If it subcategorizes for an optional CP, it can take a null complement as well; that is, it does not have to realize its complement.

An unrealized complement is interpreted as an indefinite, unspecific complement, when no context is provided. This is illustrated in (73), where the complement of *eat* is indefinite, as John wants to eat *something, we don’t know what*. That is, the object here is interpreted as a variable existentially bound at the semantic representation.

73. John wants to eat.

The NCA, in contrast, is necessarily a definite complement, as was explained in section 2.3. Its meaning has to be specific. The complement of *know* in (71b) for example, which is an NCA, is specific: I don’t know *whether the mayor resigned*.

Grimshaw’s proposal then entails the following correlation: Verbs whose CP can be implicit and interpreted as nonspecific allow NCA, and verbs whose CP is obligatory disallow NCA. If her generalization is correct, this correlation should hold. With that in mind, consider (74) below.
In (74a) the verb *hiskim* ('agree') takes an NCA. Example (74b) shows that the same verb cannot take an indefinite complement - it results in ungrammaticality. The difference in grammaticality between (74a) and (74b) casts doubt on Grimshaw’s proposal. The verb *hiskim*, which can take an NCA, disallows an indefinite, nonspecific one, contra the correlation expected by Grimshaw. In other words, this difference is not predicted by the subcategorization account.

(75) illustrates the opposite situation: It shows that there are verbs that do not allow indefinite, nonspecific complement, but do allow an NCA.
father my advise.PAST.3MS to.me to-study for-degree second

‘My father advised me to study for a Master’s degree.’

75b. יחותמתי לא ללכת לתואר שני אף על פי שאני ממליץ holland nothing to do with second though that-father decide.PAST.1S not to-go for-degree second though that-father

my advise.PAST.3MS to.me

‘I decided not to go for a Master’s degree even though my father advised me to.’

75c. [Context: CEO of a company presents its new assistant to the company's employees]

אני מציג בפניכם את פליקס,であろうיו הפרטיים של המנהל⇊ אני בטוח שאביו ייעץ לי

ha-ozar ha-iši šeli ani batu’ax še-Felix the-assistant the-personal my I sure that-Felix

contribute.FUT.3MS much to.the-company and.to.me in-matter personal.

he advise.FUT.3MS to-me and contribute.FUT.3MS from-experience-his
‘I introduce you to Felix, who will be my personal assistant. I am sure that Felix will contribute much to the company and to me personally. He will advise me and contribute from his experience.’

(75a) shows that yi’ets (‘advised’) takes a CP complement, which is the only complement type in its subcategorization frame. (75b) shows that it does not allow an NCA. One cannot understand (75b) in the sense that yi’ets has a complement that gets its meaning from the complement of hexlit (‘decided’). But yi’ets does allow an indefinite, nonspecific complement, as we can see in (75c). Just like in (74), the contrast here cannot be explained in terms of subcategorization, since in both cases the CP is not realized. Nonetheless, while yi’ets allows a nonspecific sentential complement, it disallows an NCA.

In sum, under Grimshaw’s semantic approach, which treats nonspecific null complements on par with NCAs, thus deriving the availability of both from the verb’s subcategorization frame, the above differences are completely unexpected.

Within a syntactic approach, NCA has a syntactic representation involving no internal structure. The availability of NCA does not follow from the optionality of the CP. Rather, it is an idiosyncratic attribute of specific verbs. Therefore, no correlation between optional CPs and null complements is expected. Specifically, under the syntactic analysis hiskim subcategorizes for an obligatory CP, which can be realized as an NCA, as in (74a) for example, while yi’ets subcategorizes for an optional CP, which is phonetically realized in (75a) and implicit in (75c), but it disallows NCA, as shown in (75b).
Appendix A: Experiment Materials

Instructions in Hebrew

 вашим заданием является оценивать степень естественности каждого предложения на шкале 1-7, где 1 - это совершенно неестественное предложение и 7 - это абсолютно естественное предложение. Термин естественность относится как к предложениям, которые можно использовать в разговорном языке, так и к предложениям, которые можно использовать в более высоко уровне языка. Возможно дать промежуточные баллы, если они отражают ваше мнение о естественности предложения.

Вопросник не ограничен во времени, но важно, чтобы вы быстро оценивали каждое предложение, потому что первая интуиция является наиболее важной в этом опросе. Как только вы дали оценку предложению, не меняйте ее. Перейдите к следующему предложению и не возвращайтесь, чтобы проверить ваши оценки для предыдущих предложений.

Ваше мнение не должно быть основано на правилах грамматики, изученных в школе или в других местах, а на вашем мнении о естественности предложения.

Сначала, пожалуйста, заполните свой личный профиль. Далее начнется опрос.

Translation:

Your mission is to rate how natural each sentence is in a scale of 1-7, when 1 will be given to a sentence that is unnatural at all and 7 to a completely natural sentence. The term natural relates to both sentences that are acceptable in spoken language and sentences that are acceptable in higher language. It is possible to give in between grades if they reflect your filling about how natural the sentence is.

The sentence is not limited in time, but it is important that you will judge each sentence quickly, because your first intuition is the important one in this survey. From the moment you gave a grade to a sentence - don't change it. Go on to the next sentence and don't go back to check your grades for previous sentences.

Your judgment does not have to be base on the grammar rules you studied in schools or in any other place but on your filling about how natural the sentence is.

First, please fill your personal properties. Then the experiment will start.
Experiment Sentences

Realized Object (32 sentences)

In a neutral environment (16 sentences)

1. מקס השאיל את הדיסק של שרית חדד לאחותו ג'וליה.
   'Max borrowed Sarit Hadad disc to his sister Julia.'

2. קבלתי אנדרט ברכה לראש השנה מדודה שושנה.
   'I got a Rosh-Hashana greeting card from aunt Shoshana.'

3. המנה שנוזמה היא מתאחת לא טעימה. הוחזרה לאכילה עם ממילא.
   'The dish we ordered was not tasty. We returned it to the waiter.'

4. אתמול בעבודה חילדו לנו שוברי הנחה לארוחת במתעדת שוק.
   'Yesterday at work they gave us discount vouchers for a meal in a chef restaurant.'

5. מקס השליך כיסא על מוריס באמצע השיעור אתמול.
   'Max threw a chair at Morris in the middle of the class yesterday.'

6. הילדה הפילה את המזלג במהלך הארוחה, ולא Gärd ברל אתԿաուր.
   'The girl dropped the fork during the meal, and her father lifted it from the floor.'

7. הבאת במתנה לטיסת עם ההלצת עד הסופר. הנחה אוניה על השולחון מימד_qsמהמה.
   'I brought a gift to Max birthday party. I put it on the table when I arrived.'

8. כתבתי הוראות מפורטות מה לעשות עם הכלבה כשאני הוזר. שלחתי אתן לאמבי של.
   'I wrote detailed instructions of what to do with the dog while I am abroad. I sent them to my father them by e-mail.'

9. השוקולד שאכלנו אתמול היא מתאחת לא טעימה. מקס הביא אותו מצרפת.
   'The chocolate that we ate yesterday was very tasty. Max brought it from France.'

10. ברכתי את האבטיć במקובר, ובנער הנישטיא אתו לאכילה.
    'I blessed my father in law, and I gave the nephew a meal.'
In the morning I put the watermelon in the fridge and in the evening I served it to the guests.

Two months ago we bought a new sofa. We ordered it from a company in the web.

The baby didn't like the new pacifier so he threw it to the floor.

Two weeks ago Max won the lottery. Yesterday he picked up the prize.

This luxurious pen didn't just get to Max. He stole it from Miki in the class yesterday.

The dog dropped the vase from the table in the on the porch.

Yesterday we bought a nice porcelain doll. We put it on the sideboard.

**Inside an island structure - Subject Island (8 sentences)**

The watermelon was all day in the fridge and to serve it to the guests in the evening was a great idea.

I'm happy that we bought a new sofa but that we ordered it from the internet worries me a bit.

I waited two weeks until I took the cash reward I won. To take it immediately felt strange.

I know that chocolate you cannot find in our country, to bring it from France was too complicated for me.

בישיבת הנפש העניקה את פרסים לשתי בחירות. לאפוק ואיאי מזים הקטנים מעלי חום.
I know that this chocolate cannot be found in our country and to bring it from France was too complicated for me.'

They are always giving us gifts at work, but that they gave us discount for a meal in a chef restaurant was really nice of them.

In the middle of the meal, the child dropped the fork and to lift it from the floor annoyed me.

I brought a gift to Max's birthday party. To put it on the table was the first thing I did when I arrived.

I wrote detailed instructions about what to do with the dog while I'm abroad. That I sent it to my father shows I rely on him.

Inside an island structure - CNPC (4 sentences)

I knew that the baby won't like the pacifier that I bought to him and the thought that he would throw it to the floor annoyed me.

Yesterday we bought a nice porcelain doll and I liked the idea that we will put it on the sideboard.

I know that Max like the disc of Sarit Hadad and Julia rejected the claim that he borrowed it to his sister.
I know that Max does not like Morris but I didn't believe to the rumor that he threw a chair at him.

Inside an island structure - Relative Clause (4 sentences)

1. I didn't want to put the vase outside. I was careful of the dog that already dropped it from the table.
2. It looks strange to me that Max has such a luxurious pen in the case but I couldn't believe the girl that claimed that he stole it from her.
3. I was happy to see a Rosh-Hashana greeting card that waited for me in the mail and I liked that uncle that I got it from him.
4. The meal that we ordered was not tasty and I liked the waiters that returned it to the chef without arguing.

Null Object (32 sentences)

In neutral environment (16 sentences)

1. I know what Moshe did with his car, he sold (it) to Roni.
2. The champagne we drank yesterday is a luxurious champagne. Max brought (it) from France.
That's it, I finished my last work to get my BA. Yesterday, I submitted (it) to secretariat.

I have a reservation for a fan meeting with Aerosmith. I got (it) from a friend of my sister.

I no longer have the white cat in my house, I gave (it) to SPCA yesterday.

I've heard that Max has a summary of the syntax class. Julie sent (it) to him.

Max no longer use the Mathematics book from last year, so he gave (it) to Julie.

I needed checkered notebook immediately and I remembered I had in the bag. I took (it) from work.

I saw in the store a shirt I liked but she was too expensive. In the day after my mother bought (it) to me.

Ron finally has Harry Potter new book. Julie lent him.

The kid dropped the fork at dinner. I had no choice, I lift (it) from the floor.
My mother made me birthday cake and sliced it. When my friends arrived, I served (it) to them.

The tomatoes were really rotten so Max drop (them) to the garbage.

I know how this ball got to Uri. He stole from Max.

The salad ball that I brought was dirty so I cleaned it a bit. Only after I put (it) on the table.

I saw in the shop a shirt I liked but it was expensive. To buy (it) to my mother for birthday sounds exaggerated to me.

My mother made me a birthday cake and sliced it. To serve (it) to the friends was my job.

Max thought that the tomatoes were really rotten and throwing (them) to the garbage was the only option for him.

The champagne we drank yesterday was a luxurious champagne. That Max brought (it) from France was really nice of him.

That's it, I finished the last work for the BA degree. To serve (it) to the secretariat was really liberating.
6. I have an invitation to a fan meeting with Aerosmith. That I got (it) from a friend of my sister really made me happy.

7. I no longer have the white cat at home. That I gave (it) to SPCA yesterday made me sad.

8. I needed a checkered notebook immediately and I remembered I have one in my bag. That I took (it) from work saved me.

Inside an island - Relative Clause (4 sentences)

1. Ron finally has the new Harry Potter book. He very appreciate the girl that lent (it) him.

2. I really wanted the new iPhone model and my mother made sure I will have it. I've heard about the store that she ordered (it) from.

3. The salad bowl that I brought was a bit dirty, so I cleaned the table I put (it) on.

4. I've heard that Max has a summary of the syntax class. I know the girl that sent (it) to him.

Inside an island - CNPC (4 sentences)

1. I didn't know who put the fork next to the kid's plate and I was annoyed by the possibility that (it) was lifted from the floor.
I don't know how this ball got to Uri, but the claim that he stole (it) from Max made me laugh.

I don't know what Moshe did with his car. Max denied the idea that he sold (it) to Roni.

Max no longer used the mathematics book from last year and he agreed to the offer to give (it) to Julie.

Completely ungrammatical sentences (8 sentences)

1. Pasta that we ate from the pot surprised Max.
2. Puzzle Max built the table that the girl completed on it.
3. What that I've read saying that I won't want to see also the movie?
4. Max Lucy rejected the possibility that he will see the TV show without her.
5. To whom to buy a gift sounds to the student exaggerated?
6. The ring Max knew the guy that returned to Julie.
7. What that you gave to Max was a mistake!!
8. Who Lucy liked the idea that will eat with her ice-cream on Saturday!!
Appendix B: Hebrew verbs that take NCA

הנה נושאים נוספים המכונים NCA:

- התנגד (objected)
- הסכים (agreed)
- סרב (refused)
- תבקש (asked)
- שכח (forgot)
- התנדב (volunteered)
- התעקש (insisted)
- אישר (approved)
- נינש (guessed)
- ניסח (tried)
- המשיך (continued)
- קיווה (hoped)
- השיב (replied)
- הסביר (explained)
- העדיף (preferred)
- העדיף (preferred)
- הסביר (explained)
- התנהק (wondered)
- התoha (need)
Appendix C: Hebrew verbs that do not take NCA

אמר (said), דרש (demanded), טען (claimed), איים (threatened), תכנן (planned), בחר (chose), ענה (answered), השיב (answered), הבהיר (clarified), ה디יע (think, believe), הציע (proposed), הורה (instruct), הürn (proved), הועדו (pleaded), הftar (pleaded), הפטור (pleaded), התריע (proposed), ההודר (instruct), ה뒤탕 (clarified), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), הערע (answered), H

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