

## V-Movement and VP-Ellipsis

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### ABSTRACT

Languages which allow V-to-I movement should exhibit VP-ellipsis which "strands" the verb in I, at least if V-movement can precede VP-deletion. In surface structure, all VP-internal components would be missing but for the verb, which had been positioned in I prior to VP-deletion. If such examples exist, they would be hard to distinguish from object-drop examples, since in both cases the object is missing but not the verb. Nonetheless, it should be possible to separate the two constructions based on the well-established observations that VP-ellipsis does not obey constraints on movement, and that object-drop does. This paper demonstrates that the two distinct constructions are attested in Hebrew. Moreover, since it is generally agreed upon that VP-ellipsis structures are base-generated, it follows that V in Hebrew may be base-generated in I, as only base generation would enable V to be positioned in I prior to VP-deletion. Other languages with V-to-I movement, such as French, do not exhibit VP-ellipsis which strands V, since in French, V-to-I applies at s-structure.

### O. INTRODUCTION

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It is generally assumed that the ECP plays some role in the licensing of null VPs. The present study shows that for the ECP to be satisfied, a null VP has to be governed by I which contains a base-generated lexical item. In English, for example, this role is fulfilled by auxiliary verbs. In other languages, such as Hebrew and Portuguese, the same role is fulfilled by main verbs.

Languages are known to differ according to the position of the verb at s-structure. Languages such as French allow main verbs to be dominated by I at s-structure, whereas other languages (e.g. English) allow this only for auxiliary verbs. This paper argues that languages also differ according to the position of the verb at d-structure. Some languages, Hebrew and maybe Portuguese, allow main verbs to be base-generated in I, at least in structures where VP is null. English, on the other hand, allows only auxiliaries to be base-generated in I, whereas French allows no verb to be base-generated there.

Section 1 of this paper establishes that Hebrew is like French in allowing verb-movement to I at s-structure. Section 2 is concerned with identifying VP-ellipsis in Hebrew. It is shown that a main verb may be "stranded", i.e. main verbs are realized in sentences where VP is null. Such sentences can be distinguished from homophonous object-drop constructions, where the constituent missing is the object of the verb rather than the whole VP. Section 3 further demonstrates that VP ellipsis strands the verb, by



Yet another argument, due to Anita Mittwoch (p.c.), is based on the positioning of floating quantifiers in Hebrew to the right of the verb, unlike in English:

- (4) a. ha-yeladim niSkū Sneyhem et dina  
the children kissed both ACC Dina  
 The children both kissed Dina.

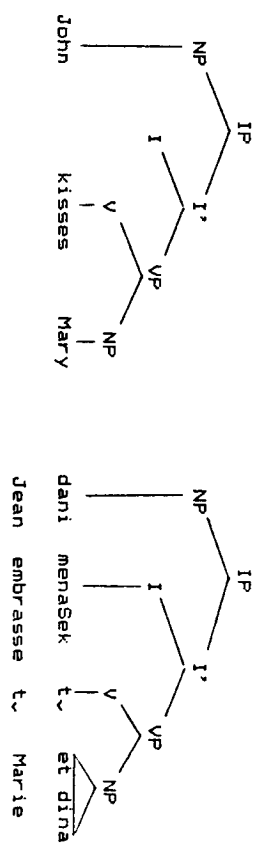
b. \* The children kissed both Dina

In English, on the other hand, only modal and auxiliary verbs can be placed in front of the subject and immediately to the left of adverbs and floated quantifiers:

- (5) a. May John kiss Mary?
- b. John may sometimes kiss Mary
- c. The children have both kissed Mary

The data in (2)-(5) can be accounted for if we assume that V remains in VP in English, but V-to-I movement takes place in French (cf. Pollock 1989) and in Hebrew (cf. Doron 1983). The difference in s-structures between English on the one hand, and French and Hebrew on the other are shown below:

(6) s-structures:



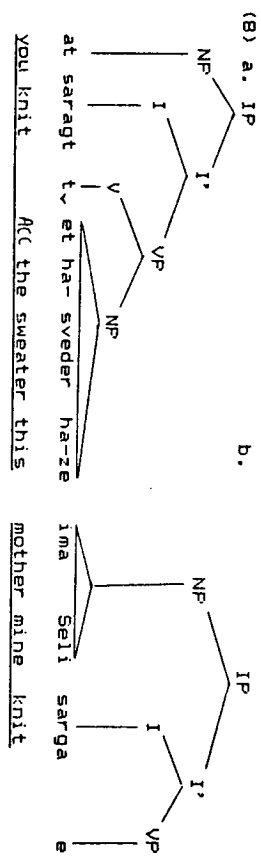
2. VP-ELLIPSIS AND NULL OBJECTS

The aim of this section is to distinguish null objects from null VPs in Hebrew. Consider the example in (7), a question-answer pair:

- (7) Q: at saragt et ha-sveder ha-ze  
you knit ACC the sweater this  
 Did you knit this sweater?

A: Io, ima Seli sarga  
no, mother mine knit  
 No, my mother did. (My mother knit it.)

All that seems to be missing in the answer is the object this sweater. Nonetheless, I will argue that the whole VP is missing, and the verb knit is "stranded" because it is part of I, not of VP. The tree in (8a) is the s-structure of the question in (7), and it shows the verb positioned in I. In (8b), which is the s-structure of the answer, the verb is under I again, and VP is null.



That VP is missing, despite the appearance of V, is corroborated by examples such as (9), where more than one object is missing:

- (9) Q: Salaxt et ha- yeladim le- beit-ha-sefer  
you-sent ACC the kids to school  
 Did you send the kids to school?
- A: Salaxti  
I-sent  
I did.

As was proposed in Williams 1977 (and similarly in Sag 1976), a null VP is interpreted by copying the interpretation of the antecedent VP. The semantic identity of the null VP to its antecedent extends to the verb in Hebrew, namely, the stranded verb of the null VP must be identical to the verb of the antecedent VP. This can be predicted by an LF treatment where the trace of a particular verb can only be bound by occurrences of the same verb, as shown in (10):

- (10)a. you [I: [I:knit]] [v:kn(x) t<sub>knit</sub> this sweater]  
 b. my mother [I: [I:knit]] [v:kn(x) t<sub>knit</sub> this sweater]

In (10a) the verb knit binds its trace t<sub>knit</sub>. This trace can only be bound by the verb knit, therefore this verb must reoccur in the ellipsis construction in (10b), which contains the copied VP. This ensures that the identity of the verbs is a requirement of VP-ellipsis even though the verb itself is not part of the missing VP.<sup>2</sup>

It follows from the identity requirement on the verb in VP-ellipsis, that in examples which involve non-identical verbs, such as (11), the construction cannot possibly involve VP-ellipsis but must be analyzed as an example of object drop:

- (11) Q: saragt et ha- sveder ha-ze  
you-knit ACC the sweater this  
 Did you knit this sweater?

A: I<sub>o</sub>, ima Seli kanta li  
 no, mother mine bought to-me

No, my mother bought it for me.

One way of distinguishing VP ellipsis from object drop is that only VP ellipsis gives rise to sloppy identity readings:

(12) Q: dina soreget et ha- svederim Se- hi IoveSet  
Dina knits ACC the sweaters that she wears  
 Does Dina knit the sweaters that she wears?

A1: I<sub>o</sub>, aval ima Sela soreget  
 no, but mother hers knits

No, but her mother does.

A2: I<sub>o</sub>, ima Sela kona (1a)  
 no, mother hers buys (to-her)

No, her mother buys them (for her).

The first answer, (12A1), is ambiguous just as its English translation indicates: Dina's mother knits Dina's sweaters under one reading, but she knits her own sweaters under the other reading. This construction therefore shows a characteristic of VP-ellipsis. The second answer,

(12A2), is not ambiguous: Dina's mother buys Dina's sweaters, not her own. This non-ambiguity is to be expected, since this answer, having a distinct verb from the question, does not involve VP-ellipsis but a missing object whose reference was already fixed in the question: the sweaters that Dina wears.

Another way of distinguishing VP ellipsis from object drop is based on locality effects. Following Ross 1967, we know that VP ellipsis is not sensitive to constraints on movement. On the other hand, the analysis given by Huang 1984 to object drop, based on the movement of a null operator, predicts that null object structures are constrained by island conditions, like other structures which result from movement. We will now see that the VP-ellipsis structures under discussion are indeed not sensitive to locality effects, whereas the null object constructions are. The following examples illustrate this difference between the two constructions with respects to islands such as relative clauses (in 13), noun-complement clauses (in 14), adjuncts (in 15) and coordinate structures (in 16). In each of these examples, the first answer, which involves VP-ellipsis, is grammatical despite being inside an island, whereas the second answer is ungrammatical since it involves a missing object within an island:

(13) CNPC – relative clause  
 Q: saragt et ha- sveder ha-ze  
you-knit ACC the sweater this  
 Did you knit this sweater?

A: lo, aval ha- baxura Se- sarğa natna li oto be- matana

no, but the girl who knit gave to-me it for a present

No, but the girl who did gave it to me for a present.

A: \* lo, aval ha- baxura Se- kanta natna li oto be- matana

no, but the girl who bought gave to-me it for a present

No, but the girl who bought \*(it) gave it to me for a present.

(14) CNPC - noun-complement constructions

Q: sarragt et ha- sveder ha-ze

you-knit ACC the sweater this

Did you knit this sweater?

A: lo, aval miSehu hefıc Smu'a Se- sarragtı

no, but someone spread a rumour that I-knit

No, but someone circulated the rumour that I did.

A: \* ken, aval miSehu hefıc Smu'a Se- kanıtı

yes, but someone spread a rumour that I-bought

Yes, but someone circulated the rumour that I had bought \*(it).

(15) Adjunct Condition:

Q: natat kvar et ha- harca'a ha-zot

you-gave already ACC the lecture this

Did you already give this lecture?

A: lo, pitru oti od lifney Se- natati

no, they-fired me before that I-gave

No, I was fired before I did.

A: \* lo, pitru oti od lifney Se- hexanti

no, they-fired me before that I-prepared

No, I was fired before I prepared \*(it).

(16) Coordinate Structure Condition:

Q: natat kvar et ha- harca'a ha-zot

you-gave already ACC the lecture this

Did you already give this lecture?

A: lo, avar hamon zman ve od lo natati

no, passed much time and yet no I-gave

No, a lot of time has passed and I didn't.

A: \* 10, avar hamon zman ve od 10 hexanti

no, pass much time and yet no I-prepared

No, a lot of time has passed and I didn't prepare \*(it).

To summarize, VP-ellipsis can be separated from object-drop despite their superficial similarity. In both constructions, the verb is present but an object is missing. Nevertheless they are distinct both in their syntax and their semantics. In the null-VP construction, there is strict identity of V, but there can be sloppy identity of the object. Moreover, there are no locality effects. In the null-object construction, no identity of V is required, but strict identity is required for the object. Moreover, we find locality effects. As is to be expected, some examples may have either of the two structures. To go back to our first example (7), repeated below as (17), the answer (17a) could actually have any one of the structures shown in (18):

(17) Q: at saragt et ha-sveder ha-ze

you knit ACC the sweater this

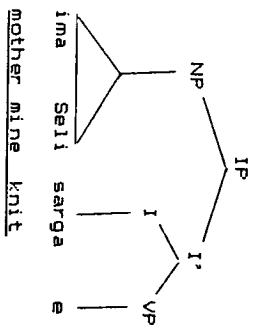
Did you knit this sweater?

A: 10, ima Seli sarga

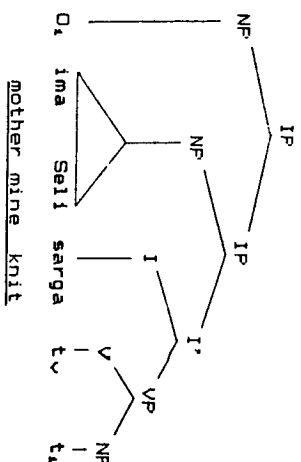
no, mother mine knit

No, my mother did. (My mother knit it.)

(18) a.



b.



My mother did.

(This sweater), my mother knit (it).

### 3. VP-ELLIPSIS AND STRIPPING

Before we continue, it is important to mention another construction, which could also be confused with VP-ellipsis, namely stripping. An example of stripping appears in (19):

(19) dina hexina et ha-harcar'a Sela, avar dani 10

Dina prepared ACC the lecture hers, but Dani not

Dina prepared her lecture, but not Dani.

The distinction between stripping and VP ellipsis was made in Hankamer 1971 and Hankamer and Sag 1976, and discussed recently in Chao 1990,

Reinhart (ms., in press) among others. I will use some of their criteria to distinguish the two in Hebrew. First, any constituent can be the remnant of stripping, not necessarily the subject, see for example (20):

(20) dina hexina et ha-harca'a, aval et ha-Si'ur Sela lo  
dina prepared ACC the lecture, but ACC the class hers not

Dina prepared the lecture, but not her class.

Second, in VP-ellipsis the antecedent can follow the remnant, but not in stripping:

(21) im ata lo torid, az ani orid et ha-aspa la-pax  
if you no take-out, then I take-out ACC the garbage to the can

If you don't, then I will take the garbage out to the can.

(22) \*im ata lo, az ani orid et ha-aspa la-pax  
if you not, then I take-out ACC the garbage to the can

\* If not you, then I will take the garbage out to the can.

Third, stripping is sensitive to locality effects, unlike VP-ellipsis. The following examples show that stripping is impossible in islands, unlike

the examples we gave in section 2 of VP-ellipsis occurring within those same islands:

(23) CNPC - relative clause

Q: hexant et ha-Si'ur  
You-prepared ACC the class

Did you prepare the class?

A: \*ken, ve ha-mora Se- lo biksa Se- alamed binkoma

Yes, and the teacher that not asked that I-teach in her place

Yes, and the teacher who \*(did) not asked me to replace her.

(24) Sentential Subject Condition:

Q: hexant et ha-Si'ur  
You-prepared ACC the class

Did you prepare the class?

A: \*ken, aval ze Se-dani lo hifti'a et ha-talmidim

Yes, but it that Dani not surprised ACC the students

Yes, but that Dani \*(did) not surprised the students



(25) Adjunct Condition:

Q: natat kvar et ha-harca'a ha-cot  
you-gave already ACC the lecture this

Did you already give this lecture?

A: \*ken, avai et dani pitru ki hu lo

yes but ACC Dani they-fired because he not

Yes, but dani was fired because he \*(did) not.

To summarize, this section has further substantiated the claim that VP-ellipsis in Hebrew strands the verb: it was demonstrated that ellipsis constructions which lack a verb altogether cannot be taken to be instances of VP-ellipsis, since they do not exhibit VP-ellipsis characteristics, but rather the properties of stripping.

#### 4. THE LICENSING OF VP-ELLIPSIS

Having established the distinction between VP ellipsis and object deletion in section 2, and between VP-ellipsis and stripping in section 3, we turn now to the properties of the syntax of any language, Hebrew in particular, which license VP-ellipsis.

It was shown in section 1 that Hebrew is similar to French in V-to-I movement. But so far we have left unexplained an important difference between them: Hebrew has VP-ellipsis, as we have argued above, but French does not allow VP-ellipsis, as has been known since Emonds 1978. Therefore, despite the similarity of Hebrew to French as far as verb placement at s-structure is concerned, there is another aspect of the syntax of the verb according to which Hebrew is similar to English and different from French. Both Hebrew and English allow VP ellipsis, whereas French doesn't. Examples are shown in (26):

(26) a. Qui a embrassé Marie?

\*Peut-être Jean a

b. Who has kissed Mary?  
 Maybe John has.

c. mi niSek et dina

who kissed ACC dina

Who has kissed Dina?

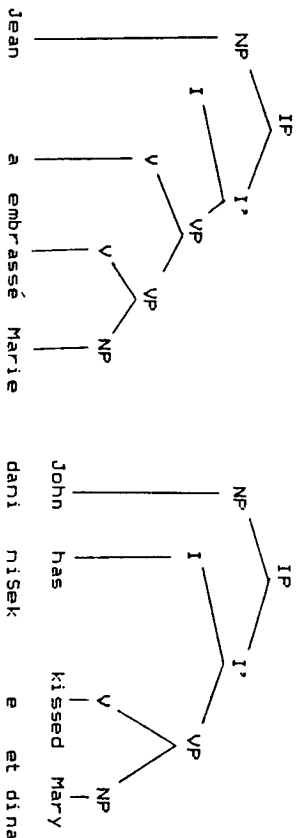
ulay dani niSek

maybe dani kissed

Maybe Dani did.

An account for this variation may be found in the following observations. It has been argued by Emonds 1978, based on his work and on Kayne 1975, that French does not distinguish among verbs between main verbs and auxiliaries. Both are generated as main verbs at d-structure. In other words, French does not allow base-generation of any V, including auxiliaries, at I. English on the other hand makes a categorial distinction between main verbs on the one hand, and modals and some other auxiliary verbs on the other. Main verbs are generated under V, and modals (and other auxiliaries) are generated under I. I will claim that Hebrew is like French in not distinguishing between main verbs and auxiliaries. But whereas French treats them all as main verbs, in generating them in VP, Hebrew treats them all as auxiliaries, in allowing all of them to be base-generated in I. I therefore argue for a similarity between Hebrew verbs and English auxiliaries at d-structure, as shown in (27):\*

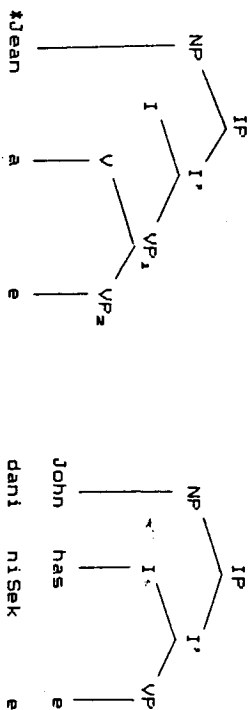
(27) d-structures:



These parametric variations correlate with the difference of availability of VP-ellipsis in the three languages. French, which does not allow base generation of verbs at I does not allow null VPs either. Hebrew, which allows all verbs to be base-generated at I, allows VP-ellipsis across the board. English, which allows base-generation in I of auxiliaries and modals only, allows VP-ellipsis only with these verbs. The d-structures of VP-ellipsis in the different languages are shown below:

(28) d-structures with VP-ellipsis:

- a. French
- b. English and Hebrew



The above discussion correlating the status of I with the availability of VP-ellipsis can be summarized in the following empirical generalization:

(29) Empirical generalization:

VP-ellipsis is licensed if and only if a lexical item is base-generated in I.

Developing ideas proposed in Zagana 1982 and 1988, this empirical generalization can be reduced to the ECP. Zagana proposes that a null VP must be properly governed. Since null VPs do not in general possess intrasentential antecedents, proper government can only be satisfied by theta-government. According to the assumptions of Chomsky 1986, I theta-governs VP, since I is a zero-level category which is a sister of VP, and I theta-marks VP. The theta-marking of VP by I will be taken up again in section 6.

Under these assumptions, (29) follows from the ECP. For assume a lexical item is base-generated in I, as are English auxiliaries and Hebrew verbs, cf. (28b). Then the ECP is satisfied since I theta-governs the empty VP, and no problems arise from the fact that I remains unbound, since I is an independent lexical item. To derive the other direction of (29), assume that no lexical item is base-generated in I, as is the case in (28a). The auxiliary  $\bar{a}$  in V does not theta-govern the empty VP<sub>2</sub>, since, as is argued by Zagana 1988, theta-marking is a property of I rather than of the auxiliaries themselves. I in (28a), on the other hand, theta marks VP<sub>1</sub>, but whether or not the auxiliary  $\bar{a}$  is moved to I at s-structure, I fails to theta-mark the empty VP<sub>2</sub>, either because VP<sub>1</sub> is a barrier, in the system of Chomsky 1986, or because of minimality considerations (cf. Rizzi 1990).

## 5. THE BASE-GENERATION OF V IN I

In the previous section it was shown to follow from theoretical considerations that the ECP requirements for empty VPs can only be met by a lexical item base-generated in I. It follows that in Hebrew, verbs must be allowed to be base-generated in I. This section will adduce language specific evidence from Hebrew to strengthen this conclusion.

The claim that Hebrew verbs can be base-generated under I, not only moved there later in the derivation, is corroborated by the fact that they can appear in I without clitics which are normally attached to them. For example, pronominal dative objects of the verb display clitic characteristics, as argued by Borer and Grodzinsky 1986, among others. An example with the dative clitic *lo* 'to-him' is shown in (30):

(30) *Gi Salaxt lo et ha-sefer*

*you-sent to-him ACC the book*

Did you send him the book?

A: *lo, miSehu axer Salax lo*

*no, somebody else sent to-him*

No, somebody else sent it to him.

The answer (30A) involves object drop of the direct object. The indirect object *lo* 'to-him' appears cliticized on the verb. But in (31) another option is shown, with both objects missing in the answer. (31A) is an example of VP-ellipsis:

(31)Q: Salaxt lo et ha-sefer

you-sent to-him ACC the book

Did you send him the book?

A: lo, miSehu axer Salax

no, somebody else sent

No, somebody else did.

In the answer (31A) to the question (31Q), the clitic *lo* 'to-him' is missing from the verb *Salax* 'sent'. If the verb had not been base-generated in I, but, say, moved there prior to some possible rule of VP-deletion, we would have expected it to move together with the clitic *lo*, as *\*dax lo (30A)*.<sup>2</sup> The answer (31A) should have therefore been ungrammatical, but it is fully grammatical. The fact that the verb can be stranded in I without the attached clitic indicates that it can be base-generated in I.<sup>4</sup>

Another indication of the base-generation of verbs in I in Hebrew are constructions where VP appears in topic position. These constructions were discussed in Ziv 1989, from whom (32) is taken:

(32)a. *liStot bira, hi lo Sota*

to-drink beer, she not drinks

Drink beer she doesn't.

b. *liStot bira, hi tiSte rak ba-pab*

to-drink beer, she will-drink only at the pub

Drink beer she will only at the pub.

These constructions are similar to VP-fronting in English, but where English has an auxiliary in the main clause, Hebrew repeats the verb which already appears in the topic VP. The repetition of the tensed verb is obligatory:<sup>5</sup>

(33) \**liStot bira, hi lo*

to-drink beer, she not

I argue that the topicalized constituent is indeed a VP. Negation, which is external to VP, cannot be fronted in this construction:

(34) \**lo liStot bira, hi (lo) Sota*

not to-drink beer, she (not) drinks

Sentential adverbs, which can normally intervene between the verb and its objects because the verb is raised to I, cannot appear in a topicalized VP:

(35)a. *dani maxazir lif'amim sfarim ba-zman*

Dani returns sometimes books on time

Dani sometimes returns books on time.

b. \**lehaxazir lif'amim sfarim, hu maxazir ba-zman*

to-return sometimes books, he returns on time

(36) a dani poter be-derek klal et ha-be'ayot Selo levad

Dani solves usually ACC the problems his on-his-own

Dani usually solves his problems on his own.

b. \* liffor be-derek klal et ha-be'ayot Selo, hu poter levad

to-solve usually ACC the problems his, he solves on-his-own

The above data show that negation and sentential adverbs cannot appear as part of the topicalized constituent in the construction under discussion, which indicates that the topicalized constituent is indeed a VP. The verb in this construction appears twice, both in the fronted VP and in the matrix sentence. In these examples, it is impossible to claim that the verb moves to I prior to VP fronting, since the verb appears both in the fronted VP and in I of the main clause. This argument is the strongest that can be brought against V movement and in favour of base generation of V in I, at least in certain constructions.

It has been argued by Zagona 1982 and by Lobbeck 1986 that in English, VP-preposing involves base-generation of VP in topic position, together with base-generation of an empty VP sentence-internally. Such a solution would account for the Hebrew construction as well. The only difference is that whereas it is an auxiliary verb which is found in I in English, a main verb is in Hebrew. The parallelism with English can be seen in (37):

(37) a. [vɪn lɪstot bɪrɑjʃɪ [ɪ Jo Sotɑ] [vɪn eʃ]]

to-drink beer she not drinks

b. [vɪn drɪnk biɪr] [ʃe [ɪ doɛsn't] [vɪn eʃ]]

To summarize, this section has provided arguments internal to the syntax of Hebrew which indicate that V may be base-generated in I.

#### 6. THE THETA ROLE OF PREDICATE

This section supplies motivation for the assumption that I theta-marks VP, an assumption which was utilized in section 4 to reduce to the ECP the conditions that license empty VPs. This theta-marking manifests itself most saliently with predicates which are not verbal but nominal.

Referential NPs cannot function as predicates unless they are theta-marked by I with the role of predicate. Clear examples of the theta-marking properties of I, which are instrumental in licensing referential NPs in the position of a predicate, were first given in Doron 1985 and 1986.

These examples involve Hebrew predicate nominal sentences in the present tense:

(38) a. dani hu mar kohen

Dani he Mr. Cohen.

Dani is Mr. Cohen.

b. \* dani mar kohen

Dani Mr. Cohen

(38b) is ungrammatical since a referential NP such as *Mr. Cohen* must be assigned the thematic role of predicate by I (which contains the pronominal copula *he*) for it to function as a predicate. In contrast, indefinite nominals which can denote properties may function as predicates without being assigned this role by I. In general, I is optional in present tense predicate nominal sentences:

(39)a. *dani hu more tov*

*Dani he teacher good*

*Dani is a good teacher.*

b. *dami more tov*

*Dani teacher good*

*Dani is a good teacher.*

The same condition holds of embedded clauses of some verbs in English, as noted in Doron 1983. I is obligatory in such sentences if they contain a predicate nominal which can only be interpreted as referential (as in (40a)). If the predicate may independently denote a property, I is optional, namely the embedded clause may be a "small clause", as in (40b):

(40) a. I consider the best teacher \*(to be) John

b. I consider John (to be) a good teacher

I is therefore instrumental in assigning the theta-role of predicate. As was argued in section 4, it is this property of I which allows it to license a null predicate. It is therefore possible to derive the following

prediction: In sentences such as (39) where I is normally optional, the predicate may be empty only if I is realized. This prediction is correct, as shown in (41-42). The connection between null predicates and theta-government is therefore corroborated. (41) shows that in sentences with I, namely where the pronominal copula *hu* 'he' occurs, it is possible to prepose the predicate:

(41) a. *more tov, dani hu lo*

*teacher good, Dani he not*

*A good teacher, Dani is not.*

b. *more tov, hu lo*

*teacher good, he not*

*A good teacher, he is not.*

But in sentences where I is missing, it is impossible to prepose the predicate:

(42) \* *more tov, dani lo*

*teacher good, Dani not*

In addition, the head N of a predicated nominal, unlike the head V of a verbal predicate, cannot be stranded when the predicate is topicalized:

(43) \* *more tov, dani (hu) lo more*

*teacher good, Dani (he) not teacher*

The reason is that, as argued in Doron 1983 and 1986, predicate nominals are not inflected and therefore do not move to I, neither are they base-generated in I.

#### 7. ANTECEDENT CONTAINED DELETION

In this last section, the present analysis of VP-ellipsis as stranding the verb will be put to use in solving a long-standing puzzle in the syntax of Hebrew. This puzzle was noted in Cole 1976 and left unexplained since. It is concerned with the structure of relative clauses in Hebrew. As is well documented (most recently Cole 1976, Doron 1982, Borer 1984, Gliner 1989 among others), Hebrew uses resumptive pronouns in the construction of relative clauses. Resumptive pronouns are strictly obligatory when the position relativized on is a PP. Example (44) shows that a PP resumptive pronoun may appear in-situ, (44a), or fronted, (44b), but that it cannot be omitted - neither by stranding the preposition, (44c), nor by omitting both the preposition and the pronoun, (44d):

- (44) a. ha-kise Se- yaSavti alav  
       the chair that I-sat on-it  
       the chair on which I sat
- b. ha-kise (Se-) alav yaSavti  
       the chair (that)on-it I-sat  
       the chair on which I sat

- c. \* ha-kise Se- yaSavti al  
       the chair that I-sat on

- d. \* ha-kise Se- yaSavti  
       the chair that I-sat

Cole noticed examples such as (45), (adapted from his (52a and c), where the resumptive <sup>pronoun</sup> may be missing only when the matrix verb is identical to the embedded verb:

- (45) a. yaSavta al kol kise Se- ben-gurion yaSav  
       you-sat on every chair that Ben-Gurion sat

- b. \* ra'ita kol kise Se- ben-gurion yaSav  
       you-saw every chair that Ben-Gurion sat

(45a) is puzzling, since resumptive pronouns are obligatory whenever relativization is on an oblique position. (45a) should therefore be as ungrammatical as (45b), as they are both missing the resumptive pronoun.

The present analysis of VP-ellipsis predicts the form (45a) by analysing it as a case of antecedent contained deletion. The translation of (45a) should therefore be as indicated in (46):

- (46) You sat on every chair that Ben-Gurion did.

The reason the resumptive pronoun is missing in (45a) is that the whole VP

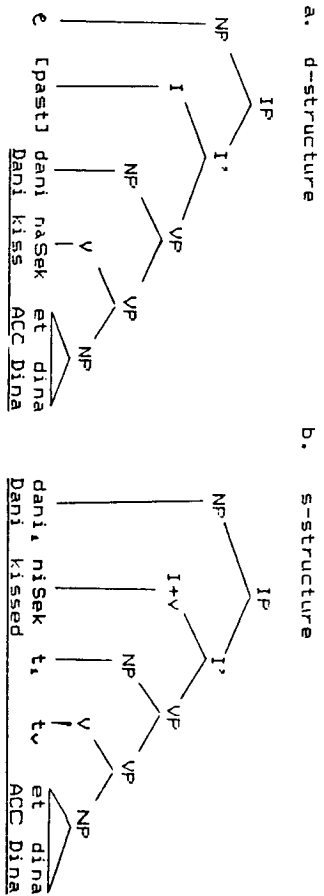
is null in these constructions:

- (47) [ɣaʁaʁaʁa]VP tv al kol kise Se- ben-gurion [ɣaʁaʁa]VP  
 [ɣaʁaʁa]VP tv on every chair that Ben-Gurion [ɣaʁa] VP  
 You sat on every chair that Ben-Gurion did.

To conclude, the last section has adduced independent support to the hypothesis explored in this paper, that it is possible for a sentence with a null VP to contain a verb nonetheless.

Notes

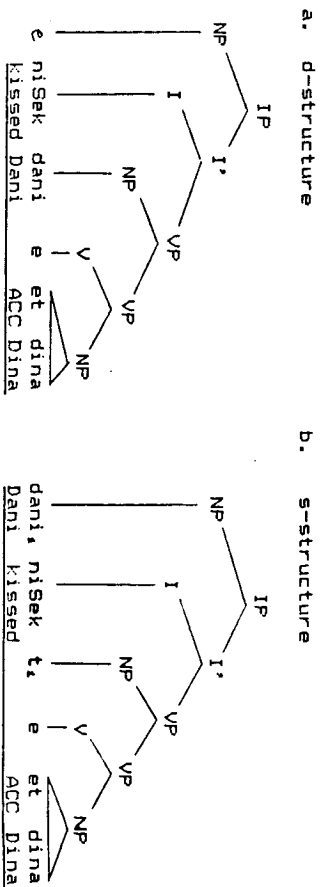
1. The structures proposed in Doron 1983 are actually different in that the subject is base-generated to the right of I, similarly to more recent ideas on VP-internal subjects:



VP-internal subjects are instrumental in explaining many aspects of word order in Hebrew, but for the purpose of keeping the structures in the text as simple as possible, I will ignore them in this article.

2. In a framework like that of Partee and Bach 1984, one would need to relax the constraint against free variables (in this case, a relation variable) in the copied VP. A similar point is made by Lappin 1984.

3. Taking into account VP-internal subjects that we ignore in the text, the claim that verbs in Hebrew are base-generated in I boils down to claiming that Hebrew is basically VSO:





4. Similar evidence can be adduced in Portuguese, the only Romance language which allows VP-ellipsis. In Rouvret 1989, the availability of VP-deletion in European Portuguese is correlated with its special characteristics of cliticization to the verb. The following example (Rouvret's (49a)) shows that stranded V of VP deletion appears without clitics:

A Maria leu esse livro e o Manuel leu tambem  
read this book and read too

Maria has read this book, and Manuel has read it too.

5. These constructions are distinct from predicate cleft constructions discussed in Koopman 1984. In predicate cleft constructions, which are found in Hebrew too, only the verb is focused:

(i) liStot, hi Sota rak bira  
to-drink, she drinks only beer

As for drinking, she drinks only beer.

Predicate cleft constructions in Hebrew are discussed in Ornan 1969 and Goldenberg 1971. It is beyond the scope of the present paper to analyze these construction in detail, but it may be possible to subsume them under the present analysis. VP-fronting discussed in the text exhibits a null VP in the main clause, whereas it may be that predicate cleft constructions such as (i) exhibit a null VP in the fronted constituent, again "stranding" the verb, but this time in topic position.

6. The discussion of VP-ellipsis in the text was limited to question-answer pairs and to VP-topicalization. Intrasentential VP-ellipsis is also attested in Hebrew, but is more difficult to pinpoint, since there is no requirement for parallel structure in an example such as (i) for example:

(i) dina me'asenet sigarim aval rina lo me'asenet  
Dina smokes cigars but Rina not smokes

Dina smokes cigars but Rina doesn't smoke.

or: Dina smokes cigars but Rina doesn't.

There is a strong tendency to interpret the sentence in (i) according to the first reading. Still, where the verb doesn't have an intransitive reading, the ellipsis interpretation is stronger:

(ii) rina masi'a et ha-yeladim Seia le-beit-ha-sefar,  
Rina drives ACC the kids hers to school.

aval dina lo masi'a  
but Dina not drives

Rina drives her kids to school, but Dina doesn't.

Sentence (ii) has the sloppy identity reading characteristic of VP-ellipsis.

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