

# THE PRONOMINAL "COPULA" AS AGREEMENT CLITIC

---

EDIT DORON

*Department of English  
The Hebrew University  
Jerusalem, Israel*

## 1. INTRODUCTION

It has long been known that present-tense nominal sentences<sup>1</sup> in Hebrew and related languages such as Arabic (cf. Eid 1983) lack a copula but contain an optional nominative pronoun in addition to the subject. Sentence (1) illustrates this phenomenon:

- (1) *dani hu ha-more*  
Dani he the teacher  
'Dani is the teacher.'

After presenting some data in Section 2, I develop an analysis for nominal sentences in Sections 3 and 4. I argue that (1) does not contain a copula; the pronoun, which I will call *Pron*, is a clitic which is the phonological realization of "unattached" agreement features that have absorbed Case. I show that the properties of this clitic fall out from the principles of the theory of Government and Binding. In particular, I follow Chomsky (1982b), who adapts suggestions of Aoun (1981) in treating as chains clitics and the NP positions associated (co-

<sup>1</sup> The term *nominal sentence* is used in traditional grammars of Hebrew to refer to sentences with predicates that do not include an overt verb form.

indexed) with them, despite the fact that clitics occupy A' positions. In Section 5 I discuss nominal sentences with referring NPs in predicate position, and predict that Pron is obligatory in such sentences. The interaction of Pron with pronominal subjects is discussed in Section 6.

Some alternative proposals are discussed and rejected in the last part of this article. In Section 7, I demonstrate that the pronoun in (1) is not the present tense (suppletive) form of a verbal copula. In Section 8 I show that (1) is not a case of left dislocation.

## 2. SOME DATA

The predicate of nominal sentences in Hebrew consists of some projection of N, A, or P. In (2a–c) the predicate is N', A', and P' respectively. In (3) it is N".

- (2) a. *dani more ba-universita*  
 Dani teacher in-the university  
 'Dani is a teacher at the university.'  
 b. *dani nexmad ad meod*  
 Dani nice very  
 'Dani is very nice.'  
 c. *dani al ha-gag*  
 Dani on the roof  
 'Dani is on the roof.'
- (3) a. *dani ha-more le-matematika*  
 Dani the teacher to math  
 'Dani is the math teacher.'

In past or future sentences corresponding to (2) and (3), the verbal root *h.y.v.* 'be' shows up obligatorily.<sup>2</sup>

- (4) a. *dani yihye more ba-universita*  
 Dani will-be teacher in-the university  
 'Dani will be a teacher at the university.'  
 b. *dani haya nexmad ad meod*  
 Dani was nice very  
 'Dani was very nice.'  
 c. *dani yihye al ha-gag*  
 Dani will-be on the roof  
 'Dani will be on the roof.'

<sup>2</sup> The present tense conjugation of *h.y.v.* does not exist in Modern Hebrew.

## The Pronominal "Copula" as Agreement Clitic

- (5) *dani haya ha-more le-matematika*  
 Dani was the teacher to math  
 'Dani was the math teacher.'

As was mentioned above, an "extra" pronoun, which I call *Pron*, may show up in present tense nominal sentences.

- (6) a. *dani hu more ba-universita*  
 Dani he teacher in-the university  
 'Dani is a teacher at the university.'  
 b. *dani hu nexmad ad meod*  
 Dani he nice very  
 'Dani is very nice.'  
 c. *dani hu al ha-gag*  
 Dani he on the roof  
 'Dani is on the roof.'
- (7) *dani hu ha-more le-matematika*  
 Dani he the teacher to math  
 'Dani is the math teacher.'

The inventory of such Prons consists of all nominative third-person (noninterrogative) personal pronouns: *hu* 'he', *hi* 'she', *hem* 'they' (masc.), *hen* 'they' (fem.).<sup>3</sup>

- (8) a. *yalda bat 3 (hi) ha-saxkanit ha-rašit ba-seret*  
 girl aged 3 (she) the actress the main in-the movie  
 'A girl of 3 is the main actress in the movie.'  
 b. *klavim (hem) tamid neemanim*  
 dogs[masc] (they)[masc] always faithful  
 'Dogs are always faithful.'  
 c. *ha-kosot (hen) ba-aron*  
 the glasses[fem] (they)[fem] in-the cabinet  
 'The glasses are in the cabinet.'

Prons commonly agree in number and gender with the subject, as seen in (8). But there are cases where they agree with the predicate rather than with the subject. Rubinstein (1968, p. 137) lists such examples.

<sup>3</sup> There are examples in colloquial Hebrew that exhibit impersonal pronouns:

- (i) *dani ze xaver tov šeli*  
 Dani it friend good mine  
 'Dani is a good friend of mine.'

- (9) a. *rešita šel hitpatxut zo hu xazon yešayahu*  
beginning[fem] of development this he vision[masc] Isaiah  
'The beginning of this development is Isaiah's vision.'
- b. *mekoro šel sod ha-xayim hi ha-šemeš*  
source[masc] of secret the life she the sun[fem]  
'The source of the secret of life is the sun.'

An obvious hypothesis would be the claim that Pron, when it appears in sentences (6) and (7), has the same syntactic role as *h.y.y.* in sentences (4) and (5). Or, in a slightly stronger form: Pron is nothing other than the suppletive form of *h.y.y.* in present-tense sentences. But the hypothesis that Pron is the suppletive form of *h.y.y.* is easy to refute, see Section 7. For now it suffices to note that on distributional grounds alone, *h.y.y.* may appear in construction with verbal present participles, whereas Pron cannot<sup>4</sup>:

- (10) a. *dani haya yošev ba-kafeteria leitim krovot*  
Dani was sitting in-the cafeteria often  
'Dani often used to sit in the cafeteria.'
- b. *\*dani hu yošev ba-kafeteria leitim krovot*  
Dani he sitting in-the cafeteria often

### 3. THE STRUCTURE OF NOMINAL SENTENCES

Rather than postulate an empty copula, I will assign the simplest possible structure to nominal sentences such as (2) and (3). In other words, I will take the structure of (2) and (3) to be analogous to that of such sentences as (11), where the predicate is a VP.

- (11) *dani yošev ba-kafeteria leitim krovot*  
Dani sits in-the cafeteria often  
'Dani often sits in the cafeteria.'

For sentences like (11) I have motivated in Doron (1983) the structure [INFL NP VP]. On par with this structure, I will assume that the structure for (2a) and (3) is

<sup>4</sup> (10b) is grammatical as left dislocation, that is, with an intonation break between *dani* and *hu*. But in that case it is parallel not to (10a) but to the following, which is also a left-dislocated sentence:

- (i) *dani hu haya yošev ba-kafeteria leitim krovot*  
Dani he was sitting in-the cafeteria often  
'Dani, he often used to sit in the cafeteria.'

For a more detailed discussion of left dislocation constructions see Section 8.

[INFL NP NP], for (2b) [INFL NP AP], and for (2c) [INFL NP PP]. Those four structures generalize as [INFL NP XP], where X is V, N, A, or P.<sup>5</sup>

I have argued (Doron, 1983) that verbs may adjoin to INFL, as in the following example.<sup>6</sup>

- (12) *?yošev dani ba-kafeteria leitim krovot*  
sits Dani in-the cafeteria often  
'Dani often sits in the cafeteria.'

Ns and As can also occur in front of the subject, that is, they behave like V in this respect:

- (13) a. *more hu dani ba-universita*  
teacher he Dani in-the university  
'Dani is a teacher at the university.'
- b. *nexmad hu dani ad meod*  
nice he dani very  
'Dani is very nice.'

Further support for considering N and A on a par with V as heads of the predicate is that none of them can be fronted in case the negation particle *eyn* appears in INFL:

- (14) a. *\*yošev eyn dani ba-kafeteria*  
sitting NEG Dani in-the cafeteria  
b. *\*eyn yošev dani ba-kafeteria*  
NEG sitting Dani in-the cafeteria
- (15) a. *\*more eyn (hu) dani ba-universita*  
teacher NEG (he) Dani in-the university  
b. *\*eyn more (hu) dani ba-universita*  
NEG teacher (he) Dani in-the university
- (16) a. *\*nexmad eyn (hu) dani ad meod*  
nice NEG (he) Dani very

<sup>5</sup> Notice that the above creates a problem with the structural definitions of the grammatical functions. For example, Chomsky (1965, p. 69) defines *subject* 'as the relation holding between the NP of a sentence . . . and the whole sentence.' This is not an adequate definition in case there are two NPs of a sentence, as in the case X = N above. We will use an ad hoc definition to ensure that the leftmost NP is the subject, and the category to its right is the predicate.

<sup>6</sup> (12) can be improved by fronting some other constituent as well, for example the adverb (cf. Borer 1984b):

- (i) *leitim krovot yošev dani ba-kafeteria*  
often sits Dani in-the cafeteria  
'Dani often sits in the cafeteria.'

- b. \**eyn nexmad (hu) dani ad meod*  
NEG nice (he) Dani very

On the other hand, constituents that are not heads of the predicate can be fronted even in sentences containing *eyn*:

- (17) *ba-kafeteria eyn dani yošev*  
in-the cafeteria NEG Dani sitting  
'Dani doesn't sit at the cafeteria.'

This supports the claim that Ns and As are syntactically heads of the predicate rather than complements of some empty verb.

#### 4. THE NATURE OF PRON

##### 4.1. Unattached AGR Features

We are ready to explore the possible derivations for nominal sentences. Consider for example the D-structure (18).

- (18)  $[_{INFL} [_{AGR} [3rd][sing][masc]]] \textit{dani more}$

Assume Move- $\alpha$  applies vacuously, so that the S-structure (19) is the same as the D-structure, modulo the assignment of Case and the application of free indexing<sup>7</sup>:

- (19)  $[_{INFL} [_{AGR} [3rd][sing][masc]]] \textit{dani}_i [_{Nom}] \textit{more}$

I assume that an S-structure such as (19) is filtered out by a surface filter, since its INFL node contains features that at no stage of the derivation are realized as part of any morpheme. But the surface string (20), which would seem to have (19) as its S-structure, is a grammatical sentence, a fact that poses a problem for the proposed filter:

- (20) *dani more*  
Dani teacher  
'Dani is a teacher.'

(20) must therefore have a grammatical S-structure distinct from (19), in which INFL is not specified for AGR features. Since INFL of present-tense sentences contains no specifications for [tense] either (cf. Doron 1983), we conclude

<sup>7</sup> *more* is not an argument; it occupies the predicate position, which is an A'-position, therefore it is not indexed or Case marked. As will become clear below, A'-positions are indexed in some cases, iff they function as arguments which are part of a chain. For a discussion of referring predicates, which are arguments, see Section 5.1.

that the S-structure of (20) has an empty INFL, or alternatively, no INFL at all:

- (21)  $[_{INFL} e] \textit{dani}_i [_{Nom}] \textit{more}$

Going back to the ungrammatical S-structure (19), we ask whether it may be rescued. Imagine that AGR could be assigned the Nom Case feature that is normally assigned to the subject:

- (22)  $[_{INFL} [_{AGR} [3rd][sing][masc]]] [_{Nom}] \textit{dani}_i \textit{more}$

INFL in (22), that is, the feature bundle  $\{[person][number][gender][Case]\}$ , does have a possible phonological realization—the element which we have been calling Pron. Pron is a *clitic* in that it is not an independent NP node, but part of INFL.

The surface string corresponding to (22) is (23), where the phonological realization of the clitic in INFL is the Pron *hu*:

- (23) \**hu dani more*  
he Dani teacher

However, (23) is still ungrammatical. This is due to the fact that the S-structure (22) is filtered out by the Case Filter: the subject *dani* has not been assigned Case.

It seems that (22) could be salvaged if Move- $\alpha$  removes the subject to an A'-position, where the Case Filter does not apply to it:

- (24)  $\textit{dani}_i [_{INFL} [_{AGR} [3rd][sing][masc]]] [_{Nom}] e_i \textit{more}$

But (24) would still be filtered out by the Case Filter, since the variable  $e_i$ , the trace of topicalization, is not assigned Case.

In spite of the fact that (24) would be ruled out by the Case Filter, we do have the following grammatical surface string corresponding to it:

- (25) *dani hu more*  
Dani he teacher  
'Dani is a teacher.'

We are therefore encouraged to look for a way in which (24) could satisfy the Case Filter.

Let us assume that free indexing applies to AGR as well as to NPs. If AGR were assigned the index  $i$ , the S-structure (24) would look as follows:

- (26)  $\textit{dani}_i [_{INFL} [_{AGR} [3rd][sing][masc]]] [_{Nom}] e_i \textit{more}$

(AGR <sub>$i$</sub> ,  $e_i$ ) is not a chain in the usual sense, since AGR is in A'-position. But it does fall under the generalized notion of *chain* advocated in Aoun (1981) and

Chomsky (1982b), that includes *clitic chains* of the form (clitic;  $e_i$ ).<sup>8</sup> Moreover, (AGR<sub>i</sub>,  $e_i$ ) is Case marked, since AGR<sub>i</sub> occupies a position assigned Nom Case. (26) therefore satisfies the Case Filter, and is a well-formed S-structure of (25). Aoun and Chomsky adduce arguments to the effect that in a chain (clitic<sub>i</sub>,  $e_i$ ), the argument is the clitic (cf. Rizzi, this volume). Following them, we suggest that in the chain (AGR<sub>i</sub>,  $e_i$ ) of (26), the argument is AGR<sub>i</sub>.

Looking back at (22), which violates the Case Filter, we ask whether it could be salvaged by co-indexing AGR and the subject, as in (27).

(27) [<sub>NFL</sub> [<sub>AGR</sub>[3rd][sing][masc]]<sub>i</sub>[Nom] ] *dani<sub>i</sub> more*

The chain (AGR<sub>i</sub>, *dani<sub>i</sub>*) satisfies the Case Filter but (23), its surface string, is ungrammatical. If AGR<sub>i</sub> is taken to be an argument, we can account for this ungrammaticality. (AGR<sub>i</sub>, *dani<sub>i</sub>*) violates the  $\theta$ -Criterion, since both AGR<sub>i</sub> and *dani<sub>i</sub>* are arguments.<sup>9</sup>

#### 4.2. Clitic Chains in Hebrew

Clitic chains in Hebrew are attested independently of (26). Objects, both direct and indirect, cliticize on the verb when they are pronominal. Consider (28), where the relative order of the objects is unmarked:

(28) *dani natan le-rina et ha-sefer*  
 Dani gave to Rina ACC the book  
 'Dani gave Rina the book.'

In case the direct object is the pronoun *oto*, it cliticizes on the verb, as is evidenced by the contrast between (29a) and (29b). Thus, I assume that the S-structure of (29a) is as in (29c).<sup>10</sup>

(29) a. *dani natan ot + o le-rina*  
 Dani gave ACC it to Rina  
 'Dani gave it to Rina.'

<sup>8</sup> An example of a clitic chain is the French (*le<sub>i</sub>, e<sub>i</sub>*), as in (ii). According to Chomsky and Aoun, this chain has the Case and the  $\theta$ -role assigned by the verb *connaitre* to its direct object. This chain contains one argument—the clitic *le<sub>i</sub>*, whereas *e<sub>i</sub>* is a nonargument.

(i) *Jean le connait.*

(ii) *Jean INFL [<sub>VP</sub>(<sub>VP</sub>(*le<sub>i</sub>* + *connait*)) [<sub>NP</sub> $e<sub>i</sub>$ ]]*

<sup>9</sup> For a different analysis of a similar phenomenon, complex inversion in French, see Kayne (1983, Chapter 10). Kayne's analysis transposed to (26) would treat (*dani<sub>i</sub>, AGR<sub>i</sub>, e<sub>i</sub>*) as a chain. The argument in this chain is *dani<sub>i</sub>*, and therefore AGR<sub>i</sub> must be nonargument. Kayne's analysis is less natural for Hebrew, where *dani* and AGR do not necessarily share grammatical features; see (9) above. In our analysis, *dani<sub>i</sub>* is not part of the chain (AGR<sub>i</sub>,  $e_i$ ).

<sup>10</sup> (29b) is possible with heavy stress on *oto*. In that case I assume that the direct object is not a clitic, but an independent pronoun.

#### The Pronominal "Copula" as Agreement Clitic

- b. \**dani natan le-rina ot + o*  
 Dani gave to Rina ACC it  
 c. *dani [<sub>VP</sub>(<sub>VP</sub>(*ot + o<sub>i</sub>*) *le-rina e<sub>i</sub>*)*  
 Dani gave ACC it to Rina

Note that when V is fronted, *oto* must be fronted as well, confirming the view that it is a clitic:

- (30) a. *matay natan ot + o dani le-rina*  
 when gave ACC it Dani to Rina  
 'When did Dani give it to Rina?'  
 b. \**matay natan dani le-rina ot + o*  
 when gave Dani to Rina ACC it  
 c. \**matay natan dani ot + o le-rina*  
 when gave Dani ACC it to Rina

Indirect objects can be clitics as well. The S-structure of (31a) is assumed to be as in (31c).

- (31) a. *matay natan l + a dani et ha-sefer*  
 when gave to-her Dani ACC the book  
 'When did Dani give her the book?'  
 b. \**matay natan dani l + a et ha-sefer*  
 when gave Dani to-her ACC the book  
 c. *matay [<sub>VP</sub>(<sub>VP</sub>(*l + a<sub>i</sub>*) *dani e<sub>i</sub> et ha-sefer*)*  
 when gave to-her Dani ACC the book

Clitic chains are also attested in Hebrew in connection with the construct-state. The construct-state is roughly an NP of the form [<sub>NP</sub>N NP], where the second NP is a complement that denotes the possessor of the head N. As shown by Borer (1983), when the complement NP is a pronoun, it shows up as a clitic on the head N of the construct-state, forming a chain with an empty complement:

- (32) *beit + a<sub>i</sub> [<sub>NP</sub> $e<sub>i</sub>$ ]*  
 house her  
 'her house'

#### 4.3. Pron as Clitic

We are claiming that Pron is a *clitic*, that is, the phonological realization of a feature bundle {*person*||*number*||*gender*||*Case*} which is not an independent NP node. Pron has some of the properties that Zwicky (1977) lists as characterizing clitics.

First, Pron does not carry contrastive stress, unlike *h.y.y.*:

- (33) a. *dani HAYA more*  
 'Dani WAS a teacher.'  
 b. \**dani HU more*  
 'Dani IS a teacher.'

Pron cannot occur in isolation, not even as an answer to a question:

- (34) Q. *dani hu more o haya more*  
 Dani he teacher or was teacher  
 'Is Dani a teacher or was he a teacher?'  
 A. *haya*  
 A. \**hu*

Pron shows up as a phonological clitic on the fronted subject, albeit for a very limited number of subject NPs. The surface string corresponding to (35a) is (35b), where (*hu*) is unstressed.

- (35) a.  $ze_i$  [<sub>INFL</sub> *hu\_i*]  $e_j$  *axi*]   
 this he my brother  
 'This is my brother.'  
 b. *ze(h)u axi*

This phonological cliticization never takes place in a case like (36a), where *hu* is not a clitic but the predicate. The surface string corresponding to (36a) is (36b), where *hu* is never unstressed.

- (36) a. [<sub>INFL</sub>  $e$ ] [<sub>NP</sub>  $ze$ ] [<sub>NP</sub> *hu*]   
 this he  
 'This is him.'  
 b. *ze hu*

## 5. REFERRING PREDICATES

### 5.1. Pron as a $\theta$ -Role Assigner

The analysis of nominal sentences developed in the preceding sections deals with optional occurrences of Pron; I now discuss nominal sentences where Pron is obligatory. Obligatoriness of Pron in a sentence correlates with the sentence having as predicate a referring NP.<sup>11</sup>

Predicate position is not an A-position, that is, no  $\theta$ -role is assigned to it. VPs,

PPs, APs, and NPs that appear in predicate position in D-structure are not arguments, or a violation of the  $\theta$ -criterion would ensue.<sup>12</sup> Rather, they are predicates, in that they assign a  $\theta$ -role to the subject.

Referring NPs, on the other hand, are arguments, and accordingly must be assigned a  $\theta$ -role. Therefore they cannot occupy a predicate position. A string of the form *NP NP* where both NPs are referring is ill-formed, first because the NP in predicate position is not assigned a  $\theta$ -role, and also because nothing assigns a  $\theta$ -role to the subject in this case. Such sentences constitute a double violation of the  $\theta$ -criterion. Thus, it appears that referring NPs should not be able to occupy predicate position at all.

Languages do, however, have various devices for allowing a referring NP to occupy something like a predicate position. English and many other languages use a copula. The copula assigns a  $\theta$ -role to the referring NP, and a VP of the form *Copula NP* can assign a  $\theta$ -role to its subject. This point is obscured by the fact that English requires a copula to appear in conjunction with verbless predicates, even if those are not necessarily referring:

- (37) a. John is my best friend.  
 b. \*John my best friend.

However, the requirement for a copula is loosened in certain complement clauses; (38b) is possible alongside (38a). The complement in (38b) is a "small clause" (cf. Stowell 1978; Chomsky 1981, pp. 113ff.):

- (38) a. I consider [John to be my best friend]  
 b. I consider [John my best friend]

Consider now the contrast between (39a) and (39b)<sup>13</sup>:

- (39) a. I consider [my best friend to be John]  
 b. \*I consider [my best friend John]

The NP *John* must be referring, and in (39a) it is assigned a  $\theta$ -role by the copula *be*. It is not assigned a  $\theta$ -role in (39b), since the copula is missing. Sentence (38b) was grammatical because the predicate of its small clause is predicational, and thus not an argument. No violation of the  $\theta$ -criterion ensues from the absence of a  $\theta$ -role assigner.

In the analogous structures of Hebrew,  $\theta$ -role can be assigned by the Aux *h.y.y.* in past- and future-tensed sentences, and by Pron in present-tense sentences. It follows that Pron should be obligatory when a present-tense predicate is a referring NP. The empirical facts confirm this prediction. In a string of the

<sup>12</sup> The  $\theta$ -criterion entails that arguments appear in D-structure only in positions that are assigned a  $\theta$ -role.

<sup>13</sup> I am grateful to Richard Kayne for pointing these examples out to me.

<sup>11</sup> See Higgins (1976) and Doron (1983) for the distinction *referring* versus *predicational* for predicate nominals.

form *NP NP*, the predicate is obligatorily predicational; only in sentences that contain Pron can both NPs be referring.

This generalization is illustrated by the following examples, which show that Pron is obligatory in cases where the predicate is unmistakably a referring NP, such as a name, a demonstrative NP, or a personal pronoun.

- (40) a. *ha-more hu dani*  
the teacher he Dani  
'The teacher is Dani.'  
b. \**ha-more dani*  
the teacher Dani
- (41) a. *ha-more šela hu ha-iš ha-ze*  
the teacher hers he the man this  
'Her teacher is this man.'  
b. \**ha-more šela ha-iš ha-ze*  
the teacher hers the man this
- (42) a. *ha-mora hi at*  
the teacher[fem] she you[fem]  
'The teacher is you.'  
b. \**ha-mora at*  
the teacher you

The contrast in meaning between (43a) and (43b) provides a further illustration of the generalization:

- (43) a. *rina ša'ala im dani psantran še šaxaxti et šmo*  
Rina asked if Dani pianist that I-forgot ACC his-name  
'Rina asked whether Dani was a pianist whose name I had forgotten.'  
b. *rina ša'ala im dani hu psantran še šaxaxti et šmo*  
Rina asked if Dani he pianist that I-forgot ACC his-name  
'Rina asked whether Dani was a pianist whose name I had forgotten.'  
or 'Rina asked whether Dani was a pianist whose name I forgot.'

As the translation of (43b) shows, it is ambiguous between two readings. On one, the predicate of the embedded clause expresses a property (of being a pianist whose name the speaker had forgotten); the speaker reports that Rina had asked whether Dani had this property. On the second reading, the speaker refers to a certain pianist whose name he cannot remember, and asserts that Rina had asked whether Dani was that pianist. For this ambiguity to show up, Pron is obligatory. Hence, (43a), where there is no Pron, only has the reading where the embedded predicate expresses a property.

## 5.2. Agreement

We have discussed S-structures of the form (44):

- (44) *dani<sub>i</sub> [[INFL [AGR[3rd]][sing][masc]]<sub>i</sub>][Nom]] e<sub>i</sub> NP*

Since *e<sub>i</sub>* in subject position is the result of Move- $\alpha$ , it is marked with the features [person], [number], and [gender] of the moved NP *dani*. The AGR features in INFL, which agree with those of the subject position, therefore agree ultimately with those of *dani*. This accounts for examples where Pron agrees with the subject, as in (8).

In other examples [cf. (9)], Pron agrees with the predicate. It turns out that in all these cases, the predicate is a referring NP. Notice the difference between (45a) and (45b):

- (45) a. *ma še dekart katav hu hoxaxa le-kiyumo*  
what that Descartes wrote he proof[fem] to his-existence  
b. *ma še dekart katav hi hoxaxa le-kiyumo*  
what that Descartes wrote she proof[fem] to his-existence

Both can be translated as the English (46)<sup>14</sup>:

- (46) What Descartes wrote is a proof of his existence.

But unlike (46), the sentences in (45) are not ambiguous. (45a) is synonymous to the "specificational" reading of (46),<sup>15</sup> in which the NP in predicate position is predicational. (45b) only has the "identity" reading, in which the NP in predicate position is referring. This seems to indicate that Pron agrees with the predicate only if the predicate is a referring NP.

Note that in cases where the predicate is referring and the subject is expletive, AGR agrees with the predicate only:

- (47) a. *ze hayiti ani*  
it was [1st. sing] I  
'It was me.'  
b. \**ze haya ani*  
it was [3rd. sing] I

It may be that in structures like (44), the empty category in subject position can be reinterpreted as an expletive element, in case the predicate is a referring NP. The features of AGR would then match those of the predicate.

<sup>14</sup> This example is due to Emmon Bach.

<sup>15</sup> This is equivalent to *What Descartes wrote proves his existence*.

To conclude, AGR in nominal sentences agrees with the subject or the predicate, depending on which is ‘‘more referring.’’ I will not try here to make this notion more precise.

## 6. THE INTERACTION OF PRON WITH PRONOMINAL SUBJECTS

The analysis in Section 4 makes additional predictions regarding the interaction of Pron with pronouns in subject position. I argue in Doron (1983) that subject personal pronouns in Hebrew cliticize to INFL. In this way I account for Pro-drop in Hebrew. For example, the feature bundle  $\{[2nd][masc][sing]\}$ , which corresponds to the pronoun *ata* ‘you’ (masc.sing.) is realized in INFL. An example of an S-structure and a corresponding surface string are (48a,b).

- (48) a.  $[_{INFL} [_{AGR}[2nd][sing][masc]]_i [_{Nom}]] e_i \text{ more}$   
 b. *ata more*  
 you teacher  
 ‘You are a teacher.’

Since the pronoun cliticizes to INFL it does not topicalize, and no additional pronoun can show up; indeed, (49), where a third-person Pron shows up in conjunction with a pronominal subject, is ungrammatical.<sup>16,17</sup>

- (49) \**ata hu more*  
 you he teacher

To conclude, no ‘‘extra’’ pronoun appears in nominal sentences when the subject is itself a pronoun. This is due to the properties of Pron and of pronominal subjects, both of which are clitics in INFL.

## 7. AGAINST THE ANALYSIS OF PRON AS V

This section considers and rejects the hypothesis that Pron, on par with *h.y.y.* ‘be,’ can be construed as part of the sentence predicate.

<sup>16</sup> Notice that the ungrammaticality of (49) cannot be attributed to some ‘‘clash’’ in agreement between the subject and Pron, since the corresponding sentence where the subject is a third-person pronoun is just as ungrammatical:

- (i) \**hu hu more*  
 he he teacher

<sup>17</sup> See Doron (1983), where I argue that the following grammatical sentence has a different structure from that of (49).

- (i) *ata hu ha-more*  
 you he the teacher  
 ‘It is you who is the teacher.’

Present-tense sentences can be negated by placing the particle *eyn* in front of them:

- (50) *eyn dani ohev bananot*  
 NEG Dani likes bananas  
 ‘Dani doesn’t like bananas.’

If Pron were part of the predicate, predicates containing Pron would be the only ones not co-occurring with *eyn*:

- (51) \**eyn dani hu more*  
 NEG Dani he teacher

It is not the nominal predicate that blocks the use of *eyn*:

- (52) *eyn dani more*  
 NEG Dani teacher  
 ‘Dani is not a teacher.’

According to the analysis presented here, the structure of (52) is:

- (53)  $[_{INFL} \text{eyn}] \text{dani more}$

We do not expect Pron to show up in (51), since the subject has not been fronted. If the subject is fronted, [Nom] is absorbed by the clitic associated with *eyn*, as in (54). Pron does not show up at all, as shown in (55).<sup>18</sup>

- (54) a. *dani*,  $[_{INFL} \text{eyn} + \text{cl}_i [_{Nom}]] e_i \text{ more}$   
 b. *dani eyn + o more*  
 Dani NEG he teacher  
 ‘Dani isn’t a teacher.’

- (55) a. \**dani eyn + o hu more*  
 b. \**dani hu eyn + o more*

Another way of negating present-tense sentences is to use the means for negating sentences in other tenses, namely to use the particle *lo* immediately preceding the predicate:

- (56) *dani lo roce banana*  
 Dani not wants banana  
 ‘Dani doesn’t want a banana.’

It is impossible for *lo* to follow the verb:

- (57) \**dani roce lo banana*  
 Dani wants not banana

<sup>18</sup> (55b) has a grammatical left-dislocated structure, but this is not the one under consideration in the text.

But in predicate nominal sentences, negation follows Pron.<sup>19</sup> This is evidence that Pron is not part of the sentence predicate.

- (58) a. *dani (hu) lo more*  
 Dani (he) not teacher  
 'Dani is not a teacher.'  
 b. \**dani lo hu more*  
 Dani not he teacher

*h.y.y.* on the other hand is negated like a verb, which points to the conclusion that it is part of the predicate.

- (59) a. *dani lo haya more*  
 Dani not was teacher  
 'Dani was not a teacher.'  
 b. \**dani haya lo more*  
 Dani was not teacher

The same distinction between Pron and *h.y.y.* shows up in connection with emphatic *ken* 'yes', which has the effect of sentence affirmation, and, as observed by Berman (1978), has the same distribution as sentence negation:

- (60) a. *dani (hu) ken baxur nexmad*  
 Dani (he) yes fellow nice  
 'Dani is indeed a nice fellow.'  
 b. \**dani ken hu baxur nexmad*  
 Dani yes he fellow nice
- (61) a. *dani ken haya baxur nexmad*  
 Dani yes was fellow nice  
 'Dani was indeed a nice fellow.'  
 b. \**dani haya ken baxur nexmad*  
 Dani was yes fellow nice  
 [Berman's (26) on p. 202]

Sentence adverbs tend to precede the predicate, but always follow Pron (a similar point is made in Berman and Grosu 1976):

- (62) a. *dani (hu) be-emet ha-baxur še raiti*  
 Dani (he) really the fellow that I + saw  
 'Dani is really the fellow I saw.'  
 b. \**dani be-emet hu ha-baxur še raiti*  
 Dani really he the fellow that I + saw
- (63) a. ?*dani haya be-emet ha-baxur še raiti*  
 Dani was really the fellow that I + saw

<sup>19</sup> This fact was brought to my attention by Hagit Borer.

- b. *dani be-emet haya ha-baxur še raiti*  
 Dani really was the fellow that I + saw  
 'Dani was really the fellow that I saw.'

Under my analysis, Pron is part of INFL and *h.y.y.* is part of the predicate. Since *lo, ken*, and sentence adverbs follow INFL but precede the predicate, the above distribution is predicted by my analysis.

As we saw in Section 3, the verb in Hebrew may precede the subject:

- (64) a. *hayom dani roce banana*  
 today Dani wants banana  
 b. *hayom roce dani banana*  
 today wants Dani banana  
 both: 'Today Dani wants a banana.'

As noted by Berman and Grosu, this is not true of Pron:

- (65) a. *hašana dani hu more*  
 this year Dani he teacher  
 'This year Dani is a teacher.'  
 b. \**hašana hu dani more*  
 this year he Dani teacher

We have accounted for this observation in Section 4, where we saw that Pron cannot precede both the subject and the predicate. On the other hand, *h.y.y.* may be adjoined to INFL just like a verb; therefore it may precede the subject and *more*.

- (66) a. *hašana dani haya more*  
 this year Dani was teacher  
 b. *hašana haya dani more*  
 this year was Dani teacher  
 both: 'This year Dani was a teacher.'

Berman and Grosu (1976) adduce two further distinctions between Pron and verbal elements such as *h.y.y.* One is that in sentences where the nominal predicate is in front, the subject may precede or follow *h.y.y.*, but it obligatorily follows Pron:

- (67) a. *ma ata tošev še dani haya*  
 what you think that Dani was  
 [Berman and Grosu's (47b)]  
 b. *ma ata tošev še haya dani*  
 what you think that was Dani  
 both: 'What do you think that Dani was?'

- (68) a. \**ma ata xošev še dani hu*  
 what you think that Dani he  
 [Berman and Grosu's (46b)]  
 b. *ma ata xošev še hu dani*  
 what you think that he Dani  
 'What do you think that Dani is?'

According to my analysis, (68a) involves topicalization of the subject. It is an ungrammatical sentence, as it is normally impossible to question out of sentences where topicalization has occurred:

- (69) \**ma ata xošev še le-rina dani natan*  
 what you think that to Rina Dani gave

The other distinction pointed out by Berman and Grosu is that *h.y.y.*, but never the pronoun, may carry contrastive stress:

- (70) a. *moše HAYA xaxam*  
 'Moshe WAS clever.'  
 b. \**moše HU xaxam*  
 'Moshe IS clever.'

As we saw above, Pron is a clitic, therefore never carries contrastive stress.

To sum up, we have established that Pron, unlike *h.y.y.*, is not part of the predicate in predicate nominal sentences. In particular, Pron is not a suppletive form of *h.y.y.*

## 8. AGAINST THE LEFT-DISLOCATION ANALYSIS

Berman and Grosu (1976) argue convincingly against the left-dislocation analysis. Their first argument is that a sentence like (71a) lacks the pause following the dislocated element, associated with the corresponding left-dislocated structure (71b):

- (71) a. *dani hu more*  
 Dani he teacher  
 'Dani is a teacher.'  
 b. *dani, hu more*  
 'Dani, he's a teacher.'

Another argument is that a subject followed by a predicate nominal may be a nonspecific indefinite NP, whereas a left-dislocated NP may not:

- (72) a. *paxot anašim hem nexmadim*  
 fewer people they nice  
 'Fewer people are nice.'

- b. \**paxot anašim, hem metaylim ba-rexov*  
 fewer people, they walk in-the street

Their third argument has to do with the fact that it is not possible to question out of sentences from which constituents have been dislocated [see Doron (1982) for an explanation of this phenomenon]. For example:

- (73) \**ma moše, hu ohev*  
 what Moshe he likes

If predicate nominal sentences with Pron were derived via left-dislocation, we would expect not to be able to question out of them either. But it is possible to question out of predicate nominal sentences with Pron:

- (74) a. *ma (hu) moše*  
 what (he) Moshe  
 'What is Moshe?' [Berman and Grosu's (44)]  
 (possible answer: *moše hu more* 'Moshe is a teacher.')

I would like to adduce two additional arguments against the left-dislocation hypothesis. The first argument has to do with agreement. The pronoun left behind in dislocated sentences must agree in number and gender with the dislocated NP. As we saw above, [cf. (9)], Pron does not always agree with the NP to its left.

The second argument against the dislocation analysis has to do with relativization. Hebrew sometimes uses resumptive pronouns in relative clauses. For example:

- (75) *ha-iš še dani xošev še hu ohev bananot*  
 the man that Dani thinks that he likes bananas  
 'the man that Dani thinks likes bananas'

But resumptive pronouns are not allowed in the highest subject position of a relative clause:

- (76) a. *ha-iš še ohev bananot*  
 the man that loves bananas  
 b. \**ha-iš še hu ohev bananot*  
 the man that he loves bananas

If Pron were indeed a subject pronoun, it should not be allowed to occur in that position either. But not only does it occur there, it is even obligatory:

- (77) a. *ha-iš še hu more*  
 the man that he teacher  
 'the man who is a teacher'  
 b. \**ha-iš še more*  
 the man that teacher

We have established in this section that predicate nominal sentences with Pron cannot be analyzed as the output of left dislocation.

## 9. CONCLUSION

I have proposed an analysis of Hebrew nominal sentences. In such sentences, the predicate is some projection of N, A, or P, parallel to verbal predicates, which are a projection of V. The difference between sentences with verbal predicates and nominal sentences is that AGR obligatorily becomes part of the morphology of V, but does not in the case of N, A, and P. The features of AGR in nominal sentences do not become agreement affixes as they do in sentences with verbs. Rather, those features remain ‘‘unattached’’ in INFL and absorb any unassigned Nominative Case feature, thereby becoming a pronominal clitic. I have called such pronominal clitics *Pron*.

The absorption of a Nom case feature by AGR coincides with a violation of either the Case Filter or the  $\theta$ -Criterion, unless the subject is fronted. This explains why Pron is never sentence initial [cf. (23)] in spite of the fact that INFL is sentence initial and that Pron is located in INFL.

The analysis of Pron as a clitic in INFL gains further support from the fact that Pron never co-occurs with pronominal subjects. Prenominal subjects themselves cliticize to INFL, thereby preventing the appearance of Pron.

