Syntactic definiteness in the grammar of Modern Hebrew*

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Abstract

Definiteness has often been assumed to play a role in syntax, most notably in relation to various "definiteness effects" and case alternations (Belletti 1988; De Hoop 1992; and many others). The question whether this involves a semantic property that is relevant in syntax, or an independent syntactic representation of definiteness, remains to a large extent unanswered. This paper shows that, on the one hand, Hebrew provides independent evidence for assuming a definiteness feature in syntax; and on the other hand, this formal definiteness does not simply correlate with semantic definiteness, and there is no simple one-to-one mapping between the two kinds of definiteness. The second part of this paper focuses on the Hebrew object marker et*, which appears only in front of DPs having the syntactic definiteness feature. I argue that* et *fulfills a requirement for structural case that Hebrew verbs cannot assign, and that this requirement is related to the representation of definiteness as a formal feature and not to any semantic property. In this light I consider Belletti's (1988) theory of abstract partitive and show that Hebrew object marking seems to provide evidence against it.*

1. Formal definiteness features

Definiteness in natural language is usually seen as a semantic or pragmatic property of noun phrases. Over the years, however, definiteness has also been discussed in the syntactic literature as well. Definiteness FEATURES, taken as formal features that are marked on certain lexical entries and play a role in syntactic processes, have often been either explicitly proposed or implicitly assumed (for Hebrew, see Hazout 1990; Siloni 1997; Borer 1998, and others). But as opposed to phi features such as number and gender, whose morphological realizations in many languages are clear and which trigger purely syntactic agreement phenomena, the

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motivation for discussing definiteness is almost always semantic and not syntactic. As I will show in the first part of this paper, in Hebrew a definiteness feature can be motivated on syntactic grounds. But surprisingly, this formal feature does not always correlate with the semantic notion of definiteness or with any other known semantic property.

The term "feature" has been used in the linguistic literature in at least two ways that are quite different from each other; before arguing that Hebrew syntax makes use of a definiteness feature, we must first make it clear which sense of the term is meant.

In its first use, the term "feature" has been used to capture descriptive generalizations and to name natural sets of elements. So, for instance, to capture the generalization that nouns and adjectives share some properties, both are labeled [+N], as opposed to verbs and prepositions, which are [−N]. Similarly, in a binding-theoretic classification of NPs, NP traces and anaphors can be labeled [+anaphoric] to distinguish them from wh traces and proper names that are said to be [−anaphoric] or [+R]. This usage of features is thus nothing more than a shorthand notation for any kind of descriptive generalization we may find. I will call this the weak use of the word "feature."

The other, or strong, use of the term is the one used most extensively in the minimalist program (Chomsky 1995 and others) as well as in HPSG (Pollard and Sag 1994) and is often called a formal feature.[1] What sets this kind of feature apart from the weak kind is that it is visible to the grammar of the language: a formal feature in the sense of the MP can (and frequently must) cause elements to move and participate in processes of agreement or checking. In other words, formal features are part of the syntactic machinery itself, and not just notations for descriptive generalizations reached by the linguist. They are part of the object of research, not of the theory that aims to describe it.

These two notions of "feature" are thus quite distinct from each other. Nothing prevents us from defining features of the weak kind wherever we find it useful, as such features carry no further implications. Features in the strong sense, however, are a different story: as part of the grammar, strong empirical evidence is needed to support the existence of such features; stipulating a formal feature without sufficient evidence might lead to apparent explanations that are nothing more than formalized descriptions of the problem. It is only the stronger use of the term "feature" that will interest us in this paper.

With this in mind, we are interested in what kind of evidence for the existence of a definiteness feature can be found. Semantic interpretation will not be considered in this context, since I assume that an abstract formal feature based only on semantics can hardly be justified. We should

look, therefore, for evidence inside the syntactic module to justify the use of such a feature, or else the weaker use of the term is the only one that can be accepted. The following discussion will focus on Hebrew, in which overt definiteness marking plays a role in various syntactic processes.

2. Evidence for syntactic definiteness in Hebrew

2.1. *Definiteness marking and the [+ def] feature in Hebrew*

The basic way of expressing definiteness in Hebrew is by use of the definite article, *ha-*, which is a prefix that attaches to the noun. Unlike the definite article in many other languages, *ha-* cannot be separated from the noun by any intervening material such as numerals, adjectives, etc. This suggests it might be better to think of *ha-* as a bound morpheme and not as an independent lexical item[2] (see also Wintner 2000):

(1) a. šlošet ha-sfarim
three the-books
'the three books'
b. *ha-šlošet sfarim/ha-šloša sfarim[3]

Indefiniteness in Hebrew is not overtly marked: a noun not marked with the definite article is usually interpreted as being indefinite; some counterexamples will be discussed later.

The motivation for claiming that there is a definiteness feature in Hebrew comes mainly from two properties of Hebrew definite DPs:[4] definiteness agreement, and the appearance of the object marker in front of definites only. Both of these properties, described below in detail, are syntactic phenomena whose description requires no semantic knowledge. Putting aside all semantic views of definiteness, these facts will be used to establish the existence of a purely formal notion of syntactic definiteness.[5]

The obligatory definiteness agreement between nouns and adjectives that modify them provides the most straightforward motivation for viewing *ha-* in Hebrew as the realization of a formal definiteness feature. Just like number and gender, an AP must also agree in definiteness with the noun it follows. Thus, an AP modifying a noun marked with the definite article *ha-* must also carry it, and an AP modifying an indefinite noun must not bear the definite article:

(2) a. ha-yeled *(ha-)xaxam
the-boy *(the-)smart
'the smart boy'
b. yeled (*ha-)xaxam

This kind of agreement is very odd if considered on semantic grounds; semantics can hardly be argued to explain this definiteness marking on the adjective, and it is not clear whether such double definiteness can even be interpreted[6] (as witnessed by the fact that most languages do not have any kind of definiteness marking on adjectives).[7] This is similar to gender marking on verbs, which has nothing to do with interpretation. These agreement facts provide clear evidence that definiteness is indeed a formal feature in Hebrew. Under this view, there is no need to interpret the definite article on the adjective, just as plural or gender marking on APs is not necessarily relevant at the semantic level. In section 4 it will be shown that there is no need to rely on semantics in order to characterize the set of DPs that trigger definiteness agreement. Definiteness marking on the AP is purely formal, and this is only possible under the assumption that there is a [def] feature in Hebrew at the syntactic level.

Another peculiar property of Hebrew syntax is the sensitivity of the object marker *et* to the definiteness of the object. Whenever an object is marked with the definite article, it must be preceded by *et*, traditionally analyzed as a dummy accusative case marker (Berman 1978 and others). Indefinite objects, however, must not be preceded by *et*:[8]

(3) a. raʔiti *(et) ha-yeled.
saw.1SG *(et) the-boy
'I saw the boy.'
b. raʔiti (*et) yeled.
saw.1SG (*et) boy
'I saw a boy.'

Of the many questions raised by this paradigm, the one most relevant to the nature of definiteness in Hebrew is, why is a syntactic "creature" such as a dummy case marker sensitive to definiteness of the object it marks? If definiteness is a semantic property of the DP, this sensitivity is a matter of the syntax–semantics interface, and the problem is one of identifying the semantic contribution of the case marker. But under the hypothesis that Hebrew has a definiteness feature in syntax, this is a different kind of phenomenon; in this case, the interaction is entirely at the syntactic level and should be accounted for in syntactic terms. Many questions related to this behavior of *et* must be addressed, such as why the syntax of Hebrew makes a distinction between definite and indefinite

objects with respect to case marking, and we will return to these questions later on. But for now, it suffices to note that if *ha-* is the overt realization of a formal definiteness feature that interacts with *et* in syntax, then analyses along the lines of Enç (1991) and de Hoop (1992), which focus on the interpretation of case, do not seem to be suitable for explaining the Hebrew facts. What we are looking for is a syntactic analysis of these facts.

2.2. *Syntactic definiteness versus semantic definiteness*

The two phenomena just described can now serve as tests for identifying [+def] DPs: definiteness marking on the AP is nothing else than agreement with a [+def] noun, and the presence of *et* in front of an object is only possible if that object is [+def]. Using these simple tests, about which speakers have very clear judgments, it can already be seen that there are syntactically definite DPs other than those where the noun is preceded by *ha-*; the most obvious ones are proper names and pronouns, which turn out to be [+def].[9] This is not surprising, since these are also semantically definite. But other than these simple cases, to what extent do the notions of syntactic and semantic definiteness overlap? Although there are many different approaches to the issue of defining definiteness semantically and of generalizing the notions of definite and indefinite to all kinds of noun phrases, even a superficial discussion of semantic definiteness will suffice to show that semantic and syntactic definiteness are two distinct notions.

Within any theory of definiteness, the prototypical cases of definites include proper names, pronouns, and simple noun phrases with the definite article or a demonstrative. The prototypical indefinites include simple DPs such as *a man* and those with bare numerals like *three men*. It can easily be seen that the classification of Hebrew DPs into formally definite and indefinite, using the two syntactic tests of *et* and AP agreement, doesn't match any semantic classification of noun phrases that takes the prototypical definites and indefinites as its starting point. The simple fact is that even prototypical semantic definites are not always formally [+def].

The strongest kind of evidence against the possibility of matching syntactic definiteness with any semantic definition of definiteness is posed by pairs of noun phrases that are semantically identical, while differing in terms of syntactic definiteness. In Hebrew, demonstratives are adjectives that appear postnominally. Just like any other adjective, they are possible both with definite and with indefinite nouns and agree with the

noun in formal definiteness. The semantic value, however, is not affected in this case by the presence or absence of the definite article — with or without it, the interpretation is that of a definite, identical to the English counterpart:

(4) a. karaʔti sefer ze.
read.1SG book this
'I read this book.'
b. karaʔti et ha-sefer ha-ze.

It is clear that no semantic definition of definiteness that assigns a specific definiteness value to demonstrative DPs will be able to account for the fact that Hebrew demonstratives can be either syntactically [+def] or syntactically indefinite. And since demonstrative DPs are among the most prototypical cases of semantic definites, the existence of demonstrative DPs that are syntactically indefinite makes the entire idea of matching formal and semantic definiteness very hard to maintain.

Similar problems, even though somewhat less striking and more debatable, are posed by universally quantified DPs. The determiner *kol*, meaning 'every'/'each'/'all', can precede either (singular) indefinite or (singular/plural) definite nouns; the resulting interpretations are equivalent to English DPs with *each*/*every* and to those with *all*, respectively. The problem is that in terms of syntactic definiteness, the former is indefinite while the latter is definite:[10]

(5) a. riʔayanti (*et) kol muʔamad (*ha-)recini.
interviewed.1SG (*et) every candidate (*the-)serious
'I interviewed every serious candidate.'
b. riʔayanti *(et) kol ha-muʔamadim *(ha-)reciniyim.
interviewed.1SG *(et) all the-candidates *(the-)serious.PL
'I interviewed all the serious candidates.'

There are well-known semantic differences between *each* and *all*, most notably regarding distributive versus collective interpretations, and these distinctions also appear in Hebrew, in examples of the type given above. But as far as definiteness is concerned, most semantic approaches to definiteness will treat these as equivalent. For instance, under the "generalized quantifier" approach (Barwise and Cooper 1981), both *all* and *each*/*every* produce strong DPs. Even if we opt for the alternative of avoiding a generalization of the notion of definiteness to quantified DPs, we would have to face the fact that in Hebrew, one of these quantified DPs is clearly syntactically [+def] while the other is formally indefinite. The only hope in this case for a match with semantics is a classification that would spell out the difference between *each* and *all*, but none of the

mainstream distinctions manages to do this, let alone generalize this difference to a full classification of DPs.

The object in the following sentence poses a similar problem:[11]

(6) raʔiti *(et) axad ha-yeladim.
saw.1SG *(et) one the-boys
'I saw one of the boys.'

Here, the DP is syntactically [+def], as shown by the obligatoriness of *et*. Most semantic approaches, however, would classify partitives as indefinite. One semantic approach that does seem, at first, to be a bit more successful in this case is the one proposed by Enç (1991). Since Enç attempts to solve a similar problem posed by Turkish objects, it is worth seeing whether her approach can account for the Hebrew data under consideration. Using a notion of specificity distinct from definiteness, Enç argues that all partitives in Turkish are specific (as are all definites). Thus, applying this semantic notion to Hebrew, it succeeds in classifying *axad ha-yeladim* in (6) into the same group as definites, thus matching the syntactic classification. However, it is easy to find cases where Enç's approach fails: first, the demonstratives discussed in (4), for which the notion of specificity fares no better than the standard notion of definiteness. Furthermore, the fact that nearly all other partitives in Hebrew are syntactically indefinite makes it absolutely clear that Enç's generalization is not the relevant one here. This is illustrated in the following examples:

(7) raʔiti (*et) šloša/harbe/xelek me-ha-yeladim.
saw.1SG (*et) three/many/part of-the-boys
'I saw three/many/some of the boys.'

What makes the partitive in (6) different from all others is its syntactic structure, which is that of a construct state (see section 3), and not any semantic property. Thus, Enç's semantic classification is no more successful here than any other semantic taxonomy of DPs. It is clear that syntactic factors that have no effect on semantics are involved here, and these factors must be identified and taken into account.

Another kind of argument against identifying formal definiteness marking with semantic definiteness is based on the existence of environments where definiteness is known to be marked only in a subset of the languages that have definite articles. For instance, the use of articles with generics varies across languages in a way that doesn't seem to have an effect on interpretation. Thus, there are languages like French or Spanish, which use definite articles with noncount generics, as opposed to languages like English, which do not (as in *Sugar is fattening*). Assuming that the

meaning of generics is the same in both kinds of languages, we have additional evidence that definiteness marking is not always driven by semantics.[12]

To summarize, we must conclude at this point that the presence of syntactic definiteness in Hebrew doesn't support the hypothesis that the underlying basis of semantic definiteness is a [def] feature. This conclusion is a bit disappointing; yet, it is important to note that it doesn't deny the possibility that syntactic factors could be involved in determining semantic definiteness in a more complicated manner. There is still the possibility that a combination of formal factors, only one of which is the [def] feature, is the source of semantic definiteness. The only thing that is clearly denied by the discussion above is the idea that semantic definiteness at the DP level is the result of a one-to-one mapping of the formal [def] feature into semantic definiteness.

It should also be stressed that the last conclusion does not mean that the formal definiteness feature is not interpreted as one would expect it to be. Nothing in the examples above denies the possibility of interpreting a noun (or some higher projection of the noun) that bears the [+def] feature as semantically definite, using whatever definition of definiteness we choose. The only thing needed to make a compositional semantics compatible with the proposed feature is the following assumptions:

1. The [def] feature is not the ONLY way for a noun phrase to be semantically definite; demonstratives, for instance, provide a definite semantics independently of the formal feature. In other words, a noun phrase without the [+def] feature is not necessarily indefinite.
2. If the [+def] is present, then SOME nominal projection marked with this feature must be semantically definite; yet, not all higher projections must be semantically definite. This is clearly seen with partitives like those in (7), which include an embedded definite DP, while the embedding DP is not semantically definite.

With these two assumptions, we can maintain the view that semantic definiteness is not identical to syntactic definiteness, yet formal definiteness is interpretable and participates in the compositional interpretation of the noun phrase in a straightforward way.

3. Construct-state nominals and definiteness

We now turn to define more accurately the set of syntactically definite DP. But in order to give a definition, a short description of what are known as *Semitic construct-state nominals* must be given first.

The *construct state* (CS) is a form of DP found in Semitic languages, which consists of the nominal head followed by an additional nominal projection, sometimes referred to as the associate, which might be a possessor, an argument (in the case of action nominals), or a modifier. I will assume that the associate is a full DP[13] (which I will refer to as genitive), without making any particular assumptions about the exact internal structure of the CS. CS nominals have received much attention in recent years and are discussed extensively by Borer (1998), Longobardi (1994, 1996), Ravid and Shlesinger (1995), Ritter (1988, 1991), Siloni (1997, 2000a, 2000b), and many others. Properties of this construction that are important to the current discussion are the following:

i. Morphological change. When a noun heads a CS, it undergoes a morphophonological change, often involving the loss of primary stress and a change in the last syllable (see Berman 1978: 253–256 for a more detailed characterization of the changes involved). This makes constructs, in many cases, easily distinguishable from non-CS DPs:[14,15]

(8) a. mapa
map non-CS
b. mapat ha-ʔir
map the-city CS
'the city map'

ii. Obligatory genitive. The genitive DP that follows the head noun must always be present; a noun with CS morphology can never appear without a genitive. The fact that this DP is indeed genitive is witnessed in other Semitic languages such as Standard Arabic, which has morphological case realization, as opposed to Hebrew, where case is abstract. In either language, the genitive phrase is not marked by any preposition-like element. This distinguishes CS in Hebrew from another method of assigning genitive case, called "free genitive" (FG), in which no morphological change occurs in the noun and where the genitive phrase is preceded by the word *šel*, roughly equivalent to English *of*.[16] The two methods of assigning genitive are illustrated below:

(9) a. mapat ha-ʔir CS
b. mapa (šel ha-ʔir) FG

iii. Head-initial. As already mentioned, a CS is always head-initial; unlike languages such as English, the genitive phrase in Hebrew must follow the head and can never precede it. While at first this might seem the obvious order in a head-initial language like Hebrew, it has been argued by Ritter (1991) and others that this order is derived by head movement from an underlying order where the genitive precedes the head.

iv. No article and definiteness inheritance. The property of CS central to the current discussion is what might be called "definiteness inheritance" (DI), also known as definiteness spreading. Unlike the case of free genitives, the head of a CS can never carry the definite article, and the definiteness value of the entire CS is determined by that of the genitive DP. Thus, a CS is definite iff its embedded DP is definite:

(10) a. ibadeti *(et) mapat ha-ʔir *(ha-)meforetet.
lost.1SG *(et) map the-city *(the-)detailed
'I lost the detailed map of the city.'
b. raʔiti (*et) migdaley misradim (*ha-)mexoʔarim.
saw.1SG (*et) towers offices (*the-)ugly
'I saw ugly office towers.'

Since we are dealing with two distinct notions of definiteness, it is important to check whether definiteness inheritance in constructs is inheritance of syntactic or semantic definiteness. It is quite easy to see that syntactic definiteness is inherited, as definiteness agreement with APs and the use of *et* are always determined by the definiteness value of the embedded DP. The implicit assumption in previous accounts has usually been that semantic definiteness is inherited as well (see for instance Hazout 1990: 52). Beyond the fact that the two kinds of definiteness were not clearly distinguished, what adds to the confusion is the well-known fact (Woisetschlaeger 1983; Hazout 1990; Borer 1998; Dobrovie-Sorin 2000, and others) that even in languages like English that don't have CSs, a DP with a genitive possessor seems to inherit its (semantic) definiteness from the genitive phrase; Hazout concludes from this that DI is not a unique property of Semitic CS, a position argued against by Borer (1998). However, a close inspection shows that DI is inheritance of syntactic definiteness ONLY, and not necessarily of semantic definiteness.

Whether or not semantic definiteness is inherited depends on various factors, including the syntactic position of the CS and the kind of head. When a CS with an embedded definite DP appears in subject position, it isn't always interpreted as definite. In examples (11a)–(11b), the most natural interpretation of the subject DP is that of an indefinite, while a definite interpretation is much harder to get. Similarly, when a CS follows a preposition, no obligatory semantic DI is witnessed. Consider, for example, (11c), with *le-* 'to' preceding a CS. The natural interpretation is that the book was given to some worker of the library, but not necessarily to any definite/specific one; the DP *oved ha-sifriya* is not necessarily semantically definite.

(11) a. tošav ha-štaxim neʔecar la-xakira.
resident the-territories arrested to-interrogation
'A resident of the territories was arrested for interrogation.'
b. necigat ha-bank xilka alonim.
representative the-bank handed-out brochures
'A representative of the bank handed out brochures.'
c. masarti et ha-sefer le-oved ha-sifriya.
handed.1SG et the-book to-worker the-library
'I handed the book to a worker of the library.'

In object position, semantic definiteness is apparently inherited, in addition to syntactic definiteness. This is illustrated in the following examples, where the only possible interpretation is one where the object is definite:

(12) a. ha-katav riʔayen et tošav ha-štaxim.
the-reporter interviewed et resident the-territories
'The reporter interviewed the resident of the territories.'
b. ani makir et oved ha-sifriya.
I know et worker the-library
'I know the worker of the library.'

What is it that makes the object position unique in this respect? A possible answer is that the object marker, *et*, has some semantic effect on interpretation. This does not mean that its distribution is governed by the semantics, and later I will argue that the distribution of *et* is governed by purely formal restrictions. However, it is still possible that while the presence or absence of *et* is determined syntactically, whenever it appears it also affects the semantics, and this is what makes the object DP in (12) semantically definite as opposed to similar DPs in other positions.

In (6) it was shown that the numeral-headed CS *axad ha-yeladim* ('one of the children') is formally [+def] although semantically indefinite. This also falls under the generalization that DI in constructs is a formal operation that doesn't necessarily involve semantic definiteness.

To conclude, it seems that, as opposed to syntactic definiteness, which is always inherited in CS, semantic definiteness isn't. I will not try in this paper to explain WHY semantic definiteness is inherited in some cases and not in others. What I do propose is that the [+def] feature is inherited from the embedded DP to the CS that dominates it, so the feature is eventually present on both the embedded and the embedding DP. As to interpretation, however, this feature is not necessarily interpreted at every level on which it is marked. It is reasonable to assume that this feature

must be interpreted at least once in every "def chain," but further restrictions, which force or prohibit the interpretation of the [+def] feature in particular contexts, are left as a topic for further research.

4. Defining the class of [+def] DPs

4.1. *A recursive definition of the set DP[+def]*

I have argued that the feature [+def] exists on simple DPs if and only if the noun is marked by the definite article. For more complex DPs, it was shown that [+def] is inherited in CS nominals, and thus a CS whose embedded DP is [+def] also shows the properties of definite DPs, namely definiteness agreement with APs and obligatory *et* when in object position. It is now easy to give a precise recursive definition of the set of Hebrew DPs carrying the [+def] feature, using only lexical and structural properties of the DPs involved. The following is a more or less comprehensive characterization of this set:

I. Proper names and pronouns are always [+def][17]
II. Other non-CS DPs are [+def] iff the head noun is marked with *ha-*
III. A CS DP is [+def] iff its embedded genitive DP is [+def]

It is important to note that the process of CS formation can be applied recursively, giving complex phrases whose formal [def] value is determined only by that of the most deeply embedded DP. The following examples illustrate this:[18]

(13) a. ha-ništara bitla *(et) [pgišat [tošvey [ha-kfar]]].
the-police cancelled *(et) [meeting [residents [the-village]]]
'The police cancelled the meeting of the village residents.'
b. ha-ništara bitla (*et) [pgišat [tošavim šel [ha-kfar]]].
the-police cancelled (*et) [meeting [residents of [the-village]]]
'The police cancelled a meeting of residents of the village.'

In (14a), a CS *tošvey ha-kfar* is embedded as the genitive DP of a larger CS; the innermost DP, *ha-kfar*, is [+def], and so are the two higher projections. Compare this with the phrase in (14b): here only the maximal DP is a CS, whose genitive phrase *tošavim šel ha-kfar* is not itself a CS (the head *tošavim* does not have the morphology of a CS head, and its genitive argument is case-marked by *šel*). Thus, the [def] value of the entire CS is determined by the indefinite head *tošavim*, and the entire phrase is not definite. This example also illustrates the fact that only CS genitives, and not free genitives, pass their [def] value upward.

Back to the definition of syntactically definite DPs, it might be objected that its simplicity ignores the contribution of determiners other than the definite article. If the given definition is correct, it has the consequence that the definite article is the only relevant determiner as far as formal definiteness is concerned. The definiteness value of DPs with a determiner preceding the noun can very often be derived without any further assumptions on definiteness of the determiners themselves, because many determiners in Hebrew are also heads of CS (see Shlonsky 1987; Ritter 1991; Danon 1996, 1997). The same morphology that derives nominal heads of CS can also create derived forms of determiners; for instance, the numeral *šloša* 'three' has the derived form *šlošet*, which must be followed by a [+def] noun whose definiteness value determines the formal definiteness of the entire DP. Thus there is no need to assume that *šlošet* is itself [+def]; similar analyses can be given for many other determiners.

4.2. *Is there a [−def] feature?*

There are two possibilities for analyzing DPs that are not [+def]: they could be assigned the complementary [−def] feature, or alternatively, it might be better to assume that those DPs are simply left without any such feature, thus reinterpreting "formally indefinite" as "not [+def]" rather than as "marked [−def]." The symmetric approach of having [±def] seems to be the default choice of most linguists who have referred to a [def] feature; see, for instance, Borer (1998), who makes extensive use of a [±def] value. But like Dobrovie-Sorin (2000), I will argue for the second approach, both for empirical reasons and for theory-internal ones. My claim is not only that there is no evidence to support the assumption of a [−def] feature, but that such a feature would be difficult to account for in theoretical terms.

4.2.1. *Morphology and abstract features.* The simplest kind of argument against a [−def] feature comes from morphology, or rather from the lack of it. As opposed to the definite article *ha-*, Hebrew has no indefinite article; indefiniteness is simply the absence of any definiteness marking. This clearly suggests that definiteness and indefiniteness should not be treated symmetrically. Unless otherwise motivated, the null hypothesis would be that no [−def] feature exists in Hebrew. The option of nonbinary features is logically possible and seems to be the simplest option in this case.

The morphological definite/indefinite asymmetry observed in Hebrew is not a universal of natural language, as there are many languages that

mark indefiniteness in a manner similar to definiteness marking. In the Semitic languages, the lack of indefinite morphology in Hebrew should be contrasted, for instance, with Standard Arabic, where the case marking on indefinite DPs has an additional phoneme *-n* not present in definite DPs, which might be argued to be an overt realization of a [−def] feature (but see Fassi-Fehri [1993], who argues that this ending is not an indefiniteness marking).

The approach advocated here regarding formal features is that, being part of the grammatical machinery, language-specific features must be independently motivated wherever they are claimed to exist. As opposed to [+def], there is no motivation for assuming the existence of a [−def] feature in Hebrew: the lack of *ha-* in front of indefinite nouns, the "zero agreement" with APs, and the absence of *et* in front of indefinite objects are all trivially accountable by the null assumption that no relevant feature exists in these cases. All these facts are only interesting in contrast to the observed realizations of [+def] but otherwise do not require any explanation and certainly can't justify the introduction of a formal feature into the grammar. Therefore, the two possible values are not [±def] — rather, they are [+def] versus no feature at all.

4.2.2. *Semantics and formal indefiniteness.* Even though the focus of this paper is the notion of syntactic definiteness, a brief discussion of the semantic aspect of the definite/indefinite contrast can be helpful here. The question is whether there is any strong semantic motivation to insist on a symmetric [±def] approach, instead of the asymmetric view sketched above. The standard assumption in many semantic accounts of definiteness is often that definiteness and indefiniteness (or any similar notions) are totally symmetric: a noun phrase has either one property or the other. For instance, in the classification of noun phrases as weak or strong (Barwise and Cooper 1981; Keenan 1987), there is nothing that makes either of these classes "primary" and the other just its complement. Logical properties such as intersectability, used in the GQ framework, are just as natural as nonintersectability. But there are alternative views of definiteness that fit more naturally with the asymmetric view. In theories that incorporate Link's (1983) semantics of plurals and Partee's (1987) type-shifting operations into GQ theory, it is common to attribute different semantic types to definites (type e), indefinites (type $<e,t>$), and quantificational (type $<<e,t>,t>$) noun phrases (cf. for instance van der Does and de Hoop 1998). The definite article has the semantics of a supremum: *the N* refers to the maximal element in the denotation of *N* and definiteness is thus a simple and natural operator.[19] Indefiniteness, on the other

hand, is something of a completely different nature — there is no "indefiniteness operator" comparable to the definite one. Furthermore, quantified noun phrases are not definite in this sense, but are not necessarily indefinite either. Thus, while definiteness is directly defined as a semantic operator, INDEFINITENESS in this semantic approach is just a name for whatever is obtained without applying this operator (similarly, van der Does and de Hoop [1998] argue that definites can be seen as a special kind of indefinites, namely those whose <e,t> denotation is a singleton set). Since we are dealing with natural language and not with formal logic, the fact that indefiniteness CAN be given a formal definition is irrelevant; what we are looking for is what best explains why the observed facts are as they are, and in this respect it seems that an asymmetric definiteness feature is better suited to match the semantics of definiteness than a symmetric one.

Another consideration that makes this discussion more than an exercise in definitions is that we would like to assume that whatever [def] features are found in the syntax, these are somehow interpreted. As we have already seen, there are DPs in Hebrew that are not formally [+def], yet semantically they are definite; in particular, demonstrative DPs without the article *ha-*. If we claimed that the noun in such DPs is marked with a [−def] feature, it would seem that the demonstrative pronoun is semantically incompatible with this feature. In this case, deriving a compositional semantics for such phrases would apparently be impossible, unless the problematic provision that an abstract [−def] feature is not necessarily interpreted even in simple DPs was added. But this problem never arises if there is no such thing as a [−def] feature. This provides strong support to the asymmetric view of [def], which can now be summarized as follows: Hebrew has a [+def] feature, with overt morphological realization as *ha-*; this feature is interpreted as semantic definiteness (at least once per DI chain). A noun not marked as [+def], on the other hand, does not carry any [−def] feature either. Such nouns, when combined with demonstratives or similar elements, can give rise to a definite interpretation. Otherwise, the semantic properties known as indefiniteness might be nothing more than the lack of definiteness.

5. The strange Case of *et*

5.1. *An overview of properties and problems of* et

As was already noted, *et* appears in front of objects if and only if they are [+def].[20] The standard assumption has usually been that *et* is an

accusative case assigner (sometimes classified as an accusative preposition, as in Falk 1991) or the realization of accusative case (see for example Shlonsky 1997: 17–20), with the restriction to definite noun phrases stipulated as a lexical selectional restriction. An alternative view would be to consider *et* a preposition that is not necessarily related to accusative case. Either way, the restricted distribution of *et* poses some challenging questions: why do definite objects require *et*? And does *et* really have the typical distribution of accusative case? I will begin by spelling out these problems more clearly.

5.1.1. *Selection of [+def] objects.* The most notable property of *et* that this paper hopes to clarify is its sensitivity to the [def] feature of the DP that follows. Under a traditional view of definiteness as a purely semantic notion, the question is why and under what conditions a case marker should be sensitive to semantic properties of the DP that follows it. Previous discussions of Hebrew, which did not make a clear distinction between syntactic and semantic definiteness, simply stated the facts descriptively as a property of the language, with no attempt at an explanation. The view presented here, of [+def] as a formal feature, makes it possible to state the restriction in terms of what is available at the lexical and syntactic levels; as a consequence, the question should be changed to focus on the syntactic process. Can the observed requirement for *et* in front of [+def] objects be derived from more general properties of the syntax of Hebrew? Can some independently motivated fact regarding the case system of Hebrew be shown to create the need for *et*? We should seek an explanation that goes beyond a mere description of the facts.

Note that an analysis that involves the semantics of definiteness is not impossible to formulate if it isn't stated as a selectional restriction. It could be proposed that *et* has some semantic content, which makes such an interaction with definiteness reasonable. For instance, one might pursue the idea that *et* is a semantic type-shifting operator that is only compatible with definites. I will not follow this line, however, because of the existence of semantically definite DPs that are not syntactically definite and do not allow *et* as already noted. Therefore, any account of the distribution of *et* that relies on semantic properties will run into serious problems with some DPs or others. I will henceforth assume that the explanation for the distribution of *et* must be entirely within the domain of syntax, even though in its presence *et* could also have some effect on interpretation, as suggested by the data in (11)–(13).

A fact that should be noted at this stage is that similar interactions between case marking of objects and semantic definiteness appear in several languages that are unrelated to Hebrew. For instance, such phen-

omena exist in Finnish (Belletti 1988; Maling and Vainikka 1996), Turkish (Enç 1991), Hindi/Urdu (Mahajan 1990; Butt 1993), West-Greenlandic (van Geenhoven 1998), Scottish Gaelic (Ramchand 1993), and Russian (Freidin and Sprouse 1991; Babby 1994). In these languages, accusative marking of objects tends to result in definite or specific readings. These languages offer some alternative, nonaccusative, form of case marking of objects (such as partitive in Finnish, genitive in Russian, or the lack of overt case marking in Turkish), which gives rise to indefinite or nonspecific interpretations (although, as has been claimed by Maling and Vainikka [1996] and by Kiparsky [1998], the semantic effect is probably more difficult to characterize than this simplistic overview). However, what makes Hebrew special in this context is that it has definiteness morphology that can be argued to be the realization of a [+def] feature. In the rest of these languages there is no evidence for such a feature: with the exception of Scottish Gaelic, definite articles do not even exist in any of these languages. I will return to the differences between Hebrew and other languages in section 6, where I will discuss in detail Hebrew and Finnish in the context of Belletti's (1988) theory of case marking of indefinite objects. For the moment, I take the differences to be deep enough for me to restrict the following discussion to Hebrew, leaving open at this point the possibility that parts of the explanation I will develop for Hebrew can be applied to the superficially similar facts in those other languages.

Before going on, it should be stressed that the issue of sensitivity of *et* to [def] actually involves two distinct questions. One question is why *et* can't appear with indefinite objects; the other is why [+def] objects require *et*. That is, the following sentences illustrate two different violations:

(14) a. *dani kara et sefer.
Dani read et book
b. *dani kara ha-sefer.
Dani read the-book

Native speakers' judgments on these two violations are not the same. Even though both are bad in the spoken language, most speakers tend to judge (14a) as considerably worse than (14b); omission of *et* is actually quite common in written language. Therefore, there are apparently two distinct issues involved, leading to two kinds of ungrammaticality. In the following discussion, wherever it is not the central issue I will continue to refer to both as "the sensitivity of *et* to definiteness," but it should be kept in mind that this actually refers to two distinct restrictions.

Regardless of how *et* interacts with definiteness, the peculiarity of this interaction is intensified by the fact that only *et*, and no other similar element in Hebrew, is sensitive to this feature. Specifically, Hebrew also has a particle *šel*, which appears in genitive constructions and is roughly parallel to English *of*; this particle, usually considered a dummy genitive marker, displays no sensitivity whatsoever to definiteness and can precede both definite and indefinite DPs. The same holds of all prepositions, none of which displays any kind of sensitivity to [def] or to any other feature of the DP. Hence, not only should we ask what makes the [def] feature special in this respect, but also the complementary question, What is the special property of *et* that makes it the only element that is sensitive to [def]?

5.1.2. *Case assignment to indefinites.* If *et* is taken to be a case assigner that assigns accusative to [+def] objects, the obvious question is how indefinite objects receive case. If they can be marked accusative directly by the verb, this option should apparently be possible to definite objects as well. And if the verb is incapable of assigning case directly, then indefinite objects seem to be caseless. As already mentioned, Hebrew provides no morphological clues here. Case has no morphological realization in Hebrew, except for pronouns; but since all Hebrew pronouns are inherently definite, there is no way of telling how indefinite objects differ from definites in terms of case. In Standard Arabic, which is similar in many respects to Hebrew, in particular by showing syntactic definiteness effects such as definiteness agreement, and which in addition also has morphological case, there is no element similar to *et*. So the problem is restricted to Hebrew, where case is abstract. In section 6, we will consider Belletti's (1988) proposal for an alternation of two abstract cases, and I will argue that it is incompatible with the facts in Hebrew.

5.1.3. et *in other environments.* Besides marking direct objects inside the VP, *et* appears in several additional environments where accusative case is not expected. As shown by Hazout (1990), Siloni (1997), and others, Hebrew derived nominals that have an internal argument structure allow arguments that are marked by *et* (in addition to the expected genitive arguments):

(15) harisat ha-cava et ha-ir
destruction the-army et the-city
'the army's destruction of the city'

The question is what licenses *et* in this environment. Assuming that accusative case is typical of verbal contexts, Hazout (1990) and Borer

(1998) take this to be evidence for the existence of a verbal projection in derived nominals. Others, such as Siloni (1997), have argued against this proposal, while leaving open the question of under what conditions accusative case can appear in nonverbal contexts.

The presence of *et* in nominals looks even stranger in light of the fact that indefinite arguments in these contexts are impossible (Borer 1984). That case marking by *et* is impossible for indefinites in nominals is not surprising since *et* is not allowed to mark indefinites in VPs either; but interestingly, indefinite counterparts of *et*-marked arguments in nominals always lead to ungrammaticality, even without *et*:

(16) *harisat ha-cava (et) ir
destruction the-army (et) city

What derived nominals share with verbs, then, is only the possibility of having *et*-marked definite arguments. Yet derived nominals differ from verbs in not being able to license the complementary indefinite arguments. This intensifies the question of what exactly is the nature of the case assignment mechanism involved.[21]

Other environments where *et* can appear without a verb are found in colloquial Hebrew. In possessive sentences *et* is used by most speakers after the nonverbal element *yeš*, roughly equivalent to English *have* or *be*, and in its negation *en*:

(17) yeš/en le-dani et ha-sefer ha-ze.
yeš/en to-Dani et the-book the-this
'Dani has/doesn't have this book.'

As in nominals, this is an unexpected environment for accusative case.[22] The use of *et* in this position only in colloquial speech, in opposition to the normative restrictions of traditional grammar, intensifies the productivity of the processes involved — making it clear that the issue can't be dismissed as an idiosyncratic property of Hebrew, but rather that *et* is the manifestation of some substantial property of Hebrew grammar.

Finally, many speakers also use *et* with such participial forms as *rašum* or *katuv* 'written', which despite a certain similarity to passives are not true inflections of a verb (for instance, they can't be inflected for tense); see Shlonsky (1987):

(18) katuv et ze ba-itonim.
written.SG et this in-the-newspapers
'This is written in the newspapers.'

In short, it is clear that *et* is not limited to VPs, as opposed to what is expected of an accusative marker.

5.2. *Definite objects and structural case*

The main problem that I aim to answer in this section is why *et* is required in front of definite objects. My claim is that [+def] DPs require STRUCTURAL case, and that verbs in Hebrew can only assign INHERENT case.[23] Furthermore, I will argue that all prepositions in Hebrew assign STRUCTURAL case, and that *et*, which is a preposition, is used in front of [+def] objects because these require structural case.

In section 5.2.1, I will defend the claim that Hebrew verbs assign inherent, and not structural, case. Specifically, I will discuss the question whether there are ECM structures in Hebrew and will argue that apparent ECM constructions such as those discussed in Siloni (1997) do not involve case assignment by the verb to a DP not theta-marked by it. In section 5.2.2, I will discuss the nature of the structural case assigned by *et* and will argue that this is not accusative, but structural genitive. Finally, I will show that definite DPs always get structural case in all positions where they appear.

5.2.1. *Verbs as inherent case assigners.* The distinction between structural and inherent case (Chomsky 1981, 1986) is based on the assignment of a theta role; inherent case is case that is always assigned together with a theta role. Whenever a verb assigns case to its object, a theta role is also assigned; therefore, the idea that objective case is inherent is a reasonable one (see Siloni 1997 for a proposal that derived nominals in Hebrew involve an inherent accusative). However, in exceptional case-marking (ECM) structures, verbs are assumed to assign case to a DP that is not their argument; ECM is thus the only reason to assume that the case assigned by a verb is structural and not inherent. In this section I will try to show that Hebrew has no ECM, and therefore verbs in Hebrew are INHERENT case assigners. I will begin by sorting out the various kinds of ECM structures that have been discussed in the literature.

Those constructions in English that have been argued to involve ECM can be classified into four groups (I will refer to these as "type 1/2/3/4" respectively):

1. Clausal complements with an infinitive, as in (19a).
2. Clausal complements with a bare infinitive, (19b).
3. Small clauses with an *-ing* participle, (19c).
4. Small clauses with an AP/PP/NP/DP,[24] (19d).

(19) a. I expect him to resign.
b. I heard him sing.
c. I heard him singing.
d. I consider him lucky.

In Hebrew, the range of possibilities is more restricted. Consider first ECM verbs such as *expect* that take infinitival clauses. As the following example shows, the Hebrew parallel of (19a) is ungrammatical with the "accusative" pronoun *oto* and requires the use of a preposition (*mimenu*, 'from him'):[25]

(20) ani mecape mimenu/*oto lehitpater.
I expect from-him/him to-resign

Hebrew differs here from English in using an obligatory preposition between the verb and the (cliticized) subject of the embedded clause. It is thus clear that what assigns case to the embedded subject is not the verb, but the P. The only sense in which (20) could be seen as ECM is in the sense that structural case is assigned by a head (P) that bears no thematic relationship to the case-marked DP, but such ECM is irrelevant here, since there is no accusative case assignment by the verb. Most other ECM verbs are totally impossible in Hebrew with infinitival clauses and don't even allow the use of a preposition. The Hebrew equivalent of the English ECM verbs *believe*, *consider*, *want*, and *find* lack the option of embedding an infinitival clause altogether, either with *et* or with a preposition:

(21) a. I believe/consider/want/find Dan to be innocent
b. *ani maʔamin/maxšiv/roce/moce (et/mi/be) dan lihiyot xaf mipeša

The second kind of ECM, that with a bare infinitive (BI), is also not available in Hebrew, which simply doesn't have the morphological form of a BI: the infinitival form of the verb has the equivalent of *to* (*le*-) attached to the root, and the root itself never appears in isolation.[26] What Hebrew does have is the equivalent of type 3 and type 4 structures; type 3 employs a participial form called the *beynoni* (see Doron [1983], Shlonsky [1997], and others for discussions of the beynoni):

(22) šamaʔti et dani šar.
heard.1SG et Dani singing
'I heard Dani singing.'

Types 3 and 4 are often referred to as small clauses (SC), and since this term doesn't presuppose that case is assigned in any particular way I will use it here.

At this point, there is already an important question: why does Hebrew lack ECM with infinitives, while it does have small clauses? Putting aside type 2 structures, whose absence can be dismissed on morphological grounds, the lack of type 1 ECM is a mystery. The fact that with some

verbs there is something very close to type 1 ECM, using a preposition, suggests that the problem is in the case properties of the verb. My proposal, that verbs in Hebrew cannot assign structural case, can account for this; but we have to show that this is compatible with the presence of SC objects.

When the subject of a SC is definite, it must be preceded by *et*; in section 5.2.2 I will argue that *et* assigns structural case independently of the verb, and therefore we should restrict our discussion now to indefinite SC subjects. If indefinite SC subjects must receive case from outside the SC, and if the verb can't assign structural case, we would incorrectly predict the following sentences to be ungrammatical:

(23) a. šamaʔti yeladim šarim.
heard.1SG children singing
'I heard children singing.'
b. ha-šofet maca neʔešam exad ašem.
the-judge found defendant one guilty
'The judge found one defendant guilty.'

The solution to this problem relies on the observation that SCs, unlike infinitival clauses, can appear — even in English — in a variety of environments where it seems very unlikely that case is assigned "exceptionally" to the subject of the SC.[27] The first of these is the subject position. As noted by Safir (1983), there are cases where a SC can appear as a subject; these include the subject position of *be* and of raising verbs. The following is from Safir (1983) (similar facts hold for Hebrew):

(24) Workers angry about the pay is/does indeed seem to be just the sort of situation that the ad campaign was designed to avoid.

Crucial to the current discussion is the fact that the embedded subject of the SC in subject position can't receive case from outside the SC, and yet the sentence is grammatical. Furthermore, the SC itself behaves like an NP with respect to case: it moves to a subject position to receive nominative case (as well as to satisfy the EPP). The implication to the analysis of SCs in object position is that there is no reason why they should differ from regular objects in terms of case: like subject SCs, object SCs can receive case, and their embedded subject doesn't have to be get case from the verb, which assigns case to the same object (the SC) that it theta-marks.

Rizzi (1990) has noted that, unlike infinitival clauses, SCs are possible in pseudocleft sentences, where it is clear that there is no external case-assigner that can assign case to the embedded subject:

(25) a. *What I believe is [John to be intelligent].
b. *What I saw is [Lucy go home].
c. What I saw is [Lucy going home].

The ungrammaticality of (25a) and (25b) is easily accounted for by the fact that the subject of the infinitival does not receive case in this configuration. But then the grammaticality of (25c) means that the participial SC can satisfy the case filter without having case assigned from the outside to its subject. Similar conclusions arise from the following contrast, taken from Roberts (1997: 91):

(26) a. *John is proud of [his son to speak Chinese].
b. John is proud of [his son speaking Chinese].

How does the subject of a SC get case? One could speculate that inherent case is assigned to the subject of the SC by the predicate. At the same time, the entire SC behaves like a DP as far as case is concerned, which accounts for the obligatory presence of genitive *of* in (26b). In infinitival clauses, on the other hand, the movement of the subject to a higher position might be incompatible with its having inherent case, while as a CP the entire clause doesn't have the case properties of a DP.

The generalization that emerges is that what Hebrew has is only the kinds of SCs that can appear in non-ECM configurations. Thus, I conclude that there is good reason to believe that SCs are not ECM constructions[28] and that they do not require case assignment to the embedded subject by the verb. The verb assigns its case to the entire SC, whose subject gets inherent case within the SC.

Summing up, the status of the Hebrew equivalents of the different types of ECM structures that are found in English is the following:

1. Infinitival clauses. Since the subject of an infinitival must receive case from outside the clause, and since Hebrew verbs cannot assign structural case, *expect*-type ECM is impossible in Hebrew, with the exception of a few verbs that select a PP; the P then case-marks the subject of the embedded clause.
2. Bare infinitives. This morphological form does not exist in Hebrew.
3. SC (including participial and AP/PP/NP predicates). The subject of a SC can receive case in non-ECM configurations, and therefore object SCs are possible even though the verb can't assign case to the embedded subject.

This concludes the discussion of all apparent counter-examples to the claim that verbs in Hebrew assign inherent rather than structural case. There seems to be no kind of structure in Hebrew where verbs assign

case to a noun phrase without also assigning it a theta role, and therefore I conclude that verbs in Hebrew assign inherent case to their objects.

An outcome of this proposal is that the presence or absence of *et* can now be reduced to the structural versus inherent case distinction: *et* is used because it assigns structural case, as opposed to the verb, which doesn't. In other words *et* doesn't really select a definite DP, it just happens that it isn't needed with indefinites, which receive inherent case from the verb. An advantage of such a reduction is that it turns an apparently arbitrary selectional restriction into a link between two formal, structural aspects of the syntax of DPs: structural case and formal definiteness. At this point, a restatement in minimalist terms can be useful: if we assume that only STRUCTURAL case is a formal feature relevant to checking processes, we could say that the [+def] feature must be checked by a head bearing a (structural) case feature.[29] Taking this generalization one step further, [+def] can be seen as a subfeature of a [+case] feature (structural case). In a theory that allows complex features, as in HPSG, we would have a feature [+case [+def]] on definites with structural case, [+case] on indefinites bearing structural case, and no [case] feature on DPs that receive inherent case. The [def] feature is thus "parasitic" on the case feature and can never appear independently. This provides an almost trivial explanation for the fact that only indefinites are compatible with inherent case.

5.2.2. *Ps do it, As do it: structural genitive.* The idea that *et* assigns structural case is quite natural, since *et* is not related to any particular theta role. But there are some open questions regarding the nature of the structural case that it assigns. It is usually taken for granted that Hebrew is a nominative–accusative language, and reference to cases like accusative, dative, and genitive is very common in the literature. However, it is not at all obvious that Hebrew, as a language with no morphological case, really has all these different types of case; and of particular importance to us, there is not much real evidence to support the claim that *et* is related to accusative case.[30] Compare this with Standard Arabic, where accusative case is overtly marked on both definite and indefinite objects, but there is no element similar to *et*. In this section, I want to show that the most widespread method of case assignment in Hebrew is the one used in CS, which is an extremely productive construction; this kind of case, I will argue, is used not only in "classical" nominal CS but also in a variety of other positions, and specifically — that this is the case assigned by *et* to definite objects.

The idea that CS is not limited to "regular" nominal constructions is not new, and an analysis of cross-categorial CS is developed in Siloni

(2000a, 2000b). Ritter (1991) and later Danon (1996, 1997) have argued that various determiners in Hebrew are heads of constructs. Many other kinds of structures in Hebrew display CS-like properties. One of these, whose status as some sort of CS is more or less uncontroversial, is the adjectival CS, which is discussed in detail in Siloni (2000a). This kind of AP, illustrated in (27a) below, involves an adjectival head followed by an obligatory DP. The adjective bears the unmistakable morphophonology of derived heads of CS, and this, along with the obligatory DP, leads to the natural conclusion that such phrases are some sort of CS headed by the adjective. (27b) illustrates another kind of adjectival CS, also characterized by CS morphology and an obligatory DP following the adjective. The difference between the two types of phrase is that the A-headed CS in (a) acts like an AP that must modify a noun, while in (b) the CS has the distribution of a DP. This difference apparently stems from the fact that the postadjectival noun in (a), but not in (b), is an inalienable-possession noun (see Siloni 2000a for details):

(27) a. yalda *kxulat enayim* sipra ma kara.
girl.FM blue.FM eyes told.FM what happened
'A blue-eyed girl told what happened.'
b. *gdoley ha-xokrim* hištatfu ba-kenes.
big.PL the-researchers participated.PL in-the-conference
'The greatest researchers participated in the conference.'

It isn't crucial for the current discussion to commit ourselves to a full analysis of these structures; the only thing relevant at this point is the observation that a DP can receive case from an adjective in the same way that it can from a noun in CS. I will refer to this kind of case as structural genitive (or simply Gen). Two distinctive properties mark Gen-assigning heads:

1. The lexical process that creates these derived heads from basic lexical entries, as described in section 3.l.
2. The strict requirement that these heads be followed by an overt DP, which can't be omitted or moved.

As also noted by Siloni, complements of Ps in Standard Arabic are marked with the same genitive case as embedded genitives in nominal CS. This suggests the possibility that the case-assignment process in PPs is also the same one as in CSs. Morphologically, prepositions in Hebrew are mostly monosyllabic, and thus even if they had undergone the morphological process creating CS heads it would be undetectable. Yet there are some longer prepositions, such as *lifney* 'before' and *axarey* 'after', whose morphology does appear to be that of heads of constructs.

Furthermore, the DP in Hebrew PPs is obligatory and can never be omitted or extracted, just like genitive DPs in CS. Thus there is reason to believe that PPs can be added to the list of structures in Hebrew that involve Gen case. In terms of the acquisition of case, the idea that the same kind of structural case is involved in PPs as in other positions is clearly an attractive one. Any claim that prepositions assign a different kind of case runs into the problem of how this abstract case taxonomy could be learned, in the lack of any morphological evidence; and although PPs differ in many respects from other types of phrase, it is not clear whether there is any reason to assume that the case assigned is different too. The null hypothesis, then, is that PPs in Hebrew manifest just another occurrence of an abstract structural case, which I refer to as Gen.

To sum up, it appears that Hebrew makes very extensive use of one kind of abstract structural case, which shows up across categories in DPs, APs, PPs, and possibly other kinds of XPs. It is this structural case that I will attribute to *et*. Because of the cross-categorial nature of Gen, claiming that *et* assigns Gen doesn't commit us to specify at this point the syntactic category of *et*; in what follows, I will assume that *et* is a preposition (an assumption made by Falk 1991 and others), but most of what follows is compatible with other alternatives as well.

5.2.3. *Structural case assigners.* I have argued that the presence of *et* in front of definite objects is needed because such DPs require structural case, which can't be assigned directly by the verb. From this, it follows that the requirement for structural case must hold not only of object position — [+ def] DPs must receive structural case wherever they appear. We must show that all other DP positions in Hebrew are indeed assigned structural case.

Since Gen is assigned by a wide range of heads in Hebrew, including all prepositions and P-like elements, as well as all heads with CS morphology, DPs that appear as complements of prepositions, adjectives, certain determiners, and nominals in CS are all marked by structural Gen. This allows us to account for one special option that is usually ignored in discussions of object marking in Hebrew — objects preceded by the partitive preposition *me-* 'from', 'of'. I will refer to these as bare partitives (BP),[31] to distinguish them from full partitive DPs in which *me-* is preceded by a determiner (*xelek me-ha-sfarim*, 'part of the books'). Many transitive verbs in Hebrew allow an alternation between *et* and partitive *me-* as object markers;[32] the BP object differs from the *et*-marked one in its semantic interpretation,

but the crucial point is that the syntax allows *me-* as a possible case assigner for [+def] objects:

(28) a. axalti uga/ et ha-uga/ me-ha-uga.
ate.1SG cake et the-cake/ of-the-cake
'I ate a/some cake/the cake/of the cake.'
b. yeš/en li et ha-sug ha-ze/ me-ha-sug ha-ze.
yeš/en to-me et the-kind the-this/ of-the-kind the-this
'I have/don't have this kind/of this kind.'

This fact supports the idea that *et* is only needed for structural case assignment, and that any other structural case assigner would in principle be able to fulfill this formal requirement — it is the semantic content of other prepositions that blocks them from being used with direct objects. Furthermore, BPs are also possible in other positions where *et* is observed, such as in existential sentences with *yeš* as in (28b) or as arguments in CS with derived nominals — exactly what we would expect if *et* is needed in these positions only for structural case assignment. Wherever the semantics allows another preposition, such as partitive *me-*, there is no longer any need for *et*.

Another nonobvious structural Gen assigner is the particle *šel* 'of', which is used to mark DP-internal arguments where direct marking by the head of a CS is not possible (either because it marks another DP or because the noun is in its free, non-Gen-assigning, form). A central problem with most analyses of *šel* is their handling of this element's structural position, which is often not much more than the quite vague reference to "*šel* insertion." But if we analyze *šel* as a preposition, this structural difficulty is avoided. This would mean that *šel*, like all other Ps, is a Gen assigner. Regarding the defining properties of Gen-assigning heads *šel* must always be followed by an overt DP, while morphologically it is monosyllabic and therefore possibly in the form of a Gen-assigning head. Thus, assuming that all prepositions, *et*, and *šel* are structurally equivalent provides a simple solution to the problems raised by analyzing *šel* as a dummy assigner of a special kind of inherent case. Viewing *šel* as a Gen-assigning head solves the structural problem of "*šel* insertion," making the position of *šel* no more problematic than that of any other preposition; and at the same time, we can maintain the idea that, except for indefinite objects, all DPs in Hebrew receive structural case, without having to assume any other kinds of case than those for which there is clear evidence.[33]

Other than Gen positions, which are thus generalized to include complements of *et*, *šel*, and all Ps, the only remaining position where [+def] DPs can appear is the subject position. Since the standard assumption

regarding subjects is that they are assigned nominative case, which is structural, not much needs to be added here. As opposed to accusative case, there is no reason to assume that nominative case assignment in Hebrew is different from nominative in other languages or that nominative in Hebrew isn't structural.

5.2.4. *Summary: definite DPs and structural case.* We can now summarize the distribution of *et* and some general conclusions regarding the case system of Hebrew. First, I have argued that DPs that are marked [+def], as opposed to indefinites, require structural case. Second, I claim that Hebrew makes use of only three types of case:

1. Structural Gen, which is a structural case assigned by various lexical heads under strict adjacency; Gen assigners are distinguished morphologically and must always be followed by an overt DP. Gen assigners include nominal heads of CS and adjectives and determiners with CS morphology, as well as prepositions (which have only a Gen-assigning form). The particles *et* and *šel* are also Gen assigners.
2. Structural Nom, which is assigned to the subject position.
3. Inherent Acc, which is the ONLY kind of case that verbs may assign.

This case will be discussed further in section 5.3.

With the additional assumption that *et* is a semantically vacuous P,[34] the fact that "definiteness effects" are observed only with *et* easily follows, since this is the only case assigner that is used only in order to satisfy the need for structural case. Furthermore, definites require the dummy Gen assigner *et* only in those positions where there is no other STRUCTURAL case assigner. This includes the object position, where the verb is incapable of assigning structural case, as well as the various other positions mentioned in section 5.1, all characterized by the lack of an alternative structural case assigner. Where there is another Gen or Nom assigner, *et* is not allowed. Thus, the environments where *et* is allowed, which seem at first to be totally arbitrary, turn out to be environments that have one simple defining property.

We conclude that the need for an element like *et* is the result of two factors: the presence of a definiteness FEATURE, and the lack of structural accusative. The first factor makes structural case necessary, while the second creates an environment where such case is not available and a dummy P must be used.

5.3. *Inherent accusative and indefinite objects*

Two important issues were left open in the previous section: what happens to the inherent Acc when *et* is present, and why *et* is blocked in front of

indefinites. To most speakers, violations of this constraint (i.e. *et* in front of an indefinite) are judged as significantly worse than violations of the restriction against definite objects without *et*. In this section I will discuss these two issues.

What happens to the inherent accusative of the V when *et* is present? If the definite object gets its case from *et*, it is impossible that the verb also assigns its inherent case to the same object (which the verb doesn't even govern if *et* heads a PP). There are two possible solutions: either the *et* + DP complex receives inherent case from the verb while *et* assigns its structural case to the DP that follows it; or, the inherent accusative is optional, and therefore not assigned when the object is definite (this is basically what Belletti [1988] proposes regarding abstract partitive, which she claims is an optional case assigned by the verb to indefinite objects).

Consider the first option, that inherent case is assigned to the *et* + DP sequence, which we will assume to be a PP. If such a PP can receive case, the question is whether PPs headed by *et* must always receive case. We might view *et*-headed PPs as extended nominal projections, and therefore their status with respect to the case filter should be determined. A central observation is that such phrases can occur where no case is assigned. As illustrated in (15)–(16), repeated below as (29), when a derived nominal heading a CS has two arguments, the second of these arguments is preceded by *et* if it is a definite. The important fact is that indefinite arguments in the same position are impossible:

(29) a. harisat ha-cava et ha-ir
destruction the-army et the-city
'the army's destruction of the city'
b. *harisat ha-cava (et) ir

In (29a), the definite DP *ha-ir* receives case from *et* (the first argument of the nominal, *ha-cava*, is marked Gen by the nominal that heads the CS). The ungrammaticality of (29b) can be explained as a violation of the case filter, if we assume that the nominal lacks the accusative-marking properties of verbs, as is usually assumed (see Siloni 1997). But if there is nothing that can assign case to the indefinite DP in (29b), then there's also no case available for [*et* + DP] in (29a). Thus, we have clear evidence against the hypothesis that *et* + DP requires case. If this hypothesis was true, then (29a) would have been predicted to be ungrammatical, for the same reason that (29b) is. The conclusion is that case is not obligatory for *et* + DP. Thus, if we assume that verbs always assign their inherent accusative, we must also assume that PPs headed by *et* receive case only optionally. The other alternative is that inherent Acc itself is optional, following the suggestion in Lasnik (1992: 393) that case assignment in

general might be optional. I will leave the choice between these two alternatives open, since at the moment there is no clear evidence to support either option.

What still remains to be explained is the restriction against *et* in front of indefinites. Nothing so far rules out the sequence *et* + indefinite, which is judged by speakers to be completely ungrammatical. Since PPs headed by *et* can be used as objects, and *et* can assign case to a DP, the fact that *et* can't be used as an alternative case assigner to indefinite objects is not predicted.

Unlike other structural case assigners, *et* is needed only when the DP that follows it is [+def]. One possibility is that some general principle of grammar blocks the use of redundant functional elements. In the framework of the minimalist program (Chomsky 1995), this might be seen as an economy principle, or as an instantiation of the general idea that only feature checking can motivate syntactic processes. In the absence of a [def] feature, no checking relation can exist between *et* and an indefinite. Alternatively, it is possible that *et* has evolved to the point where it too is specified in the lexicon as [+def]. In feature-checking terminology, the case feature that *et* must check bears the [+def] specification, which we assume is a subfeature of [+case]. The crucial difference between *et* and other Ps is that only *et* is specified for the complex [+case [+def]] feature, while other Ps are simply [+case]. This account goes one step beyond simply restating the fact that *et* seems to select a definite DP; such a restatement would fail to explain why *et* selects for the [+def] feature and not for any other feature or property, while the current approach makes it explicit that [+def] can never occur without structural case.

6. Case and definiteness across languages and Belletti's partitive

In the previous section I argued that verbs in Hebrew assign inherent case, and that *et* assigns structural case to definite objects. There is an obvious similarity between these results and Belletti's (1988) idea that verbs assign an optional inherent case: the inherent accusative proposed here seems to closely resemble Belletti's inherent partitive. But the analyses differ in at least two respects: under my hypothesis, inherent Acc is the ONLY kind of case that verbs in Hebrew can assign; Belletti, on the other hand, assumes that partitive case is optional and that verbs may also assign structural case (accusative). Furthermore, while Belletti uses semantic considerations to distinguish between these two cases, my analysis relies only on overt syntax. But if not identical, the question is whether

these two analyses are at least compatible, and if not — whether there is any reason to choose one over the other.

6.1. *Overview of Belletti's analysis*

The main goal of Belletti's (1988) paper is to give an explanation of definiteness effects (DE) in terms of case assignment. The most well-known instance of the DE is the one found in existential *there* sentences; Belletti, however, argues that this is part of a more general pattern observed with all unaccusative and passive verbs cross-linguistically (Belletti assumes that the verb *be* is unaccusative):

(30) a. There is a man in the garden.
b. *There is the man in the garden.
(31) a. There arrived a man.
b. *There arrived the man.

Belletti observes that in Finnish, objects can be marked with either one of two morphological cases — accusative or partitive — where the former usually results in a definite interpretation for the object, and the latter in indefiniteness. From this alternation, Belletti proceeds to propose that verbs can universally assign an abstract partitive case, which is only compatible with indefinites. Her proposal, then, is that unaccusative verbs lose the ability to assign accusative but still maintain their ability to assign partitive. Thus, unaccusative verbs can have indefinite objects, which are the only ones compatible with partitive case.[35]

Based mainly on data from Italian, Belletti argues that partitive is inherent case, and therefore impossible in ECM constructions. Furthermore, partitive case must be optional — otherwise, either definite objects (and subjects of unaccusative verbs) would be ruled out when partitive case is assigned to them, or, if they move prior to partitive case assignment, the verb would be left with an unassigned case (this second option is not discussed by Belletti). Thus, Belletti comes to the conclusion that verbs can assign optional inherent case. Furthermore, under her proposal definites receive structural case, and thus the account that Belletti proposes can be seen as one that links definiteness to structural case and indefiniteness to inherent case, an idea very close to the central idea of the analysis of the Hebrew data developed in this paper. But there are some crucial problems with Belletti's analysis, which will be discussed below; it will later become evident that the analysis developed here does not suffer from the same problems.

6.2. *Problems with Belletti's analysis*

Several central points in Belletti's analysis have been criticized by Maling and Vainikka (1996) (henceforth M&V). Upon closer examination of the basic data from Finnish, they argue against Belletti's proposals on two major issues:

1. As M&V show, the semantic property relevant for the morphological accusative/partitive alternation in Finnish is not definiteness, but rather an aspectual property that they characterize as ±completed; Kiparsky (1998) provides a detailed semantic analysis based on aspectual properties of the VP, clearly showing that there is no direct relationship between case and definiteness in Finnish. Both M&V and Kiparsky show that the Finnish partitive is semantically compatible with definiteness, and therefore if Belletti's account of the DE is to be maintained, then the Finnish morphological partitive cannot be an instance of the proposed abstract partitive. This fact has also been used by de Hoop (1992: 64–65) to argue against Belletti's analysis.

2. Considering Belletti's claim that partitive is inherent, M&V give evidence to the contrary, that it is structural. Their arguments that the Finnish partitive is structural seem to be somewhat irrelevant, since this was already shown not to be an instance of Belletti's universal partitive. But furthermore, they argue that Indo-European abstract partitive is structural too.

The most serious problem that results from this is that, as M&V (1996: 201, note 29) correctly observe, if the Finnish partitive is not an instance of Belletti's abstract partitive, then the latter loses the only overt evidence it was claimed to have, and therefore "abstract partitive" in Belletti's approach reduces to no more than "indefinite object." Similarly, "abstract accusative" turns out to be simply equivalent to "definite object." Thus, statements such as "partitive case always selects an indefinite meaning for the NP that carries it" or "a straightforward account is provided for the fact that the DE typically appears in the object position of unaccusative verbs: this follows from the case properties of these verbs" (Belletti 1988: 5) simply restate the problem.[36,37] It thus seems that without the Finnish evidence, what remains of Belletti's analysis of the DE is the important descriptive observation that the DE occurs in object position of all unaccusative verbs and is not restricted to existential *there* sentences. The proposal that the source of the DE is case-related, although certainly plausible, must find independent evidence.

It could even be argued further that the fact that the Finnish partitive is not an instance of abstract partitive poses strong evidence AGAINST Belletti's idea that abstract partitive is universal. One would expect a

universal case to match morphological case in at least some of those languages that show morphological case; but neither Finnish, nor Icelandic (as Sigurðsson's [1989: 32–233] findings, quoted by M&V, show), nor any other language that I am aware of, has morphological case that matches Belletti's partitive. Considering this lack of empirical evidence, the idea of a universal abstract partitive seems to me highly problematic.

6.3. *Partitive and Hebrew objects*

In light of Belletti's and M&V's work, it is important to check whether Hebrew object marking is similar to either the Finnish partitive or Belletti's abstract partitive. If it is essentially the same phenomenon as the first of these, then important cross-linguistic generalizations could be drawn. And if Hebrew can be shown to have the properties of Belletti's abstract partitive, then this can save Belletti's analysis from the problem of lacking overt empirical support. But as I will show, Hebrew differs in some crucial ways from both of these.

6.3.1. *Hebrew indefinite objects versus Finnish partitive.* From a descriptive point of view, how similar are the Finnish partitive and Hebrew indefinite objects? According to M&V (1996: 186), the Finnish partitive is the "default" case for objects, which is similar to the "zero-marking" of indefinite objects in Hebrew. Similarly, case marking by *et* can be said to be "special" in a way similar to M&V's claim that Finnish accusative is the marked case. But the similarities seem to end here.

First, case in Finnish is morphologically marked on objects, while they do not have any formal specification of definiteness or indefiniteness (or any other relevant semantic property, such as the aspectual properties mentioned above); it is case itself that acts as the only formal marking. Hebrew objects, on the other hand, do have formal definiteness marking DP-internally; case, on the other hand, is abstract. This seems to fit into M&V's (1996: 202) observation that case and definiteness markings tend to appear, to a certain degree, in complementary distribution. Still, since it is not yet clear how these two marking systems can be subsumed under the same general notion, the fact that Hebrew and Finnish objects differ in the way they are formally marked can't be ignored.

The other crucial difference between Finnish and Hebrew is in the kind of property that is apparently linked to case. In Hebrew, as I have already shown, formal definiteness is the relevant factor, which does not correspond exactly to any semantic property. Finnish, on the other hand,

displays semantic effects that are apparently quite complex and involve the compositional semantics of the whole VP (as aspectual properties can't be interpreted within the DP itself). Therefore, while in Hebrew the interaction is at the syntactic level, in Finnish it is more of a syntax–semantics interface issue.

But perhaps the strongest, and simplest, argument against identifying Hebrew indefinite objects with Finnish partitive objects is that the partitive preposition *me-* is a third option available for objects in Hebrew, in addition to unmarked indefinites and *et*-marked definites. As was already mentioned, many verbs allow BP arguments to alternate with *et*-marked objects, thus showing a three-way alternation:

(32) axalti uga/ et ha-uga/ me-ha-uga.
ate.1SG cake/ et the-cake/ of-the-cake
'I ate a/some cake/the cake/of the cake.'

Thus, the obvious equivalent of the Finnish partitive is the Hebrew bare partitive, and not the unmarked indefinite.[38] The fact that Finnish lacks articles is probably responsible for the apparently wider use of partitive in that language than in Hebrew; but otherwise it seems that partitive case in Finnish is more or less equivalent to partitive *me-* in Hebrew, and therefore Hebrew indefinite objects are not the same as Finnish partitives.

The conclusion seems to be that though the Hebrew and Finnish object-marking systems share some similarities, they differ in some respects that are crucial to the analysis and can't simply be given the same account. Still, the fact that two languages that are so different from each other both show case/definiteness interactions in object position does seem to be significant, even if the explanation for this similarity is not yet clear.

6.3.2. *Hebrew and abstract partitive; DE in Hebrew.* Since M&V have shown that the Finnish partitive is not an instance of Belletti's abstract partitive, the differences between Hebrew and Finnish still don't rule out the option that Hebrew does fit into Belletti's proposal, for which it might prove crucial support. The fact that Hebrew has overt partitive marking as an option also doesn't rule out the possibility of identifying Hebrew indefinite objects with Belletti's abstract partitives, if one ignores the problem of naming this abstract case. We have concluded that indefinite objects in Hebrew receive an inherent case, and this might seem equivalent to Belletti's abstract partitive. The question is whether Hebrew object marking is compatible with Belletti's explanation of the DE. The lack of semantic uniformity among the class of formally [+def] DPs in

Hebrew should already suggest that the answer is negative. Consider now the syntactic evidence.

Existential *there* sentences of the kind that appear in English do not exist in Hebrew, since Hebrew has no verb equivalent to English *be* and no expletive parallel to *there*. Sentences with a meaning similar to that of English *there* sentences use the element *yeš*, which was already mentioned in section 5.1:

(33) yeš šloša anašim ba-xacer.
yeš three men in-the-garden

As in *there* sentences in English, definites can't appear in such sentences in Hebrew, with or without *et*:

(34) *yeš (et) šlošet ha-anašim ba-xacer.
yeš (et) three the-men in-the-garden

Given the difference in syntactic structure between these sentences in Hebrew and their English counterparts, and the poorly understood status of *yeš*, it would be very difficult to judge whether the DE in such structures can be attributed to case marking. The fact that alternative semantic/pragmatic explanations of the DE have been proposed makes the question even harder. Strong evidence against accounting for the ungrammaticality in (34) as a case violation comes from the fact noted in section 5.1, that there are contexts in Hebrew where definites can follow *yeš*. When a ''possessive-dative'' is used with *yeš* to give a meaning similar to English *have*, a definite argument is possible; in these contexts, colloquial speech uses *et*:

(35) a. yeš li ha-sefer ha-ze.
yeš to-me the-book the-this
'I have this book.'
b. yeš li et ha-sefer ha-ze. (colloquial)

But if such sentences are grammatical, then it is clear that case can be assigned to the position following *yeš*, and thus the DE in (34) is not the result of a case filter violation. In colloquial speech, *et* assigns case to the definite in (35b); in (35a), it could be argued that nominative case is assigned to this DP, as with postverbal subjects. There is no reason why case couldn't be assigned in the same way in existential sentences, and therefore case cannot be the reason for the DE, at least not in Hebrew.

As to unaccusative verbs, sentences similar to those given by Belletti from Italian usually seem to result in unclear or marginal judgments in Hebrew; in some cases, the judgments tend to be similar to those cited for Italian:

(36) a. higiʔu šloša anašim ba-boker.
arrived.PL three men in-the-morning
b. ??higiʔu šlošet ha-anašim ba-boker.
arrived.PL three the-men in-the-morning

But these facts are actually irrelevant, since the postverbal DPs in these sentences are subjects and receive nominative case, as witnessed by the number agreement on the verb; Hebrew allows for postverbal subjects of unaccusative verbs, and there is nothing to block nominative assignment to the postverbal DP in (36b). It seems plausible that the fact that (36a), with an indefinite postverbal subject, is better than (36b) is due to discourse considerations and not to any formal case requirement.

A somewhat different pattern is seen in colloquial Hebrew, which actually shows evidence AGAINST Belletti's hypothesis that unaccusative verbs can't have definite objects. For many speakers, unaccusative and passive verbs are acceptable with a postverbal DP that doesn't trigger agreement with the verb; when this DP is definite, it is often preceded by *et* (see for instance Siloni 1997). Contrary to Belletti's prediction, it is indefinites that are unacceptable in this environment:

(37) a. nimsar li et ha-hodaʔa ha-zot.
handed.MASC to-me et the-message.FM the-this
'This message was delivered to me.'
b. *nimsar li hodaʔa.

This is precisely what my analysis predicts: passive and accusative verbs lose the ability to assign case, and this explains the ungrammaticality of (37b). (37a) is possible because case is assigned by *et* and not by the verb. Belletti's analysis would predict (37b) to be grammatical, if unaccusatives in Hebrew were able to assign case that is compatible with indefinites only.

We conclude that Belletti's proposal of an abstract partitive receives no support from the case alternation found in Hebrew. This adds to the earlier conclusion that, given the distinction between formal and semantic definiteness in Hebrew, semantic generalizations such as those alluded to in Belletti's analysis don't seem to be relevant to the Hebrew system of object marking.

6.4. *Case/definiteness interactions across languages*

To conclude the discussion of Belletti's proposals, we should point out several other questions that it leaves unanswered. First, Belletti's analysis relates case alternations to definiteness effects but doesn't give any explanation why these effects are found only with objective case. As noted in section 5.1.1, this is something that happens in a variety of languages (and see also Lyons 1999 for a review), and therefore it must be derived from some general property. Under Belletti's account there is no reason why verbs alternate between accusative and partitive while other case-assigning heads do not show similar alternations that restrict the definiteness or specificity of the relevant DPs. For instance, why isn't there an inherent case that "competes" with nominative for the subject position in a manner similar to the way partitive is claimed to do in object position?[39] Belletti's system doesn't provide any way of predicting such phenomena. The analysis developed here does try to derive the effects observed in Hebrew from more general properties and solves at least part of this puzzle. Of the three kinds of case used in Hebrew, only one (accusative) is theta-related, and therefore inherent; this explains why the object position is the only environment where such phenomena are observed. And since verbs assign a theta role to their object in all languages, accusative case is probably the case most likely to be inherent in a variety of languages. If inherent accusative (and, as a result, lack of true ECM) can be found to correlate with definiteness effects in object position, then parts of the analysis of Hebrew could probably be extended to other languages.

Another important property shared by Finnish, Turkish, and Russian is the contrast between the rich morphological case system and the lack of definite articles. Hebrew, on the other hand, has no overt case marking but does have formal definiteness marking. A possible generalization is that only languages that lack either one of these marking systems can use the other to achieve part of the semantic effect of the missing distinction. M&V (1996: 202–203) reach a similar conclusion and suggest that case and definiteness may belong to the same grammatical system; as they note, however, the picture is complicated by languages that have both case and definiteness marking. For instance, case marking of objects in Scottish Gaelic is reminiscent of Finnish (Ramchand 1993), even though this language has definite articles.[40]

There are thus two possible parameters that together might be responsible for definiteness effects in object position: structural versus inherent accusative, and the degree of overt specification of definiteness and case, which could both be seen as "D-features." Though at this point

this is no more than a speculation, I believe that it is a step forward in understanding the process behind these puzzling phenomena.

7. Syntactic definiteness across languages

Is the definiteness feature seen in Hebrew the manifestation of a universal feature present across languages, or is it a phenomenon restricted to Semitic languages? This question, of course, presupposes that features can differ from language to language and are not necessarily universal. My assumption is that some sort of overt evidence must be present for each feature that is part of the grammar of a particular language. This is opposed to the assumption often made, explicitly or implicitly, that overt evidence for a feature in one language is sufficient for establishing its existence as an abstract feature universally. Thus, the question is whether there is sufficient evidence for assuming a definiteness feature in non-Semitic languages. In Lyons (1999), it was proposed that such a feature exists in all languages that have definite articles. I believe that this is still too strong, and that a formal feature is part of the grammar in only some of these languages, while in others the article is just another lexical item and not the realization of a grammatical feature, as Lyons claims.

One possible motivation for assuming a universal [def] feature, which must be rejected, is as a way of accounting for the source for semantic definiteness (Zwarts 1989). It should by now be clear that such a hypothesis is incompatible with the data from Hebrew, where formal [+def] specification isn't a necessary condition for a DP to be semantically definite, no matter how semantic definiteness is defined. Since it would be very odd to claim that overt formal definiteness in Hebrew doesn't correlate with a universal abstract formal definiteness, we must conclude that semantic definiteness is not simply the interpretation of a formal [def] feature. One might argue for an independent abstract formal feature, with little or no morphological or syntactic evidence, but it seems extremely improbable that such a feature would coexist with a similar overt feature, and it is almost impossible to see how a child would acquire such a feature. The hypothesis of a universal abstract [def] feature as the basis for semantic definiteness must therefore be rejected. Still, as was already mentioned, when a [+def] feature does exist, it is interpreted — but it isn't the only possible method of reaching such an interpretation.

In those languages where objective case determines semantic interpretation as definite or indefinite (or other related notions), such as in Turkish, the relation between case and definiteness can be formulated either as a

property of the syntax–semantics interface, or as a formal interaction at the syntactic level, along the lines developed in this paper for Hebrew. One possible formulation of the second approach is in terms of a [def] feature that is only compatible with a certain type of case. This, for instance, could be one possible interpretation of Belletti's ideas, where the proposed incompatibility of definite objects with partitive case (if such case can indeed be shown to exist universally) can be seen as some sort of feature mismatch. Similar considerations are present in M&V's proposal (where the presence of a [+COMPLETED] feature is explicitly assumed to be the relevant factor) and in de Hoop (1992). But the problem with assuming a [def] feature in these cases is, again, a problem of evidence. Assuming such a feature in these languages has no motivation other than the fact that it derives the correct results. In Finnish, for instance, where there are no articles and no overt definiteness marking (other than the related case marking), the language learner has no evidence that a given DP is [+def] other than its semantics; at the syntactic level, the difference is merely that of case marking. Therefore, the claim that a DP interpreted as a definite carries an abstract [+def] feature is vacuous. To make things worse, the interpretation of accusative DPs in Turkish or Finnish is not identical to that of Hebrew objects marked with *et* (and Turkish and Finnish differ from each other as well in this respect), so once again, we would have to say that an abstract [def] feature, with no overt realization other than case and semantic interpretation, doesn't match the overt [def] feature of Hebrew, which is an unwelcome result. The conclusion should be that there is no formal [def] feature in Turkish and Finnish, and that the case–definiteness effects in these languages are part of the syntax–semantics interface, where different case markings result in different interpretations, and that this has nothing to do with a definiteness feature. An important theoretical outcome is that case is sometimes relevant at the LF interface, contrary to what is assumed in the minimalist program (see for instance Chomsky 1995: 278).

The last kind of argument that can be proposed in favor of a formal [def] feature in non-Semitic languages is one based on environments where definite and indefinite articles or clitics produce different word orders. In Hellan (1985), for instance, it is argued that a [def] feature in Norwegian is responsible for differences in word order inside the DP. Hellan's claim is that a definiteness feature can either adjoin to the head noun, where it appears as a suffix, or appear as an independent article, and that head movement occurs in some configurations because of this feature. The relative order of adjectives with respect to the noun varies depending on the position of the [def] feature. Thus, his argument for a [def] feature is based on syntactic evidence of word order and overt

realization of the definite article. Similar data from other Scandinavian languages and from Romanian has been discussed by Grosu (1994), Giusti (1994, 1997), and Dobrovie-Sorin (2000). Based on such arguments, it seems reasonable that these languages indeed have a definiteness feature. First, the evidence is syntactic and not semantic, and second, the [def] feature in these cases does not have to be abstract, since the articles are overt. Word order, under the approach advocated here, can serve as evidence for the presence of a feature, if one assumes that only features can motivate movement (Chomsky 1995). Thus, an account linking the position of an article with word-order variations does not suffer from the circularity of an account that derives semantic phenomena from abstract features designed to express exactly these phenomena.

If one accepts that Scandinavian languages or Romanian do have a [def] feature, it should be noted that such a feature has properties that are language-specific and different, for instance, from the formal definiteness of Hebrew. But this should not be seen as a problem; just as languages differ in other features such as gender, they could differ in how definiteness is manifested. It seems as if the extensive interest in definiteness in the semantic field, which is based almost entirely on the analysis of English data, has moved this notion into a position where its universality is almost taken for granted. I believe that a certain "demystification" of definiteness is in order, as its arbitrary and language-specific realizations should suggest. This is needed at least if formal definiteness is to be accepted as a constituent in the inventory of possible formal features that a language may have.

8. Conclusion

This paper argued that definiteness as a syntactic feature exists in the grammar of Hebrew, but that it isn't a universal feature. Where it does exist, it is responsible for syntactic effects that can be described and analyzed without making any reference to the semantic level. It was shown that syntactic and semantic definiteness don't always overlap, and that the former cannot be seen as the unique source of the latter. This provides evidence against attempts to account for semantic definiteness effects as derived from an abstract [def] feature at the syntactic level.

I have argued that DPs marked [+def] require structural case, and that the different case assignment to definite and indefinite objects has nothing to do with semantic interpretation. In the course of the analysis, the case system of Hebrew was shown to rely to a very large extent on one sort of structural case, the genitive, which in addition to its use in

the nominal construct state is used in a wide range of syntactic environments. What was traditionally taken to be accusative case marking by the verb was in turn reanalyzed as genitive case marking within a PP. The proposal that accusative in Hebrew is inherent explains why a special object marker is needed for definite objects, while also accounting for the lack of ECM constructions in Hebrew.

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Notes

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1. The terms ''weak use'' and ''strong use'' here should not be confused with weak and strong features, as in Chomsky (1995); both weak and strong features in the sense of the minimalist program are formal features and hence belong to what I call the strong use of the term ''feature.''
2. See also Shlonsky (1997: 229) for phonological evidence that the article in Biblical Hebrew and in Standard Arabic forms a word with the noun that follows it.
3. Hebrew numerals have two forms; the distinction between the two is not important at this point and will be discussed later.
4. Throughout this paper I will refer to noun phrases as DPs (following Abney 1987), even though the analysis does not rely on any assumption that is specific to the DP hypothesis.
5. The idea that there is formal/syntactic definiteness in Hebrew in addition to semantic definiteness is not a new one; Glinert (1989), for instance, also distinguishes formal definiteness from semantic definiteness in his descriptive grammar of Hebrew; see also Ziv (1982: 276) and Wintner (2000).
6. As pointed out to me by an anonymous reviewer, there are cases where the use of an adjective makes an indefinite article possible, as in *a blue sky*. I think this falls under the generalization that (in)definiteness is semantically related to the entire DP, regardless of where or how many times it is marked.
7. There are some other languages, such as Greek, that display agreement in definiteness between nouns and adjectives. More research is needed to see to what extent the claims made here regarding Hebrew can be extended to these languages.
8. Similar facts found in Finnish, Turkish, and other languages will be discussed later.
9. The evidence for the definiteness of pronouns is not entirely clear, since pronouns can't normally be modified by adjectives, and thus rests only on the fact that morphologically pronouns in object position seem to be clitics on *et*.
10. It seems that the 'each' interpretation is incompatible with definiteness marking on the noun, as also seen by the English contrast *all the boys* vs. **each the boy(s)*. Still it is

not clear in what sense the entire quantified DP with *each* is less definite than the one with *all*.

11. In colloquial speech, speakers usually prefer a partitive containing a preposition (*exad me-ha-yeladim* 'one of-the-boys') over the one in (6), which is considered more formal. According to prescriptive grammars, the partitive with *me-* should not be preceded by *et*, but in everyday usage many speakers do precede it (optionally) with *et*. As pointed out to me by an anonymous reviewer, this may be indicative of a reanalysis that is taking place in the language.
12. I am grateful to an anonymous reviewer for pointing out this fact to me.
13. I will not discuss compounds, which are often lexicalized constructs (see for instance Berman and Ravid 1986; Borer 1988); in compounds, it might be that the associate is not a full DP. See also Dobrovie-Sorin (2000), who argues that even in nonlexicalized constructs the associate is sometimes just an NP.
14. In some cases this morphological operation produces no audible change; this happens, for instance, in words consisting of a single syllable.
15. As noted by an anonymous reviewer, it might be possible to argue that the morphological change on the head noun is itself some sort of case morphology; however, since this morphology is not related to the syntactic environment in which the full DP appears, I will not pursue this idea.
16. The CS is used more often in written or formal usage than in everyday speech; see Ravid and Shlesinger (1995).
17. To this one could also add such kinship nouns as *ima* 'mother', *aba* 'father', *saba* 'grandfather', etc, which are also inherently [+def]:

    (i) pagašti *(et) ima/aba/saba šel Dani etmol.
    met-1SG *(et) mother/father/grandfather of Dani yesterday

    It is interesting to note that this does not include all kinship nouns, and that the relevant criterion does not seem to be semantic; nouns like *baʔal* 'husband' and *iša* 'wife', which refer to relations that are more "definite" than 'grandfather of —', are not formally definite without overt marking by the definite article:

    (ii) pagašti et *(ha-) baʔal šel Dana etmol.
    met-1SG et *(the-) husband of Dana yesterday

    It seems that the relevant factor is sociolinguistic, with the set of nouns that are used as names being inherently [+def] just like other proper names. Compare this with the discussion of similar facts in Italian in Longobardi (1996).
18. Such recursive CSs are relatively rare in everyday spoken language (Ravid and Shlesinger 1995), while extremely productive in the written language.
19. Other "definite determiners," such as *this* and *my*, can also be defined as (contextually dependent) operators of the type $<<e, t>, e>$.
20. There is no circularity here, even though the presence of *et* was used in establishing the existence of [+def] DPs. First, definiteness agreement of APs with the head noun is an independent means of identifying [+def], and therefore the use of *et* as a diagnostic is not the only way of characterizing formal definiteness. Furthermore, the recursive definition of [+def] DPs in section 4.1 does not make any reference to *et*.
21. Siloni (1997) uses this as evidence that accusative case in event nominals is assigned by *et*, unlike accusative in VPs, which is assigned by the verb and is morphologically realized as *et*. Even though I agree that the case-assigning properties of N and V are different, the analysis developed here does not distinguish between two varieties of *et*.

22. One might argue that *yeš* is in the process of turning into a verbal element, and in that case the presence of *et* is not surprising. There are, however, many differences between *yeš* and real verbs, and at least one should admit that *et* is not restricted to lexical items that show the full inflectional paradigm of verbs. See Doron (1983) and Shlonsky (1987) for a discussion of the properties of *yeš*.
23. Throughout this paper I use the term "case assignment" as in GB theory, rather than "case checking," mainly because the former term applies to both structural and inherent case, while checking might be taken to involve only structural case. A reformulation of the theory developed here using the terminology of the minimalist program is possible, given an updated view of the structural/inherent case distinction.
24. I ignore the question whether the predicate in a SC is an XP or an X′; furthermore, I will concentrate only on AP predicates for simplicity.
25. It is unnecessary to show here that *lecapot* 'to expect' in Hebrew is not a control verb, because the whole point of the discussion is to establish the lack of true ECM in Hebrew.
26. Siloni (1997) discusses the Hebrew gerund, which is actually a bare infinitive. However, it is shown there that this element differs in many ways from the verbal infinitive, and for the current discussion this form can be ignored.
27. If one assumes that a small clause is not one constituent but rather an object DP/NP followed by some kind of adjunct (Williams 1983; Schein 1995), then obviously it doesn't give rise to an ECM structure. In what follows, however, I will assume that SCs do form a single constituent.
28. At least in Hebrew and English. In a language like English, which does have ECM structures, a SC is perhaps ambiguous, with both the ECM and the non-ECM options available. I leave it as an open question whether the claim that SCs don't involve ECM is true universally. As pointed out to me by Tal Siloni (personal communication), French too allows only SCs and not infinitival ECM:

    (i) Je crois Jean intelligent.
    *Je crois Jean être intelligent.

29. A similar idea is proposed by Maling and Vainikka (1996).
30. The pronoun system does show what seem to be case inflections, and in this respect object pronouns are morphologically different from subject or PP pronouns; but since object pronouns are all morphologically related to *et* there is no way of separating the case properties of these pronouns from the general properties of *et* in order to tell whether object pronouns are really accusative. It should also be noted that the inflectional paradigm of pronominal clitics on *et* and all Ps is exactly the same as the inflection of pronominal genitives in the nominal system.
31. A similar construction in Dutch ("faded partitives") is discussed in de Hoop (1998). She makes a distiction between two classes of bare partitives, which differ in meaning and in syntactic distribution, focusing only on those that have a more NP-like behavior. I am not sure whether this distinction is relevant to the current discussion and will use the term "bare partitives" for all partitive constructions that have no overt determiner.
32. Not all verbs allow bare partitive objects; the exact characterization of the set of verbs that allow these is beyond the scope of this paper and probably involves some aspectual properties of the verbs' semantics.
33. A problem raised by the analysis of *šel* as a structural genitive assigner is that *šel* is more sensitive to the role of the DP that follows it than nominal heads of CS (cf. Siloni 1997). However, since *šel* isn't restricted to event nominals and can express nonthematic relations as well, I won't adopt Siloni's proposal that *šel* assigns inherent genitive.

34. With the exception noted in section 3, that *et* might have some effect on interpretation that is not yet clear, perhaps acting as a type-shifting operator.
35. Belletti does not attempt to explain why only indefinites are compatible with partitive, and neither does she try to give a precise characterization of what is meant by "indefinite." Thus, even if one accepts Belletti's proposals, they should by no means be taken as a full explanation of the DE.
36. Even though M&V show that Belletti's abstract partitive is no more than indefiniteness, they do not reject her approach altogether but rather try to improve it, being aware of its explanatory shortcomings. In particular, they consider the possibility that "indefiniteness marking" in Indo-European languages is itself an instantiation of abstract case.
37. Furthermore, Belletti doesn't specify what exactly the set of definite DPs is, other than the most prototypical definites; since there are various definitions of definiteness, it is hard to tell to what extent the proposed generalization actually works.
38. I am not claiming that Hebrew has partitive CASE, but only that bare partitives are semantically equivalent to the Finnish partitive. As far as case is concerned, it seems that BP objects in Hebrew involve Gen just like any other PP.
39. Quirky case, as found in Icelandic, is lexically limited to subjects of particular verbs, unlike the case alternations in object position that do not depend on the choice of verb. The subject-case alternations found in split-ergative languages are a more productive system, but I am not aware of any split-ergative language in which the case of the subject is related to its definiteness.
40. I am grateful to an anonymous reviewer for pointing this out to me.

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