To appear in *Natural Language & Linguistic Theory* 24(4)

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Caseless nominals and the projection of DP*

July 31, 2006

Abstract

Modern Hebrew differentiates between definite and indefinite objects, using a prepositional object marker only in front of definites. This article explores the hypothesis that lack of an object marker when the object is indefinite follows from lack of abstract Case on indefinite objects. It is shown that indefinites in Hebrew are allowed in various other positions in which Case seems to be unavailable and in which definites are not allowed, a fact that gets a straightforward account under the proposed hypothesis that indefinites do not require Case. The possibility of having Caseless indefinites is then argued to follow from lack of a DP projection in Hebrew indefinites. The second part of this article aims to show that an analysis of indefinites in Hebrew as lacking a DP projection is indeed possible and can be motivated on independent grounds. This involves a reexamination of the arguments that have motivated the influential N-to-D analysis of Semitic noun phrases. I claim that most previous work on Semitic nominals is in fact compatible with an analysis in which nouns do not raise as high as the D position, and that the hypothesis that indefinites in Hebrew are not full DPs has some explanatory advantages over the view that all construct state nominals in Hebrew are DPs.

1 Introduction

Ever since the introduction of the Case Filter into Government & Binding Theory (Chomsky 1981) and its reformulation as the Visibility Condition (Chomsky 1986), the assumption that all nominal arguments must have Case has been among the most widely accepted principles of syntactic theory. This assumption has remained more or less unquestioned in the transition from GB to the Minimalist Program (Chomsky 1995, 2000, 2001); despite the shift in perspective from Case assignment to Case checking, Case theory (now part of checking theory) still assumes that all argument DPs have an uninterpretable Case feature, which must be checked in the course of the derivation. The only possible exception involves nominals bearing inherent Case, which might be trivially checked at merge time.

This article discusses evidence from Modern Hebrew that challenges the hypothesis that all thematically-licensed nominals must check abstract Case. Indefinites in Hebrew are allowed to appear in a variety of apparently Caseless positions,

*I would like to thank Irena Botwinik-Rotem, Marcel den Dikken, Edit Doron, Anita Mittwoch, Tanya Reinhart, Tali Siloni, and three anonymous NLLT reviewers for their valuable and insightful comments on earlier versions of this article. Any remaining errors are of course my own.

a fact that might suggest an analysis along the lines of Belletti (1988), where an abstract inherent Case compatible only with indefinites is assumed to license seemingly 'Caseless' nominals; or along the lines of de Hoop (1992), where indefinites in certain positions are claimed to be licensed by 'weak Case'. However, I will argue that taking the relevant indefinites in Hebrew to be truly Caseless can account for the facts in a much more straightforward manner. My claim will thus be that indefinites in Hebrew require nothing but thematic licensing. Hence, Case and θ-role assignment will be argued to be totally independent of each other, contra Chomsky's (1986) Visibility Condition. On the other hand, I will show that a different kind of Case-related visibility does play a significant role, namely, the visibility of the noun phrase to Case itself: indefinites in Hebrew (as well as some other languages) will be argued to be invisible to the effects of the Case Filter.

Although the empirical facts to be discussed strongly suggest that indefinites in Hebrew are Caseless, the theoretical question is *why* Case should be sensitive to definiteness. I will argue that what allows indefinites in Hebrew to lack a Case feature is the fact that indefinites in this language lack a DP level, along the lines proposed in Chomsky (2000, p.139). This will allow us to maintain the simple assumption that Case features are uniformly features of D^o. On the other hand, this view of Hebrew indefinites challenges another assumption often made in the literature, namely, that all nominal arguments are DPs (Stowell 1989; Longobardi 1994; Szabolcsi 1994; and others). Even though this assumption seems to be well-motivated for many languages, I will argue that it is not necessarily a universal principle.

The organization of this paper is as follows: Section 2 focuses on indefinite objects, which, I claim, lack Case in Hebrew as well as in a variety of other languages. Section 3 shows that the object position in Hebrew is not unique in distinguishing between indefinites and definites, and that the former can appear in many other Caseless positions. In section 4, I focus on the internal structure of indefinites in Hebrew, and show that an analysis of indefinites as less than full DPs is not only possible but can be motivated for reasons that have nothing to do with Case. This crucially depends on a reexamination of some of the claims made in the literature regarding N-to-D movement; I will argue that even though there might be good reasons to assume movement inside the Hebrew noun phrase, there is no reason to assume that N moves as high as D in the formation of construct state nominals. Finally, in section 5, I consider the extent to which the analysis proposed for Hebrew noun phrases can be extended to other languages.

2 Caseless objects

2.1 Caseless indefinite objects in Hebrew

The phenomenon known as differential object marking (DOM) provides the immediate motivation for questioning the assumption that all nominal arguments check Case. Differential object marking can be defined as presence of either case[1] morphology or an object marker with some direct objects and not with others (Aissen 2003). In Hebrew, only definite direct objects are marked with the prepositional element *et* (Danon 2001, 2002):[2]

(1) a. Dan kara *(et) ha-itonim.
Dan read OM *the-newspapers*
Dan read the newspapers.

b. Dan kara (*et) (kama) itonim.
Dan read OM *some newspapers*
Dan read (some) newspapers.

There are two major approaches with respect to the nature of the object marker *et*: according to some authors, *et* is the realization of accusative Case assigned by the verb (Hazout 1991; Shlonsky 1997); alternatively, others assume that *et* is a preposition, which itself assigns Case to the object (Falk 1991; Danon 2001, 2002). The fact that *et* appears only with definites, however, poses a problem to both of these approaches. When *et* is not present, the indefinite object seems to be Caseless: for the first approach, it is the case morphology which is missing; for the second approach, the abstract Case assigner is missing. If the verb could assign Case independently of *et*, then the need for *et* with definites would have been a mystery. It thus seems impossible to maintain both the assumption that presence of *et* with definites is evidence for abstract accusative Case, and the assumption that indefinites bear accusative just as definites do. Previous work on Hebrew has usually stipulated that accusative is overtly marked only on definites, without offering an explanation for *why* accusative should distinguish definites from indefinites.[3] In what follows, I will focus on the Case-theoretic status of indefinites, and thus on environments where *et* is not found; the status of *et* will be further discussed in §3.4.1.

One line of explanation for the lack of *et* with indefinites that must be rejected is that indefinites are morphologically incompatible with *et*. Partial motivation for this idea comes from the fact that in colloquial Hebrew, *et* is usually cliticized to the definite article *ha-*, giving rise to the phonologically reduced form *ta-* (=*et*+*ha*):

[1] Using standard notation, I distinguish abstract *Case* from morphological *case*.

[2] In literary or written Hebrew, *et* is sometimes omitted even when the object is definite; in spoken Hebrew, *et*-dropping with definites is very rare and considered marginal.

[3] Many authors also note that similar facts occur in other languages.

(2) Dan kara ta- itonim.
Dan read OM+*the- newspapers*
Dan read the newspapers.

However, the contrast between definite and indefinite objects appears even when the object is a complex nominal that does not begin with the definite article. For instance, in construct state nominals (CSNs), there is no definiteness marking on the phrase-initial N, yet the use of *et* is restricted to definite CSNs:[4]

(3) a. Dan axal *(et) ugat ha-šokolad.
Dan ate OM *cake the-chocolate*
Dan ate the chocolate cake.

b. Dan axal (*et) ugat šokolad.
Dan ate OM *cake chocolate*
Dan ate a chocolate cake.

It is thus clear that there is no morphological reason for blocking *et* in front of indefinites.

One previous attempt to explain the distribution of *et* was given in Danon (2001), where DOM in Hebrew was argued to be related to the structural/inherent Case distinction. According to Danon (2001), verbs in Hebrew assign *inherent* accusative. This claim is supported by the fact that Hebrew lacks infinitival ECM constructions of the kind found in English.[5] The object marker *et*, on the other hand, was argued to be a dummy preposition that assigns structural Case. The contrast between definite and indefinite objects then follows if definites in Hebrew require *structural* (and not inherent) Case, a requirement not shared by indefinites.

Though logically possible, this analysis leaves many major problems unresolved. Most importantly, it is not clear why definites should be required to have *structural* Case. Structural Case differs from inherent Case in being a purely configurational relation between a head and a DP; inherent Case, as defined in Chomsky (1981, 1986), contains on top of the configurational relation an additional thematic relation. In this respect, inherent Case can be seen as a stronger relation than structural Case, and one would not expect inherent Case to be 'insufficient' for certain classes of DPs. Furthermore, it is not immediately obvious why definiteness should make a DP more selective in the kind of Case it requires.

Despite these difficulties, I believe that the idea of linking *et* to structural Case is essentially correct. By reconsidering the notion of inherent Case in view of re-

[4]Definiteness of the entire complex DP is determined by the definiteness of the embedded genitive phrase. See Borer (1999); Dobrovie-Sorin (2000, 2003); Danon (2001); Siloni (2001) and many others.

[5]Hebrew does, however, have small clause complements of perception verbs. Danon (2001, 2002) argues that this is possible because subjects of SCs are not dependent on clause-external Case in the same way that subjects of infinitival clauses are.

cent syntactic work, this kind of analysis can be given a much simpler formulation that avoids some of the difficulties. As noted by many researchers over the years, the notion of inherent Case has proven to be quite problematic (see for instance Webelhuth 1995, pp. 56–59). When the Case Filter was reformulated as a Visibility Condition on θ-role assignment, a certain circularity has been introduced into the definition of inherent Case: inherent Case is assigned in conjunction with a θ-role, and at the same time it also serves to license θ-role assignment. In the Minimalist Program (Chomsky 1995, 2000, 2001), structural Case has been incorporated into checking theory, while the place of inherent Case in the theory has become somewhat unclear (Chomsky 1995, p. 386, fn. 55; Chomsky 2000, p. 148, fn. 87). Additionally, it has often been claimed that certain DPs carry both inherent Case and structural Case at the same time, most notably in quirky subject constructions in languages such as Icelandic (Chomsky 2000; Bošković 2002; and references cited there); if true, it is not clear that inherent Case actually plays any role in licensing a DP.

Perhaps the most straightforward way to address these difficulties is to assume that 'inherent Case' is not really part of Case theory. All arguments require thematic licensing, independently of the need for abstract Case. I propose that 'inherent Case' is actually nothing more than this thematic licensing.[6] [7]In what follows, I will reserve the term *Case* to structural Case, i.e. to a purely structural licensing relation between a head and a DP.

Under these assumptions, the analysis of Hebrew DOM proposed in Danon (2001) can be restated as follows: The difference between definites and indefinites in Hebrew revolves around the presence of a Case feature. Indefinites do not carry a Case feature, and therefore do not need to enter a checking relation with a Case assigning head; the only licensing condition that an indefinite has to satisfy is thus a thematic one. A definite object, on the other hand, must check Case, which is reflected by the fact that it must be preceded by *et* (or, under certain circumstances, another preposition). In section 4, I will further argue that this difference between definites and indefinites with respect to Case follows from a difference in the internal structure of the noun phrase, such that in Hebrew, only definites are DPs, while indefinites lack the D^{o} head which is the locus of Case features.

[6] As usual, one should distinguish between abstract and morphological case. My claim is that '*abstract* inherent Case' is thematic licensing. It would then be necessary to assume that morphological case is determined by a combination of structural Case and θ-role, such that the *morphological* case of nominals bearing no structural Case may be determined independently of abstract Case.

[7] A somewhat similar view of the relationship between Case and thematic licensing is proposed by Reinhart and Siloni (2005, sec. 7), who suggest that Case is composed of a thematic component and a structural component, where the structural component may sometimes be absent. I believe that the analysis to be developed in this paper can easily be reformulated in terms of the system of Reinhart & Siloni; yet I do not think that using that system would offer any advantage here, and therefore I will keep to more familiar terminology and assumptions.

Even though the main claims in this paper should be compatible with various views of Case Theory, I should make explicit the following assumptions. I will assume that DPs enter the derivation carrying an uninterpretable Case feature that must be checked against a matching Case feature of a head, as in Chomsky (1995). I will not assume that the Case feature on DP is simply an 'activator' for other formal features as proposed in Chomsky (2000, p.127), but will keep to a more traditional view of Case as a licensing feature of DPs.[8] Finally, I will assume that heads traditionally viewed as Case assigners, such as T, carry a Case feature only optionally, such that an indefinite subject does not lead to ungrammaticality as a result of leaving an unchecked Case feature on T.

2.2 Caseless indefinite objects across languages

Differential object marking is not just an idiosyncratic property of Hebrew, but a rather common pattern that has not been fully addressed by Case Theory yet. As even a brief cross-linguistic survey will show, Hebrew is far from unique in marking only definite objects. Many other languages, such as Spanish and Romanian, use a prepositional element in front of definite or animate objects (Borer 1984; Dobrovie-Sorin 1994; Torrego 1998; Aissen 2003).[9] That this kind of phenomenon is Case-related is evident from the great number of languages with case morphology in which accusative case is morphologically marked only on definite objects.

In Turkish, accusative case triggers a definite (or specific) interpretation of the object (Enç 1991; Lewis 1991; Erguvanli Taylan and Zimmer 1994):

(4) a. Ali kitaplar okudu. (Turkish)
Ali books read
Ali read (some) books.

b. Ali kitaplar -ı okudu.
Ali books -ACC read
Ali read the books.

Some other languages that display similar patterns include Hindi/Urdu (Butt 1993), Persian (Karimi 1996), and Scottish Gaelic (Ramchand 1993), to name just a few.

Under the standard view of the relation between abstract and morphological case, lack of case morphology does not imply lack of abstract Case. Even though this is a reasonable assumption for languages that uniformly lack case morphology, it seems much less natural in the context of DOM. Clearly, if facts such as those

[8] In the framework of Chomsky (2000), a noun phrase cannot enter into an agreement relation unless it has an uninterpretable Case feature. This is incompatible with the analysis to be proposed here, since indefinite subjects in Hebrew trigger agreement just as definites do.

[9] The exact semantic property that correlates with DOM may be definiteness, specificity, animacy, etc. (Aissen 2003). At this point, I will abstract away from these semantic details. This issue will be addressed in section 5.

in (4) occur systematically in many unrelated languages, this should follow from universal principles of grammar; dismissing this pattern as an insignificant morphological idiosyncrasy seems to miss a real generalization. Within the framework of the Minimalist Program (Chomsky 1995), a central hypothesis is that syntactic operations are triggered by the need to check formal features, often realized as inflectional morphology. In this context, the most straightforward interpretation of the contrast in (4) is that indefinite objects in languages like Turkish lack an abstract Case feature as well.

Languages with object agreement provide similar evidence for the hypothesis that indefinites may be syntactically less 'visible' than definites. Object agreement is commonly assumed to be a reflex of the accusative checking relation between the verb and its object. It is thus not surprising that the phenomenon of DOM extends to what might be labeled 'differential object agreement' (DOA). Some languages, such as Swahili (Lyons 1999), Hungarian (Bartos 2001), Palauan (Georgopoulos 1998; Woolford 2000) and Muna (Georgopoulos 1998) tend to mark object agreement only when the object is definite or animate, as illustrated by the following example from Swahili:[10]

(5) a. Ni- li- ki- soma kitabu. (Swahili)
1SG PAST OBJ read book
I read the book.

b. Ni- li- soma kitabu.
1SG PAST read book
I read a book.
(Lyons 1999, p. 210)

The pattern of object agreement in Hungarian is especially relevant to the Hebrew facts. As discussed in Szabolcsi (1994, pp. 222-223), Lyons (1999, pp. 207-208) and Bartos (2001), verbs in Hungarian have two different inflectional paradigms: one that is used with transitive verbs, known as the objective inflection; and one that is used mostly with intransitive verbs, the subjective inflection. In the objective paradigm, the agreement morpheme on the verb encodes ϕ-features of the subject, as well as the presence of an object. However, there are cases where the objective inflection is not used even though the verb is transitive. In particular, indefinite objects trigger the subjective inflection. The following examples from Bartos (2001, p. 312) illustrate this fact:[11]

[10] Admittedly, this is an oversimplification of the Swahili facts; according to Seidl and Dimitriadis (1997), factors such as the discourse status of the object play a central role in this language. I believe that this is compatible with the approach to be developed in this paper; see in particular the discussion in section 5.

[11] It should be noted that accusative case morphology is retained on the indefinite object, despite the lack of object agreement. This could mean that morphological accusative case in Hungarian is

(6) a. Látom a fiút. (Hungarian)
see.1SG.OB the boy.ACC
I see the boy.

b. Látok egy fiút.
see.1SG.SU a boy.ACC
I see a boy.

c. Látok.
see.1SG.SU
I can see.

As noted by Szabolcsi (1994) and discussed in detail by Bartos (2001), characterizing the class of objects that trigger objective morphology as definites is actually not the correct generalization. Although in most cases definiteness of the object correlates with objective agreement, the relevant factor actually seems to be the syntactic structure of the object. Based on the analysis of Hungarian noun phrases developed in Szabolcsi (1994), Bartos argues that the objective inflection appears iff the object contains a DP projection. Determiners that occupy a position below the DP level in Hungarian, such as the indefinite article (which is homophonous to the numeral 'one'), numerals, and most quantifiers, do not trigger objective agreement; this contrasts with the definite article, which occupies the D position and which triggers the objective agreement. Bartos proposes that not all nominal arguments in Hungarian project a DP layer, and that verbs agree only with DP objects. Thus, differential agreement morphology correlates directly with the syntactic structure of the object. This kind of analysis is, of course, much better from an explanatory perspective than stipulating that an abstract checking relation always holds, regardless of the morphological paradigms. One of the central claims of this paper is that an analysis along the lines proposed by Bartos for Hungarian can also be applied to the Hebrew data. In section 4, I will argue that, like DOA in Hungarian, DOM in Hebrew is in fact dependent on a *syntactic* classification of noun phrases, which usually (but not always) correlates with semantic definiteness.

Another variation on the 'invisibility' of indefinite objects is found in certain languages that use 'intransitivizing' morphology to turn transitive verbs into intransitives. In some cases, transitive verbs undergo this morphological process when the object is indefinite. This happens, for instance, in the Western Austronesian language Selayarese, an ergative language in which verbs agree with subjects and with definite objects. An indefinite object does not trigger agreement on the verb, and thus Selayarese serves as another example of the DOA pattern discussed

assigned based on θ-role, while checking the abstract accusative feature is reflected morphologically in the agreement on the verb. This is more or less what Bartos (2001) proposes, following a similar proposal by Laka (1993). For the present discussion, the 'invisibility' of indefinite objects with respect to agreement is what requires an explanation.

above. Moreover, in the presence of an indefinite object, the verb bears the same morphology as an intransitive verb (Basri and Finer 1987; Georgopoulos 1998); an 'intransitivizer' morpheme is prefixed to the verb, and the subject agreement morpheme becomes a suffix, as with intransitives. In contrast, transitive verbs with *definite* objects carry subject agreement as a prefix while the object agreement morpheme is a suffix: [12]

(7) a. La- ʔalle- i doe- iñjo i Basoʔ. (Selayarese)
3- take- 3 money- the h Basoʔ
Basoʔ took the money.[13]

b. (A)ng- ʔalle- i doeʔ i Basoʔ.
INTR- take- 3 money h Basoʔ
Basoʔ took (some) money.

(Georgopoulos 1998, pp. 311-312)

Crucially, the 'intransitivity' in (7b) is not at the thematic level: the object is still present and is thematically licensed by the verb. The split between thematic and morphosyntactic licensing is thus extremely clear in this language. As opposed to the thematic visibility of the object in (7b), I take the intransitive morphology and lack of verb agreement to signal that no feature-checking takes place between the verb and the indefinite object.

To summarize, there is ample cross-linguistic evidence to support the idea that indefinite objects in some languages do not enter into the same checking relations as definite objects. The Hebrew DOM pattern is thus not an isolated fact, but rather an instantiation of a general pattern with overt morphological evidence in a variety of languages that are typologically unrelated to each other. The general claim is that in languages that distinguish between definite and indefinite objects in terms of case morphology, agreement, or similar forms of morphosyntactic marking, indefinites lack the Case feature found on definites.[14]

[12] The data from Selayarese is highly reminiscent of the so-called ANTIPASSIVE construction found in many ergative languages. In the antipassive, the direct object of a transitive verb is "either suppressed (left implicit) or realized as an oblique complement" (Polinsky 2005), with the agreement morphology on the verb following the pattern of intransitive verbs (thus failing to agree with the object). In many of the languages in which the antipassive is found, this construction tends to be associated with indefinite objects, thus raising the question whether the antipassive can be taken to be another instance of the more general phenomenon of 'invisible' indefinites. Given the complexity of the data regarding the distribution of the antipassive, and the many counterexamples to the claim that it is obligatorily associated with indefiniteness (see for instance Bittner 1987 and Polinsky 2005), I leave the relationship between the antipassive and the other constructions discussed here as an open question.

[13] *h*=[+human] DP marker.

[14] I do not claim that this is true for languages in which definite and indefinite objects display similar morphosyntactic properties; in such languages, it would be reasonable to assume that there

3 Caseless arguments in other positions

The hypothesis that indefinite objects in Hebrew do not need Case makes strong predictions regarding the distribution of indefinites. If indefinites may be licensed without Case, we expect them to be more flexible in their distribution than definites, being able to appear in additional positions that are licensed only thematically. In this section, I will show that this prediction is indeed borne out: Hebrew allows the use of indefinites in several other Caseless positions, positions in which definites are blocked.

3.1 Non-agreeing internal arguments of unaccusative verbs

One of the obvious places to look for arguments that are licensed thematically but not by Case is the internal argument position of unaccusatives. Unaccusatives in Hebrew allow their argument to appear either in the preverbal subject position or postverbally (Shlonsky 1987; Reinhart and Siloni 2004). In standard Hebrew, the argument must agree with the verb, in both positions, which I take to be a reflex of nominative Case (Borer 1986). But in colloquial Hebrew, unaccusatives are sometimes used with postverbal indefinite arguments that do not trigger agreement, as in (8b); this alternates with the standard agreeing form in (8a):[15]

(8) a. niš‘ar-u li rak štey xatixot.
remain.3PL to me only two piece.PL.FM
I have only two pieces remaining.

b. niš‘ar li rak štey xatixot.
remain.3SG.MS to me only two piece.PL.FM
I have only two pieces remaining.

Definites must trigger agreement on the verb, unless preceded by the object marker *et*, as illustrated in (9c):[16]

(9) a. niš‘ar-u li rak štey ha- xatixot ha- axronot.
remain.3PL to me only two the- piece.PL.FM the- last.PL.FM
I have only the last two pieces remaining.

is no formal syntactic difference between definites and indefinites. The source of the cross-linguistic variation in this area may be nothing more than the existence and categorial status of indefinite articles in each language, combined with differences in the features marked on D; see the discussion in section 4.

[15] Judgments vary widely regarding the use of such non-agreeing arguments; most speakers tend to view these as substandard and 'degenerate', but there is no doubt that the non-agreeing forms are used in everyday speech by quite a lot of speakers.

[16] This by itself seems to pose strong evidence that *et* is not the realization of accusative Case, which should not be available with unaccusative verbs; see §3.4.1. Like non-agreeing indefinites, the use of *et* with unaccusatives is limited to colloquial Hebrew.

b. * nišʿar li rak štey ha- xatixot ha- axronot.
remain.3SG.MS to me only two the- piece.PL.FM the- last.PL.FM

c. nišʿar li rak et štey ha- xatixot ha- axronot.
remain.3SG.MS to me only OM two the- piece.PL.FM the- last.PL.FM
I have only the last two pieces remaining.

Many speakers who do not accept non-agreeing arguments with most unaccusative verbs do accept these with the verb *haya*, 'to be', as in (10b); again, there is a strong preference for *et* when the non-agreeing argument is definite, as in (10c):

(10) a. hayu li hamon raʿayonot.
was.3PL to me plenty ideas.PL.FM
I had plenty of ideas.

b. haya li hamon raʿayonot.
was.3SG.MS to me plenty ideas.PL.FM
I had plenty of ideas.

c. haya li ??(et) ha- raʿayonot haxi tovim.
was.3SG.MS to me OM the- ideas.PL.FM most good
I had the best ideas.

These facts are precisely what the Caseless analysis of indefinites predicts: indefinites must be licensed thematically, but do not require Case, and therefore may appear in a position where no Case is available.[17] Definites, on the other hand, must check Case, either via agreement with the verb or by use of *et*.

For a small subclass of unaccusatives that have acquired new idiomatic uses in modern Hebrew, lack of agreement with the postverbal noun phrase is the unmarked form. The following examples, with non-agreeing indefinites, are used in everyday speech even by speakers who consider examples like (8b) to be unacceptable:

(11) a. magiʿa lo makot.
arrives.3SG.MS to him blows.PL.FM
He deserves spanking.

b. ba li ugiyot xemʿa.
comes.3SG.MS to me cookies.PL.FM butter
I feel like having butter cookies.

In fact, these examples are judged better than similar ones where the verb does agree with the nominal argument (the agreeing parallel of (11b) is ungrammatical,

[17] What the analysis does not explain is the rather limited use of such non-agreeing arguments, and their absence from the standard language. The latter might be due to the inventory of null expletives: standard Hebrew seems to have a null equivalent of English *there*, which bears no ϕ-features, while colloquial Hebrew also has a null equivalent of French *il*, which can check the agreement features on the verb.

except for the absurd literal interpretation "Butter cookies are coming to me"). As these verbs are both unaccusative, it is clear that the nominal does not check accusative Case; and the lack of agreement means that it does not check nominative either. The conclusion is that it must be Caseless. The fact that definites are not allowed in these constructions is exactly what we predict:[18] [19]

(12) a. * magi'a lo ha- makot.
arrives.3SG.MS to him the- blows.PL.FM

b. * ba li ha- ugiyot ha- ele.
comes.3SG.MS to me the- cookies.PL.FM the- these

Thus, unaccusative verbs, especially in colloquial Hebrew and in more recent idiomatic uses, provide an additional environment in which Caseless indefinites are allowed, as opposed to definites, which must check Case.

3.2 Argument-taking adjectives

In Hebrew, as in many other languages, adjectives do not assign Case.[20] Argument-taking adjectives therefore make use of various prepositions to license their nominal arguments:

(13) a. Dan ge'e *(be-) bno.
Dan proud in- his son
Dan is proud of his son.

b. Dan meruce *(me-) ha- macav.
Dan satisfied from the situation
Dan is satisfied with the situation.

There is, however, a class of adjectives that allow the preposition to be dropped when the argument is indefinite. Some adjectives of this class are *male* 'full', *mexuse*

[18] Example (12b) can be made grammatical by using the preposition *al*, 'on', in front of the definite DP. This is, of course, what the analysis predicts, assuming that prepositions are Case assigners.

[19] The verb *mat'im* ('suit') seems to display a similar pattern:

(i) a. mat'im li mis'ada sinit.
suits.3SG.MS to me restaurant.SG.FM Chinese
A Chinese restaurant suits me.

b. ?? mat'im li ha- mis'ada ha- sinit.
suits.3SG.MS to me the- restaurant.SG.FM the- Chinese

With this verb, however, many speakers feel that the theme is always preceded by an observable intonation break, which suggests that this could be a different construction. This would also explain the greater degree of acceptability of a definite theme in examples such as (ib), compared to the definites in (12).

[20] More precisely, adjectives in Hebrew *in their free form* do not assign Case. As discussed in Siloni (2002), an adjective can also be used as a head of a construct state, where it could be argued that the adjective does assign (genitive) Case.

'covered', *amus* 'loaded', *lavuš* 'dressed' and *atuf* 'wrapped':

(14) a. ha- oxel haya male (be-) nemalim adumot.
the- food was full in- ants red
The food was full of red ants.

b. ha- šamayim mexusim (be-) ananim šxorim.
the sky covered in- clouds black
The sky is covered with black clouds.

Definites contrast with indefinites by not allowing the preposition to be dropped:[21]

(15) a. ha- oxel haya male ba-/ *ha- nemalim ha- adumot.
the- food was full in-the-/ the- ants the- red
The food was full of the red ants.

b. ha- šamayim mexusim ba-/ *ha- ananim ha- šxorim.
the sky covered in-the-/ the- clouds the- black
The sky is covered with the black clouds.

Once again, this pattern is expected if definites, but not indefinites, must have Case in addition to being thematically licensed. Assuming that these constructions can be interpreted even if the preposition is missing, we have an immediate explanation for the fact that the preposition may be dropped in front of indefinites, where it is not required for Case assignment.[22]

As many of these adjectives are deverbal, it is not surprising that the same pattern emerges with some of the related verbal forms.[23] Thus, the verbs *hitmale* 'fill (up)', *hitkasa* 'cover (oneself)' and *hit'atef* 'wrap (oneself)' allow an optional internal argument that is usually preceded by the preposition *be-*; when the argument is indefinite, however, the preposition may be dropped:[24]

(16) a. Dan hitmale (be-) čips.
Dan filled in- French fries
Dan filled up with French fries.

[21] When the preposition *be-* precedes the definite article *ha-*, they merge into *ba-*, 'in the'.

[22] The fact that *be-* is still *possible* in (14), where Case is not needed, might suggest that, semantically, the preposition is not entirely vacuous, thus providing an additional reason for its presence. Assuming that *be-* in such cases carries some (minimal) semantic content would be supported by the fact that dropping this preposition is limited to a small class of adjectives that seem to have some common semantic characteristics.

[23] Incidentally, *mexusim* ('covered') in examples (14b) and (15b) above is ambiguous – it can be analyzed either as an adjectival passive or as a verb.

[24] Some additional restrictions may apply here. For instance, the verb *hitkasa* is ambiguous between a reflexive ('cover oneself') and an unaccusative ('cover (up)', 'get covered') use; prepositionless indefinites seem to be allowed only with the unaccusative reading:

(i) a. hu hitkasa *(be-) smixa.
he covered in- blanket
He covered himself with a blanket.

b. Dan hitmale ba-/ *ha- čips ha- ele.
Dan filled in-the-/ the French fries the- these
Dan filled up with these French fries.

It should also be noted that the morphological template of these verbs, known as the *hitpa'el* form, is strictly intransitive: to the best of my knowledge, there are no *hitpa'el* verbs that allow direct objects with *et*. Therefore, the fact that the verbs listed above allow an indefinite without using a preposition cannot be analyzed as involving some sort of accusative Case; the only explanation is that these indefinites do not check Case and are licensed by θ-role alone.

3.3 Event nominals

It has often been noticed (Hazout 1991; Siloni 1997; and many others) that event nominals in Hebrew can take both an internal and an external argument, marking a definite internal argument with *et*. Many authors also cite examples such as (17b) below, in which an indefinite internal argument leads to ungrammaticality:

(17) a. axilat Dan et ha- uga
eating Dan ACC *the- cake*
Dan's eating the cake

b. ??/* axilat Dan uga
eating Dan cake

The grammaticality of examples like (17a) has led some authors to the hypothesis that event nominals contain a VP projection (Hazout 1991; Borer 1999), a position argued against by Siloni (1997). None of these approaches provides a satisfactory explanation for the ungrammaticality of (17b), however. But in fact, the data regarding indefinites is more complex than what (17b) seems to suggest. As Hazout (1991) notes, complex indefinites are much better than bare nouns in this environment, and many speakers judge examples like the following (taken from Hazout 1991) to be perfectly grammatical:

(18) ? axilat Dan tapuxey-ec rabim
eating Dan apples many
Dan's eating many apples

In light of this, the contrast in NSO event nominals is actually not between definite and indefinite internal arguments, but between bare nouns and all other nominal

b. ha- šamayim hitkasu (be-) ananim šxorim.
the sky covered in- clouds black
The sky covered with black clouds.

arguments. Cross-linguistically, bare nouns are known to be subject to stricter licensing conditions (see for instance Zamparelli 2002). Assuming, therefore, that the ungrammaticality of (17b) follows from independent principles (such as the fact that the bare noun is not lexically governed), the central question is now what licenses the indefinite internal argument in (18). The current analysis provides a trivial answer: the indefinite needs nothing but thematic licensing, which is provided by the derived noun. This is compatible both with the VP-in-NP approach (Hazout 1991; Borer 1999) and with the VP-less analysis (Siloni 1997); for the latter approach, the Caseless indefinite hypothesis provides an alternative to the stipulation that the Case assigned to the internal argument of event nominals of the kind in (17b) is an inherent accusative compatible only with definites.

3.4 Cognate objects

As noted, for instance, by Mittwoch (1998) and Pereltsvaig (2001), Hebrew allows the use of cognate objects (COs) with essentially all kinds of verbs, unlike many other languages, which allow COs only with unergative verbs (Massam 1990). The following examples illustrate COs with unergative, unaccusative, and transitive verbs:

(19) a. Dan kafac kfica madhima.
Dan jumped jump amazing
Dan made an amazing jump.

b. Dan nafal nefila ko'evet.
Dan fell fall painful
Dan fell painfully.

c. Dan daxaf et ha- delet dxifa kala.
Dan pushed OM *the- door push light*
Dan pushed the door lightly.

One of the central questions regarding COs is how they get Case. This question is particularly interesting for a language like Hebrew, which allows COs with unaccusative verbs or in addition to the 'real' accusative object of a transitive verb. One answer proposed in the literature (Jones 1988) is that COs are not really arguments, and therefore are not subject to the Case Filter, which rules out the possibility of NPs (or DPs) that get a θ-role but no Case (Chomsky 1986). However, the behavior of definite COs in Hebrew poses a serious problem to this view. Like definite thematic objects, definite COs must be preceded by *et*:[25]

[25] As pointed out by Pereltsvaig (2001), definite COs are often judged marginal by some speakers, a fact that is probably related to their modificational interpretation. However, in those cases where a definite CO is acceptable, there is no optionality with respect to *et*.

(20) a. Dan kafac *(et) ha- kfica ha- rišona šelo etmol.
Dan jumped OM *the- jump the- first his yesterday*
Dan made his first jump yesterday.

b. Dan nafal *(et) ha- nefila haxi koʿevet še- yeš.
Dan fell OM *the- fall most painful that- exists*
Dan fell in the most painful way there is.

c. Dan daxaf et ha- delet *(et) ha- dxifa ha- rišona.
Dan pushed OM *the- door* OM *the- push the- first*
Dan gave the door the first push.

It is therefore clear that the criterion for whether or not COs need Case is not thematic. If a CO is definite, it requires Case just like a definite direct object, despite the fact that a CO does not get a θ-role. So, having rejected the possibility that COs do not need Case because of their non-argument status, the question is how they do get Case. Pereltsvaig (2001) proposes that COs are complements of a functional head that assigns oblique Case, an analysis that fails to account for the fact that the surface marking of COs in Hebrew is identical to that of thematic objects. An alternative analysis is that there is, in fact, no difference between the two kinds of objects in terms of Case. For definites, presence of *et* can be taken as evidence for the presence of Case on the cognate object. Indefinite COs, on the other hand, can be Caseless just like indefinite thematic objects.

Hebrew COs thus show quite clearly that the kind of 'visibility' that is relevant to Case has nothing to do with θ-role assignment. In Hebrew, definiteness is what makes a noun phrase visible to the effects of the Case Filter. In section 4, I will argue that it is not definiteness itself, but rather the fact that definiteness forces the projection of a DP level, as only DPs are visible in terms of Case. It is possible that a tendency for the NP-DP distinction to correlate with the predicate-argument distinction could lead to the impression that the need for Case is linked to the argumenthood of a nominal. In this section, however, I have shown that COs in Hebrew clearly demonstrate this impression to be false.

3.4.1 The status of *et*

At this point, I would like to revisit the question whether *et* is an accusative Case marker or a prepositional Case assigner, and show how each of these views of *et* would be implemented in the current analysis.

Consider first the possibility that *et* is the overt realization of accusative Case. If this is so, we would have to assume that verbs in Hebrew are specified with an *optional* Case feature: only in the presence of a definite object (or definite CO) can such a feature be checked, and hence no Case feature can be present on the verb when it takes an indefinite object. In this respect, verbs would not be different from other heads capable of checking Case; if indefinites in Hebrew are Caseless,

it follows that Case features are always optional.

Alternatively, if one assumes that *et* is a Case-assigning preposition, then V in Hebrew never carries a Case feature. *et* would then be the only possible means of checking a Case feature of a definite object (or CO).

It thus seems that the analysis of indefinites put forward in this paper is compatible with both views on the status of *et*. Where these views differ is in how well they account for the distribution of *et*, regardless of definiteness. The *et*-as-accusative approach trivially accounts for the use of *et* with objects of transitive verbs; but a special account is then needed for the other environments where *et* can be used, such as unaccusatives with cognate objects (20b), unaccusatives with non-agreeing arguments (9c), event nominals (17a), passive participles (21a), or verbless existential sentences (21b):[26]

(21) a. katuv et ze ba- iton.
written OM *this in-the- newspaper*
It's written in the newspaper.

b. yeš li et ha- sefer ha- ze.
exists to-me OM *the- book the- this*
I have this book.

The *et*-as-P approach, on the other hand, has the complementary problem when it comes to accounting for the distribution of *et*: while it does not predict that *et* should be limited to objects of transitive verbs, it does require an additional constraint in order to explain the fact that *et* cannot be used freely wherever Case cannot be assigned by any other means. One possible constraint seems to be that *et* is restricted to internal arguments. A more thorough analysis is beyond the scope of the present paper.

In conclusion, it seems that neither view of *et* provides a simple and straightforward account of its exact distribution. Regardless of the debate whether *et* is a Case assigner or Case marker, the hypothesis that indefinites in Hebrew are Caseless removes the need for an additional stipulation, which would otherwise be needed to account for the sensitivity of *et* to definiteness.

3.5 Case and the subject of infinitives

As shown by the discussion above, the distribution of Hebrew indefinites does not seem to be sensitive to the availability of Case. In this context, the subject position of infinitival clauses, perhaps the prototypical position in which overt noun phrases have been assumed to be blocked by the GB Case Filter, comes to mind as another environment in which we might expect indefinites to occur in Hebrew. But as seen

[26] The word *yeš*, glossed as 'exists' in (21b), is not a verb. It is used only in the present 'tense' (which is morphologically tenseless); in the past and future tenses, the verb *haya* ('be') is used instead of *yeš*.

in the following examples, indefinites are impossible in this position in Hebrew, just as they are in English:

(22) a. * Dan mekave harbe studentim lehacliʿax.
Dan hopes many students to succeed

b. * (ze) cafuy harbe studentim lehikašel.
(it) expected many students to fail

In this section, I will argue that this fact does not pose a counterexample to the analysis developed in this paper, because overt subjects of infinitival clauses are ruled out for reasons that have nothing to do with Case.

Early GB analyses (Chomsky 1981) derived the ungrammaticality of sentences like (22) from two assumptions:

1. The Case Filter requires all lexical noun phrases to have Case (as opposed to phonetically-null nominals such as PRO);

2. The subject position of non-ECM infinitival clauses is a Caseless position.

In the early 1980s it already became evident that the first of these assumptions is quite problematic. Given that some types of phonetically-null arguments – PRO and operators – seem to require Case just like overt nominals, restricting the Case Filter to lexical noun phrases cannot be the correct generalization. This led to the reformulation of the Case Filter as the Visibility Condition (Chomsky 1986), which gave rise to a new problem: if Case is needed because it licenses θ-role assignment, there is no obvious reason why PRO should lack Case; as a consequence, the second of the above assumptions came to be reconsidered as well. The logical consequence would be that PRO does actually have Case, which would entail that the subject position of infinitival clauses is not Caseless; but this, in turn, reopens the question of what prevents overt DPs from appearing in positions that license PRO.

Of the various attempts to account for the restrictions on subjects of infinitival clauses without abandoning the Case-based analysis, the one that has remained the most influential is probably the Null Case hypothesis (Chomsky and Lasnik 1993). By stipulating that infinitival T has a special Case feature, known as Null Case, which is compatible only with PRO and which is the *only* Case compatible with it, the empirical coverage of the original Case theory can be maintained. However, as noted by many authors, the Null Case analysis is essentially a stipulation which merely provides a technical way of encoding the distribution of PRO as opposed to other kinds of nominal arguments.

Besides its stipulative nature, the Null Case analysis of infinitival subjects has been shown to be empirically inadequate. The most well-known piece of counter-evidence involves languages where PRO can be seen to bear Case just like an overt DP. As shown by Sigurðsson (1991), PRO in Icelandic can bear any kind of Case that

a lexical subject can – nominative, accusative, or quirky – as witnessed by the case agreement on floating quantifiers and secondary predicates. The following examples, from Sigurðsson (1991, p. 331), illustrate accusative and dative PRO; concord with the floating quantifier provides visible evidence for the Case carried by PRO:

(23) a. Strákarnir vonast til að PRO vanta ekki alla í skólann.
the boys(NOM) hope for to (ACC) lack not all(ACC) in school
The boys hope not to lack all in school.

b. Strákarnir vonast til að PRO leiðast ekki öllum í skóla.
the boys(NOM) hope for to (DAT) bore not all(DAT) in school
The boys hope not to be all bored in school.

Similar facts have been observed in other languages, such as Russian, Latin and Italian. This poses a substantial empirical problem to the Null Case hypothesis.

Further evidence against a Case-based analysis of the selection of subjects of infinitives comes from languages that allow PRO in finite clauses. As argued by various authors (see in particular Terzi 1992, Landau 2004, and references cited there), the Balkan languages allow PRO as the subject of subjunctives, a position that may also license overt subjects; Landau further shows that this is also true, to a more limited extent, for Hebrew. The non-complementary distribution of PRO and overt DPs in these positions poses a very serious problem to the claim that PRO is incompatible with 'regular' Case; this, in turn, further suggests that the special properties of infinitival subjects might actually have nothing to do with Case.

As an alternative to the traditional Case-based approach, Landau (2004) develops a detailed system with the goal of predicting the kind of subject – overt or PRO – that different types of clauses may license. It is beyond the scope of the present discussion to give a comprehensive overview of Landau's system; below I merely summarize some of the main points of his 'Calculus of Control':

1. C° and I° may be specified for tense and agreement features, or may lack one (or both).

2. A C° or I° head specified as $[+T, +Agr]$ gets a positive value for a third feature, $[R]$, which is uninterpretable on these heads; any other combination of these two features gives rise to a $[-R]$ specification. Finally, a head that is unspecified for one of these features remains unspecified for $[\pm R]$ as well.

3. On noun phrases, an interpretable $[R]$ feature specification distinguishes between PRO, on the one hand, and overt nominals and *pro*, on the other hand: the former is specified as $[-R]$, and the latter as $[+R]$.[27]

[27] Like many others, Landau assumes all nominal arguments to be DPs, and hence the interpretable $[\pm R]$ feature in his system is marked on DPs. As far as I can see, the NP-DP distinction

4. Feature checking, using the operation AGREE, is the licensing mechanism responsible for determining the kind of subject that a clause allows.

This system is capable of accounting for an impressive range of constructions from a wide variety of languages and provides an attractive alternative to the various Case-based approaches, which have difficulties when faced with data from languages that display patterns significantly different from those found in English. The systematic dependencies that Landau points out between tense, agreement, and subject selection are thus encoded in a way that is not mediated by Case features.

Put in this context, the proposal developed in the present paper is not only compatible with an analysis along the lines of Landau (2004), but it also provides further support for the view that the ungrammaticality of sentences like (22) has nothing to do with Case. As we have seen, indefinites in Hebrew can occupy a variety of Caseless positions, and yet they are not possible as subjects of infinitives; this is what we would expect if the special subject-licensing properties of infinitives are not reducible to Case. In fact, this point can be strengthened by noting that infinitival clauses that disallow overt DP subjects resist all kinds of overt subjects, including those that are not usually assumed to require Case. For instance, PP subjects are also blocked in non-ECM infinitival clauses:

(24) a. It seems that under the bed is a good place to hide.
b. * It seems under the bed to be a good place to hide.
c. Under the bed seems to be a good place to hide.

Similarly, sentential subjects are not allowed in infinitival clauses that license PRO as their subject:

(25) a. I wonder whether for John to learn Chinese would be helpful.
b. * I wonder whether for John to learn Chinese to be helpful.
c. I wonder whether PRO to be helpful.

Under the assumption that PPs and clauses do not require Case, the ungrammaticality of (24b) and (25b) cannot follow from lack of Case. Thus, whatever principle explains these facts should also account for the inability of overt noun phrases to act as subjects of infinitival clauses.

To conclude, the fact that indefinites in Hebrew, which can appear in a variety of Caseless positions, are nevertheless impossible as subjects of infinitives, supports the view that the distribution of overt subjects is not related to the Case Filter, but follows from a separate system that does not distinguish between definites and indefinites. In particular, the system proposed by Landau (2004) provides a powerful

plays no role in his system, and thus it should be straightforward to apply it to non-DP arguments as well.

way of accounting for these facts that does not suffer from the weaknesses of the alternative Null Case hypothesis. It is interesting that the Case Filter, which was originally motivated by the need to account for facts of this kind, has turned out to be extremely useful in numerous areas but may actually not be relevant to explaining the distribution of subjects of infinitival clauses.

4 Hebrew Indefinites and the projection of DP

So far, visibility of a noun phrase to the effects of the Case Filter has been shown to correlate with its definiteness. It was also shown that definiteness (or some similar property, such as specificity) is a trigger for objective Case in many other languages. Assuming that both definiteness and Case are features of D° (Giusti 1997), we should note an interesting observation made by Szabolcsi (1994):

> "Only in languages that have no overt articles do non-specific direct objects fail to be accusative-marked (or, in general, fail to be marked in the same way as specific direct objects)." (Szabolcsi 1994, p. 223)

Even if there are a few counterexamples to this generalization, it is nevertheless a very strong tendency that is probably not accidental. Assuming that the D° position is occupied by articles, one possible explanation for Szabolcsi's generalization could be that lack of articles makes possible noun phrases that do not contain a DP projection.

This is essentially the line that I will follow with respect to the Hebrew facts. In this section, I argue that considerations regarding the formal encoding of definiteness in Hebrew support the view that only definites in this language are DPs (a similar structural distinction between definites and indefinites in Hebrew is proposed in Dobrovie-Sorin 2003).[28] It then follows from this hypothesis that the relation between Case and definiteness in Hebrew is only indirect: definiteness leads to the projection of a DP; and DPs, in turn, must check Case. The association of both Case and definiteness to the D° position is thus what gives the impression that properties internal to the noun phrase play a role in the external syntactic behavior of the noun phrase.

This hypothesis will be developed in the rest of this section. In section 4.1, I summarize some of the central conclusions of previous research into the position of determiners. Section 4.2 then examines the structure of Hebrew noun phrases, focusing on evidence for and against the projection of DP in indefinites.

[28] As pointed out to me by an anonymous reviewer, this could suggest that the compositional semantics of indefinites in languages like Hebrew differs from that of indefinites in languages like English, as the DP level is present only in the latter. The degree to which my analysis makes such a prediction depends on the assumptions one makes regarding the free application of type shifting, existential closure and similar operations involved in the interpretation of indefinites. I thus leave this as an open question.

4.1 The syntactic position of determiners

Before discussing issues specific to the Hebrew noun phrase, we should clarify some general assumptions regarding the structure of the noun phrase cross-linguistically, and the position of determiners in particular. While the semantics literature on determiners has often tended to treat all determiners uniformly, there is substantial evidence that, syntactically, the term 'determiner' is a cover term for a very heterogeneous group of elements. Some early works, such as Jackendoff (1977), attempted to provide elaborate structural analyses in which different classes of determiners occupy different structural positions within the NP. Among other things, Jackendoff's analysis pointed out some of the inherent limitations of the early analysis of noun phrases as simple NPs. The introduction of the DP hypothesis (Abney 1987), in turn, provided an extremely useful framework for a significant number of cross-linguistic studies of the internal structure of noun phrases. Determiners in this framework have been argued to occupy various positions, both at the DP level and as specifiers or heads of additional intermediate functional projections.

For the present discussion, we should focus only on the question of which elements occupy a position at the DP level itself – i.e., as either heads or specifiers of DP. For some languages, word order makes the answer to this question quite straightforward; for instance, Szabolcsi (1994) has argued convincingly that all determiners in Hungarian, with the exception of the definite article, occupy positions below the DP level.[29] Similarly, Giusti (1995, 1997), based on data from a wide variety of languages, concludes that demonstratives, cardinal numerals and some 'adjectival' quantifiers occupy lower specifier positions.[30] In what follows, I will adopt Szabolcsi's and Giusti's conclusions and assume that articles are the only kind of determiner that belongs to the category D.[31]

In addition to articles, I will follow Abney (1987) and many others in assuming that pronouns should be analyzed as belonging to the category D, thus implementing in a straightforward manner the insight that pronouns and definite articles be-

[29] Szabolcsi also briefly mentions inflected demonstratives, which precede the definite article, and thus cannot be assumed to be located below D°. According to Bartos (2001), the demonstrative + article in this case forms a complex head that belongs to the lexical category of articles and occupies the D position.

[30] Additionally, following Shlonsky (1991), Giusti argues that quantifiers that precede the definite article should be analyzed as heading a QP which selects a DP complement. I will not discuss such quantifiers, which have many interesting properties in Hebrew; see for instance Danon (1996) and Shlonsky (2004).

[31] The status of indefinite articles is less clear than that of definite articles. In many languages, the indefinite article is homophonous to the numeral 'one' and is similar to it in its syntactic properties (see for instance the discussion of the Hungarian indefinite article under (6)), and thus it is not immediately obvious whether indefinite articles should be analyzed as heads of DP or as lower specifiers, like numerals. It is possible that the category and position of indefinite articles varies from language to language and is subject to diachronic change.

long to the same lexical category, an idea that goes back to Postal (1969). This analysis provides a straightforward account for the incompatibility of pronouns with articles, as well as for the fact that pronouns in many languages are homophonous to definite articles.

As to the specifier position of DP, it has often been claimed that this position may be occupied by possessors, at least in some languages (Abney 1987, Szabolcsi 1994). Yet word order facts clearly show that this is not the position of possessors in all languages: First, many languages allow possessors to come between the definite article and the noun (Szabolcsi 1994, Giusti 1995, Longobardi 1994). Furthermore, there are languages such as Hebrew, in which the possessor even follows the possessed noun; in the so-called free-state, the possessor follows adjectives as well (Ritter 1991, Siloni 1997 and many others):

(26) ha- xiyux ha- muzar šelo
the- smile the- strange his
his strange smile

Even within the same language there may be more than one position for possessors. Szabolcsi (1994), for instance, argues that in Hungarian, dative possessors occupy a higher specifier position than nominative possessors. According to Kayne (1994), quantified prenominal possessors raise to the [spec,DP] position in English, while non-quantified possessors occupy a lower specifier position. It is thus clear that the [spec,DP] position is not the unique universal position of possessors.

In addition to possessors, Giusti (1997) has argued that demonstratives, which originate in a lower specifier position, may raise to [spec,DP]. This, too, is probably not universal, and does not seem to apply to Hebrew, in which demonstratives appear to be adjectives that follow all other adjectives modifying the same noun (Shlonsky 2004). Thus, the Hebrew word order N-AP-demonstrative-possessor, illustrated below, strongly favors an analysis in which neither demonstratives nor possessors occupy the [spec,DP] position:

(27) ha- ra'ayon ha- muzar ha- ze šeli
the- idea the- strange the- this my
this strange idea of mine

In conclusion, I assume that cross-linguistically, the only elements that must trigger the projection of a DP level are articles and pronouns. Additionally, in languages where possessors or demonstratives occupy the [spec,DP] position, DP must be projected if one of these elements is present. In all other cases, the hypothesis that DP is not necessarily projected is compatible with DP-internal word order facts, and other factors should be considered in order to decide between this hypothesis and the more traditional view that DP is always projected.

4.2 The D position in Hebrew

Two properties of noun phrases in Hebrew are particularly important in the context of the question whether DP is projected or not:

1. Hebrew has a definite article, *ha-*, but no indefinite article.

2. The definite article has properties of an inflectional morpheme rather than of an independent head (Siloni 1997; Borer 1999): it must be attached to the noun, and it is doubled on modifying adjectives, which agree with the noun in number, gender, and definiteness.

These properties are illustrated in the following examples:

(28) a. Dan ra'a xatul.
Dan saw cat
Dan saw a cat.

b. Dan ra'a et ha- xatul- im ha- šxor- im.
Dan saw OM *the- cat-* PL.MS *the- black-* PL.MS
Dan saw the black cats.

The lack of indefinite articles raises the question of what heads an indefinite noun phrase in Hebrew. There are at least 3 possible answers (Dobrovie-Sorin 2000):

1. Hebrew indefinites are DPs headed by an empty D.

2. Hebrew indefinites are DPs in which the noun raises to D.

3. Hebrew indefinites lack the DP level.

Of these, the second possibility has received the most attention and has been discussed extensively in the literature on Hebrew noun phrases. In section 4.2.1, I show that while there might be good reasons to adopt an N-raising analysis, there is in fact reason to believe that such movement only targets a lower functional head position, rather than the D position. Then, in section 4.2.2, I provide evidence against an empty D analysis of Hebrew indefinites.

4.2.1 The N-to-D analysis of construct state nominals

There is a vast literature claiming that N-to-D movement is quite productive in Hebrew and other Semitic languages (Ritter 1988, 1991; Hazout 1991; Siloni 1997; Borer 1999; Fassi Fehri 1999, and many others; but see also Shlonsky 2004, who argues against this kind of movement in Semitic). The literature on N-to-D movement in Hebrew has been motivated mainly by the need to account for the derivation of two kinds of nominals, often referred to as *free state nominals* and *construct state*

nominals (CSNs), exemplified in (29a) and (29b) respectively. While the former marks an optional embedded genitive using the prepositional element *šel* (roughly equivalent to English *of*), the latter involves an obligatory embedded noun phrase directly following the head noun:

(29) a. ha- anafim (šel ha- ec)
the- branches of the- tree
the branches (of the tree)

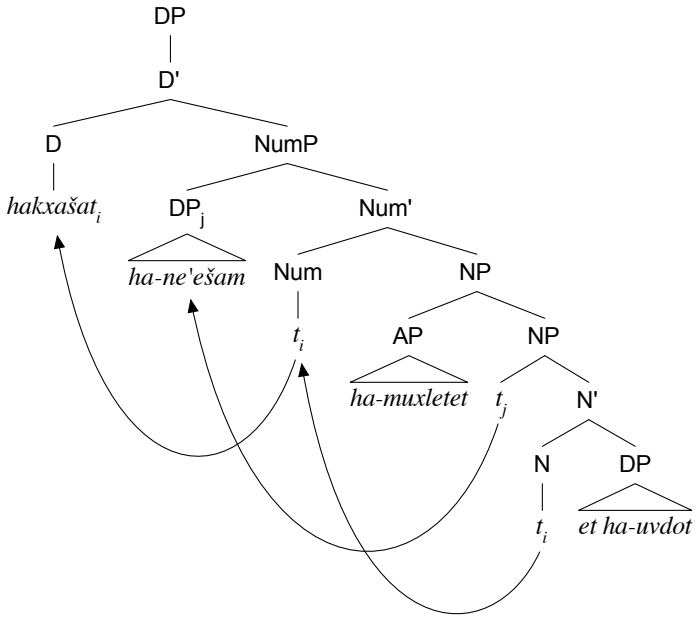
b. anfey *(ha- ec)
branches the- tree
the branches of the tree

When denoting events, both kinds of nominals display strict NSO order; data from binding strongly suggests an analysis in which S c-commands O (Ritter 1991; Siloni 1997). Furthermore, APs in construct state nominals must *follow* the subject (i.e., the order is N-S-AP-O, as opposed to the N-AP-S-O order in free nominals). Starting with Ritter (1988, 1991), a family of analyses has been proposed in which the formation of CSNs involves moving both N and S out of NP past the AP, thus accounting for both word order and binding facts. For instance, the derivation of the event nominal in (30a) below using the analysis in Ritter (1991) is shown in (30b):[32]

(30) a. hakxašat ha- neʿešam ha- muxletet et ha- uvdot
denial the- defendant the- total ACC the- facts
the defendant's total denial of the facts

[32] To account for the different position of adjectives in free nominals versus CSNs, the analysis of free nominals in this tradition is usually assumed not to involve movement of the subject out of NP, but only head movement.

b.



Even within this tradition, however, there is no consensus regarding the question whether N moves to D in *all* Semitic noun phrases, or only in CSNs. Some, such as Siloni (1996, 1997), claim that N in Hebrew always moves to D; while Ritter (1991), among others, adopts an N-to-D movement analysis only for the derivation of CSNs, with N moving only to an intermediate functional projection in free nominals. More recently, Shlonsky (2004) has proposed that these facts can also be captured using a derivation involving *phrasal* movement, such that N-to-D movement does not take place at all in Semitic. In what follows, I will focus on the derivation of CSNs, where word order seems to provide strong evidence in favor of successive head-movement even in indefinites;[33] the conclusions to be drawn regarding the derivation of indefinite CSNs can easily be extended to indefinite free nominals as well.

The target of N-movement It is important to note, however, that the issue of whether Hebrew nominals involve N-to-D movement depends to a large degree on the question of how many additional functional projections are found between NP and DP. While the literature on N-to-D movement has argued that N in Hebrew CSNs must undergo at least two head movement operations, there is in fact very little evidence to show that the final landing site is D and not some lower functional head position. In other words, given enough functional projections, all observed word order and binding facts can be derived similarly to the derivation proposed

[33] Additionally, the fact that the definite article is a prefix has been argued to pose evidence in favor of N-to-D movement in free nominals. As Hebrew has no indefinite article, this has no direct implications for the analysis of indefinites.

by Ritter (1991), but without moving N as high as the D level. Some authors, such as Fassi Fehri (1999) and Shlonsky (2004), have indeed argued that a complex structure containing much more than one functional projection between N and D has to be assumed for independent reasons. Put in this perspective, the literature on N-movement in Semitic does not provide any conclusive evidence regarding whether or not D has to be projected in indefinites.

Against movement to D in indefinite CSNs If the N-to-D analysis of CSNs is correct, it makes two important predictions: It predicts that no 'low' determiners (in the sense discussed in §4.1) should precede the head of a CSN; and it predicts that *all* CSNs, whether definite or indefinite, should display properties of DPs. Below I will show that, contra these predictions, numerals may precede the head of an indefinite CSN, and bare indefinite CSNs show various word-like properties. This is in line with the observation often made regarding the similarity between CSNs and compounds (Borer 1988).

The surface order of cardinal numerals with respect to the nominal head of an indefinite CSN provides immediate evidence against assuming that indefinite CSNs involve movement to D°. As noted in Danon (1996), cardinals may precede the nominal head of an indefinite CSN, as in the following example:[34]

(31) šloša sifrey balšanut
three books linguistics
three linguistics books

Danon claims that under the N-to-D analysis of CSNs, one must assume that numerals in Hebrew are located in [spec,DP]. But given the ample cross-linguistic evidence that numerals occupy positions below D° (see for instance Szabolcsi 1994; Giusti 1995; Zamparelli 1995; Cinque 2005), this conclusion seems highly problematic. A more reasonable conclusion would be that the head noun of a CSN does not move as high as previously assumed, thus occupying a surface position that still follows the universal position of cardinal numerals.

In terms of their external distribution, indefinite CSNs do not seem to differ from simple indefinites. For instance, Siloni (2001) observes that, just like simple indefinites, such as (32b), indefinite CSNs are blocked from appearing in the subject position of predicational sentences, as shown in (33b):

(32) a. ha- tmuna hi xadaša.
the- picture is new
The picture is new.

[34] In a definite CSN, a cardinal is possible only in its CSN-like morphological form (for instance, *šlošet*, as opposed to the free form *šloša* in (31)). This might suggest that definite CSNs are indeed structurally different from indefinite CSNs, with the head noun occupying a higher position than that of free cardinals. See for instance Danon (1996).

b. * tmuna hi xadaša.
picture is new

(33) a. tmunat ha- praxim hi xadaša.
picture the- flowers is new
The picture of the flowers is new.

b. * tmunat praxim hi xadaša.
picture flowers is new

However, this characterization of the facts is not totally precise, as it applies only to bare nouns and not to all indefinites. The addition of a numeral, for instance, would make the indefinites in (32b) and (33b) grammatical in this position:

(34) a. šaloš tmunot hen xadašot.
three pictures are new
Three pictures are new.

b. šaloš tmunot praxim hen xadašot.
three picture flowers are new
Three pictures of flowers are new.

Thus, the contrast here is not between definites and indefinites, but between *bare* indefinites and other noun phrases. As in the case of event nominals discussed in §3.3, bare nouns have a more limited distribution than all other nominal phrases. What is crucial for the present discussion is the fact that the possibility of appearing in the subject position of predicational sentences groups bare indefinite CSNs together with bare nouns. This poses a strong problem to any approach that derives all CSNs, including indefinite ones, by N-to-D movement; if indefinite CSNs were indeed derived by head movement to D, then the CSN in (33b) would be a DP with a filled D position, and it is unclear what kind of property could account for the fact that such a DP behaves as if it were a bare noun.[35]

One possible explanation for these patterns is that bare nouns differ from other nominals in their possible denotations. Let us assume that bare singular nouns are interpreted as denoting properties (Dobrovie-Sorin 2000, 2003), whereas definites and non-bare indefinites can (or must) receive a referential interpretation. If the subject position of predicational sentences requires a referential nominal, this

[35] It seems that the distribution of indefinite internal arguments in event nominals, as discussed in §3.3, also groups bare CSNs with bare nouns. Compare (17)–(18) with the following example, where the internal argument *ugat šokolad* 'chocolate cake' is a bare CSN:

(i) ?? axilat Dan ugat šokolad
eating Dan cake chocolate
Dan's eating a chocolate cake

However, judgments in this case are not as clear as in the other examples discussed above.

accounts for the ungrammaticality of bare indefinites (simple or construct state) in (32b)–(33b). If we further assume that full DPs, as opposed to NPs (and the lower functional projections dominating NP), never denote properties (Stowell 1991, Zamparelli 1995), it follows that bare indefinite CSNs are not DPs; as a result, it follows that not all CSNs have a DP layer.

Further support for this analysis of bare singulars comes from restrictions on pronominal reference. As noted by Dobrovie-Sorin (2000, 2003), in CSNs where the embedded genitive phrase is a bare indefinite, a pronoun cannot refer back to the embedded genitive:

(35) a. # ešet **pakid**$_i$ nixnesa la- xeder. **hu**$_i$ lo haya šam.
wife clerk entered to-the- room. he NEG *was there*
A clerk's wife entered the room. He (the clerk) wasn't there.

b. ešet **ha- pakid**$_i$ nixnesa la- xeder. **hu**$_i$ lo haya šam.
wife the- clerk entered to-the- room. he NEG *was there*
The clerk's wife entered the room. He (the clerk) wasn't there.

The property-denoting interpretation of bare indefinites embedded in a CSN is projected up to the whole CSN. Thus, when a bare indefinite CSN, such as *rofe šinayim* 'dentist' in (36), is itself embedded in another CSN, the embedded CSN denotes a property and cannot refer to an individual:

(36) # ešet **rofe šinayim** nixnesa la- xeder. **hu**$_i$ lo haya šam.
wife doctor teeth entered to-the- room. he NEG *was there*
A dentist's wife entered the room. He (the dentist) wasn't there.

Similarly, Doron (2003) has shown that bare singular indefinites in Hebrew may refer to kinds; this too extends to indefinite CSNs, which can refer to kinds just as simple indefinites can, which again argues against analyzing them as DPs.

In conclusion, the assumption that all CSNs are derived by N-to-D movement fails to account for certain distributional and interpretational properties of bare indefinite CSNs. These properties can be accounted for if we assume that the process of CSN formation by itself, if it involves head movement, moves the head only as far as an intermediate functional projection; this projection is lower than the position of cardinals and may still denote a property.[36] Thus, projection of the DP level has nothing to do with the mechanisms involved in forming a CSN, and could perhaps be related to specifying the definiteness value or reference of the noun phrase (Longobardi 1994).

The discussion above still leaves open the possibility that *non-bare* indefinites in Hebrew include a DP layer, motivated by reasons not related to those assumed in

[36] Claiming that indefinites are DP-less and have a basic denotation as properties does not mean that they cannot be interpreted as arguments as well. See for instance Chierchia (1998), de Swart (2001), Doron (2003) and many others.

the N-to-D literature. In light of the Cardinal–N word order illustrated in (31), it is unlikely that head movement to D takes place even in non-bare indefinites. It thus boils down to the question whether there is reason to assume an empty D head in Hebrew indefinites, a question to which we now turn.

4.2.2 Against an empty D analysis

There are both empirical and conceptual reasons to reject an analysis of Hebrew indefinites as DPs headed by a phonetically null D. First, empty heads are known to display several characteristic syntactic properties. As discussed by Longobardi (1994), bare nouns in Italian (as well as other Romance languages) are allowed to appear only in lexically governed positions, and in particular, preverbal subjects may not be bare nouns:

(37) a. Viene giù acqua dalle colline.
comes down water from the hills
Water comes down from the hills.

b. * Acqua viene giù dalle colline.
water comes down from the hills

Longobardi takes this contrast as evidence for an empty D position in Romance bare nouns, which are thus subject to ECP-style constraints.

In Hebrew, on the other hand, indefinites (including bare nouns) are allowed in the preverbal subject position:

(38) mayim (rabim) zormim me- ha- gva'ot.
water much flows from- the- hills
(Much) water is flowing from the hills.

Therefore, if placement in the preverbal subject position is a valid test for identifying an empty D position, Hebrew indefinites do not seem to be headed by an empty position.[37]

Another consideration in favor of assuming that only definites contain a D position is that it is not clear what kind of content might be associated with a phonetically null D heading indefinites. As argued by Danon (2001), the use of *et* is sensitive to formal marking of definiteness and not to semantic definiteness.[38] Thus, for instance, demonstratives in Hebrew, which have various morphosyntactic properties of adjectives, do not render a noun phrase formally definite; as demonstratives may co-occur with the definite article, formal definiteness is determined by the presence or absence of the article:

[37] Dobrovie-Sorin (2000) also argues that Hebrew indefinites do not contain an empty D position; her arguments in favor of this analysis are quite intricate and will not be discussed here.

[38] Roughly, with the exception of pronouns, proper names, and nouns carrying pronominal suffixes, formal definiteness correlates with the use of the definite article; see Danon (2001) for details.

(39) a. ha- memšala daxata (*et) haca'a zo.
the- government rejected OM *proposal this*
The government rejected this proposal.

b. ha- memšala daxata *(et) ha- haca'a ha- zo.
the- government rejected OM *the- proposal the- this*
The government rejected this proposal.

As shown by the distribution of *et*, the object in (39a) is formally indefinite, even though it is semantically equivalent to the one in (39b). This means that no phonetically null D that has any semantic content related to indefiniteness could reasonably be assumed to head the object in (39a).

In light of examples such as these, we must conclude that there is no semantic property common to all noun phrases that are indefinite in the formal sense relevant to the use of *et* (see also Siloni 2001). Thus, if indefinites are headed by an empty D, this D must be semantically vacuous; the simplest hypothesis is thus that there is no such empty D. Put differently, an empty D in Hebrew indefinites would carry nothing but an uninterpretable Case feature. Following Chomsky (2000, p. 139), I assume that this kind of functional head is not possible.

Following Siloni (1996, 1997), Borer (1999), and Danon (2001, 2002), I assume that definiteness in Hebrew is a grammatical feature, which might be assimilated to tense features in the clausal domain. In light of the discussion above, we conclude that definiteness is a monovalent feature (Danon 2001, 2002): the possible values are either $[+def]$ or a total lack of a definiteness feature, rather than the binary $[\pm def]$. This asymmetry between definiteness and indefiniteness is also reflected in the morphology by the contrast between overt definiteness marking and lack of indefiniteness marking.[39]

As to definites, there is good reason to assume that DP is projected and that the D head is not vacuous. It has often been proposed that the D position is systematically linked to referential or definite interpretations of the DP. Let us assume that the $[+def]$ feature, which might be marked on N, on D, or on both, is interpreted only on D: in a definite noun phrase, it is the entire phrase which is interpreted as definite, not just the noun. In the Minimalist framework, this can be encoded in a straightforward manner: $[+def]$ on N is an uninterpretable feature, which must be checked against an interpretable $[+def]$ on D. This means that definites must be DPs, or else the $[+def]$ on N will not be checked.

We thus conclude that definites contrast with indefinites as a result of the lack of a $[def]$ feature. Assuming, as in Chomsky (2000), that empty heads with no

[39] An anonymous reviewer pointed out that the asymmetry of the $[def]$ feature suggests the possibility of assimilating its behavior to the *Wh*-criterion and Negative criterion of Rizzi (1996). I will not pursue this possibility here, however; these criteria revolve around the relation between a specifier and a head, a relation that I do not assume to exist in the case of $[+def]$.

interpretable features can never be projected, it follows that indefinites in Hebrew cannot be DPs.

4.3 Summary

Of the three possible analyses of Hebrew indefinites, I have shown that there are reasons to reject the view that N moves all the way to D, and also that there are reasons not to adopt an empty D analysis. This leaves us with the option of analyzing indefinites in Hebrew as projections of a lower functional head, rather than as DPs. This contrasts with definites, in which a DP level can be justified by the need to check the $[+def]$ feature of a definite-marked N.

We are now in a position to restate the generalization that indefinites are not subject to the same licensing conditions as definites in structural terms. The traditional observation, that there is a dependency between Case and definiteness in Hebrew, turns out to be derivative from the dependency between definiteness and the projection of a DP layer. Differential object marking in Hebrew is thus reduced to the fact that only DPs need to check a Case feature. This removes much of the mystery from the descriptive generalization in terms of a definite-indefinite contrast, which turns out to be simply the result of DP being projected only in definites.

5 DOM and DP crosslinguistically

If the analysis proposed above for Hebrew can be generalized to other languages, it would amount to the hypothesis that languages that display DOM project the DP level only under certain circumstances. The central difficulty with applying this generalization is that languages differ with respect to what these circumstances might be. It has often been noted that the factors affecting DOM vary from language to language, but two main hierarchies repeatedly emerge (from Aissen 2003, p. 437):

Animacy scale: Human > Animate > Inanimate

Definiteness scale: Personal pronoun > Proper name > Definite NP > Indefinite specific NP > Non-specific NP

The typological generalization is that if an object is overtly marked for case in a language with DOM, then any object that is higher on the relevant scale will also be marked for case. Some languages have DOM based on the definiteness scale, some have DOM based on the animacy scale, and some use both scales.

Looking at the definiteness scale, one striking observation is that the factors that rank high in this scale are indeed factors that have often been associated with the D position, for reasons totally unrelated to Case. Regarding pronouns, it has been proposed by Abney (1987) that they belong to the category D. For proper

names, Longobardi (1994) has argued that, unlike common nouns, they require a filled D° position. In view of this, it seems quite plausible that a significant number of languages that instantiate DOM based on the definiteness scale can be subsumed under the analysis proposed for Hebrew in a straightforward manner.

For instance, Aissen discusses the Australian language Pitjantjatjara as an example of a language that marks case only on pronouns or proper names:

(40) a. Tjitji-ngku Billy-nya/ngayu-nya nya-ngu. (Pitjantjatjara)
child-ERG Billy-ACC/1SG-ACC see-PAST
The child saw Billy/me.

b. Billy-lu tjitji nya-ngu.
Billy-ERG child see-PAST
Billy saw the child.

(Aissen 2003, p. 452)

Note that in (40b), the object lacks case morphology despite receiving a definite reading (and being animate); thus the cutoff point on the definiteness scale for this language is higher than the cutoff point for Hebrew. If we assume that pronouns and proper names in this language are the only nominals that project a DP, the pattern in (40) would be an immediate instantiation of the analysis put forth in this paper. This is further supported by the fact that no article is used for the (definite) object in (40b); thus, the difference between Pitjantjatjara and Hebrew might stem from the inventory of articles found in each language.

Despite the fact that the top of the definiteness scale has well-motivated links with the DP projection, it might be somewhat unrealistic to claim that *all* instances of DOM can be reduced to the presence of a DP layer. One central observation in this respect is that languages vary not only with respect to the choice of scale(s) relevant for DOM and the cutoff points on these scales, but also with respect to the degree to which DOM has undergone grammaticalization. On one side of the spectrum, DOM in languages like Modern Hebrew is sensitive to formal marking of definiteness which does not always correlate with semantic or pragmatic characterizations of definiteness, as discussed in §4.2.2. On the other side of the spectrum are languages in which DOM is sensitive to semantic, pragmatic, or extra-linguistic cognitive factors. Clearly, the analysis proposed in this paper is more suitable for languages of the first kind, whereas functional analyses, such as those in Aissen (2003) or Jäger (2003), are more suitable for languages of the second kind. I would like to suggest that, from a diachronic perspective, DOM might initially arise out of functional factors, and later, as grammaticalization proceeds, become syntactically governed. In other words, the analysis developed here is meant to capture the situation in languages in which DOM is at a relatively advanced stage, where its functional origins have 'faded away'. In this respect, the functional approach and the structural approach to accounting for DOM do not necessarily contradict each

other, but might actually complement each other by pointing out two independent factors that may induce the same (or similar) surface phenomenon.

6 Conclusion

I have argued that Hebrew DOM, which looks like an isolated fact concerning direct objects, is actually just one instantiation of a more pervasive contrast between definites and indefinites in terms of their syntactic distribution in this language. A variety of morphological patterns from many unrelated languages support an analysis in which indefinites may be truly Caseless, or 'invisible' in certain formal ways, thus allowing them to appear in positions that are licensed only thematically. The Visibility Condition, linking Case to θ-role assignment, has been shown to be problematic in light of clear splits between these two modes of licensing, and especially in light of the fact that Hebrew allows indefinite arguments in various Caseless positions.

The fact that indefinites are exempt from the need for Case has been argued to follow from the lack of a DP projection, which is the locus of Case features. At first, this analysis of indefinites appears to be incompatible with the vast majority of the literature on N-to-D movement, an operation which has often been assumed to be extremely productive in Hebrew. I have shown that upon closer inspection, the analysis of Hebrew nominals along the lines proposed by Ritter (1991) provides no evidence that the surface position of nouns in Hebrew is in D. I have argued that the well-known facts involving Hebrew CS nominals are not only compatible with the hypothesis that head movement does not necessarily raise the noun as high as D, but also that there are good reasons to assume that indefinites, including indefinite construct state nominals, project only the lower functional categories associated with the noun phrase.

From a cross-linguistic perspective, the proposal put forward in this paper makes the prediction that DOM, at least in languages where it is governed by the formal marking of definiteness or related features, should correlate with non-obligatory presence of articles and with the marking of various features that are associated with D heads. To the degree that this prediction is borne out, it solves a central problem in the Minimalist approach to Case and allows us to maintain the idea that Case is a feature uniformly associated with DPs, even in languages where Case has overt realizations only on a subset of direct objects.

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