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Case and Formal Definiteness:

the Licensing of Definite and

Indefinite Noun Phrases in Hebrew

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Abstract

This dissertation is a study of the interactions between the assignment of abstract Case and the formal marking of definiteness in Modern Hebrew. The focus is on two constructions where Case and definiteness interact. The first, that definite objects in Hebrew differ from indefinite objects with respect to the use of the prepositional object marker *et*, which precedes only definites objects. The second phenomena is that the process of genitive Case assignment in Semitic construct-state nominals gives rise to a spreading of the formal definiteness to which the object marker is sensitive. Hence, definiteness seems to interact both with accusative and with genitive Case. This dissertation aims to give a unified analysis of these two phenomena, which is based on the structural differences between definite and indefinite noun phrases in Hebrew.

Even though definiteness is usually taken to be a semantic notion, Hebrew also distinguishes definites from indefinites syntactically. Formal marking of definiteness, by means of a definite article, does not stand in a one to one relationship with semantic definiteness. It is this formal marking that displays syntactic effects. The class of noun phrases carrying the formal [+def] feature can be defined in syntactic terms, with no reference to the semantic content of the phrase. Furthermore, this work argues that there is no matching [-def] feature, and thus Hebrew noun phrases manifest a formal asymmetry between definites and indefinites. As the definiteness feature is generated on nouns and triggers N-to-D raising, only definites, as syntactically defined, project a DP layer. The head noun in an indefinite phrase, on the other hand, does not

raise to D, and therefore indefinite noun phrases in Hebrew are NPs rather than DPs.

The main claim of this work is that the differential Case marking of definites and indefinites in Hebrew stems from this formal distinction between NPs and DPs, which derives from the asymmetry between [+definite] phrases and those that do not carry this formal feature. Definites in Hebrew require *structural* Case, which verbs in this language cannot assign. This claim is supported by the lack of ECM, Exceptional Case Marking, in Hebrew; a verb in Hebrew can never assign Case to the subject of an embedded clause. Some apparent ECM constructions are argued to require a non-ECM account, so there are no situations where a verb in Hebrew assigns Case to a noun phrase to which it does not assign a theta role. Hebrew, therefore, has no structural accusative. As a consequence of the unavailability of structural accusative, Hebrew reverts to the use of the prepositional element *et*, which is capable of assigning structural Case to definites, which require this kind of Case. According to this analysis, *et* assigns Case like any other preposition, independently of the verb. Support for this comes from the possibility of assigning Case to objects of some verbs by means of other prepositions, and from the fact that *et* is also used in some environments that are not governed by a verb.

As to indefinites, at first it is proposed that they may get inherent Case, which depends on theta role assignment by the Case-assigning head, and which is the kind of Case assigned by verbs in Hebrew. Later, this proposal is revised, and I argue that indefinites in Hebrew, lacking a DP layer, do not need abstract Case at all. Indefinites are thus licensed by projection into a theta position. This claim is supported by the fact that in many languages with rich morphological systems, indefinite objects do not

participate in morpho-syntactic processes that accompany abstract Case assignment: they are not marked with morphological case, do not trigger agreement on the verb, or appear with verbs that carry the morphology of intransitive verbs. Likewise, several constructions in spoken Hebrew, in which an indefinite noun phrase is used in a Caseless position, get an immediate explanation under the hypothesis that indefinites in Hebrew do not require Case. Consequently, the Case system of Hebrew consists only of structural Cases; inherent Case turns out to be a redundant notion in the analysis of Hebrew, and it can be reduced to theta role assignment.

Within the analysis that distinguishes structurally between definite and indefinite noun phrases, this dissertation offers a new explanation to the phenomenon of definiteness spreading in Semitic construct state nominals (CSNs). Since definites require structural Case, CSNs with a definite associate require a complex structure in which Case assignment is possible. Therefore, a definite associate forces the CSN itself to be a DP. On the other hand, when the associate is indefinite, the CSN can be an NP, because there is no need for the functional projection in which Case is assigned, or checked. As the projection of a DP level in Hebrew is based on N-to-D movement, definiteness spreading turns out to be a side effect of the requirement that definites get Case.

Finally, it is argued that the prepositional object marker *et* participates in the compositional interpretation of the VP, as opposed to what has been assumed before. Despite the fact that its semantic contribution is minimal, it is not entirely vacuous, as it serves as the identity operator over quantificational DPs. In this way, the presence of *et* limits the range of possible interpretations for the phrase that it precedes. This

claim, which accords with the syntactic analysis of *et* as a preposition, is used to account for a variety of semantic effects triggered by the presence of *et*. This analysis is compared to previous analyses which have been proposed for similar facts in other languages; as opposed to analyses that rely only on the difference in interpretation between NPs and DPs, and to analyses that rely only on the semantic content of various Case markings, the analysis proposed in this work combines elements from both approaches with the syntactic analysis of the structure of the noun phrase in Hebrew, and succeeds in explaining a wider range of facts.

Chapter 1 serves as an introduction, spelling out the theoretical background. Chapter 2 introduces the distinction between semantic and syntactic definiteness. Chapter 3 focuses on the distribution of *et* and on the licensing of definite objects, arguing that verbs in Hebrew cannot assign structural Case, which definites require. Chapter 4 discusses the licensing of indefinite objects, and it is argued that these are NPs and therefore they do not require formal licensing by means of abstract Case. Finally, chapter 5 discusses the semantics of *et*.

Acknowledgments

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Chapter 1: Introduction

1 Case and definiteness

Differential case marking of definite and indefinite objects is attested in a variety of languages. Turkish, for instance, shows an alternation between accusative morphology, which usually leads to a definite reading of the object, and zero marking:

(1)   a.   Ali   kitab-ı   okudu.   (Turkish)
          Ali   book-ACC   read
          'Ali read the book.'

     b.   Ali   bir kitap   okudu.
          Ali   a   book   read
          'Ali read a book.'

Modern Hebrew, unlike Turkish, has no case morphology. Still, Hebrew uses a prepositional element, *et*, in front of definite objects and not in front of indefinites:

(2)   a.   Dan   kara   *(et)   ha-sefer.   (Hebrew)
          Dan   read   *(et)   the-book
          'Dan read the book.'

     b.   Dan   kara   (*et)   sefer.
          Dan   read   (*et)   book
          'Dan read a book.'

The striking similarity between the distribution of *et* in Hebrew and morphological accusative in languages like Turkish does not seem to be coincidental. This pattern is interesting for several reasons. From a purely syntactic point of view, it raises questions

regarding the syntactic representation of definiteness and how it interacts with the case module. Furthermore, the apparent lack of case on indefinites seems to pose a problem to most analyses of abstract case within generative grammar, where objective case is assumed to be determined structurally and where all nominal arguments require case. From the point of view of the syntax-semantics interface, the link between case and definiteness seems to contradict the view of case as a formal licensing requirement represented as uninterpretable features (Chomsky 1995). From a semantic point of view, it is not entirely clear whether case really distinguishes between definites and indefinites, and some researchers have argued that other semantic notions such as specificity (Enç 1991) and the weak/strong distinction (de Hoop 1992) are the relevant ones here.

In addition to the well-known and widespread interaction between case and definiteness in object position, other syntactic environments display different kinds of phenomena involving case and definiteness. In Semitic construct state nominals (see section 2.3 below), genitive constructions in which case is assigned directly by the noun to its genitive argument, case assignment is accompanied by "spreading" of the definiteness value from the embedded genitive to the embedding nominal (see for instance Borer 1998, Dobrovie-Sorin 2000, 2001 and others). Other interactions between genitive case and definiteness are found in Romanian, where direct genitive assignment is possible only if the head noun is marked with the enclitic definite article. To the best of my knowledge, no unified account of all these interactions between genitive or

accusative case and definiteness has been proposed so far.

This dissertation will focus on the interactions between case and definiteness in Hebrew. I will propose a syntactic analysis of these phenomena in which case is only indirectly linked to definiteness, through the mediation of a morphosyntactic definiteness feature which triggers the projection of a DP level. I will argue that the distribution of the object marker *et*, as well as the phenomenon of definiteness spreading in construct state nominals, are governed by syntactic constraints having to do with the structural distinction between definites and indefinites.

Before giving a more detailed outline of the dissertation, I will start by reviewing the theoretical background on which my analysis is based.

2   Theoretical background

2.1   Case theory

2.1.1 Abstract and morphological case

The term 'case' in traditional grammar usually refers to the different morphological forms that noun phrases take depending on their syntactic position and/or semantic role. For instance, in languages with case morphology, such as Latin, Russian, or Turkish, a subject shows up with different morphology than an object:

(3)   a.   Mehmet   Ali-yi   gördü.   (Turkish)
            Mehmet   Ali-ACC   saw
            'Mehmet saw Ali.'

    b.   Ali   Mehmet-i   gördü.
          Ali   Mehmet-ACC   saw
          'Ali saw Mehmet.'

Following Chomsky (1981), who adopts an idea by Rouveret & Vergnaud (1980), Generative Grammar makes the assumption that even in languages with no case morphology, case exists as an abstract entity. Every NP, in this view, bears abstract case, even when this has no morphological realization. Chomsky (1981:170) proposes the following system of abstract cases, which should hold even for languages like English that have no case morphology (with the exception of the pronoun system).:

(4)   (i)   NP is nominative if governed by AGR

        (ii) NP is objective[1] if governed by V with the subcategorization feature: –NP (i.e., transitive)

        (iii) NP is oblique if governed by P

        (iv) NP is genitive[2] in $[_{NP}\_\overline{X}]$

        (v) NP is inherently Case-marked as determined by properties of its [–N] governor

(Chomsky 1981:170)

Following standard notation, I will henceforth use capitalization to distinguish between morphological *case* and abstract *Case*.

Despite the fact that the notion of abstract Case is inspired by case morphology, Case theory in Generative Grammar has actually dealt more with the licensing conditions

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[1]Objective case is often referred to as *accusative.*

[2]This refers to the Case of possessors; see Chomsky (1986) for a discussion of the Case assigned to NPs dominated by N'.

for NPs in languages without case morphology than with the morphological patterns.

At the heart of Case Theory is the Case Filter (CF) of Chomsky (1981):

(5)   Every lexical NP must be assigned Case.

Following an idea by Joseph Aoun, Chomsky (1986:94) proposes that the Case

Filter is needed in order to make an NP visible for theta role assignment. The revised

formulation of the Case Filter, known as the Visibility Condition, states:

(6)   "A noun phrase can receive a θ-role only if it is in a position to
           which Case is assigned or is linked to such a position" (Chomsky
           1986:94)

The Case Filter, especially under its formulation as a visibility condition, is

concerned with abstract Case, and is therefore a universal licensing condition on NPs.

The term "assigned Case" refers to the idea that Case is a relation between a licensing

head (such as tensed I, or V) and a licensed NP. Case Theory is thus concerned

mainly with characterizing the environments in which Case can be assigned, and in

predicting the syntactic consequences in situations where Case cannot be assigned.

2.1.2 Inherent and Structural Case

In addition to distinguishing different Cases, such as nominative and accusative,

in terms of the governing head, Case theory makes a distinction between two general

kinds of Case: inherent and structural. Structural Case is defined *only* in terms of

government: a head which assigns structural case must only govern the NP. Inherent

Case is more restricted than this. Chomsky (1986:193, 202) defines inherent Case as

Case that is assigned by a head, at D-structure, only to an NP that gets a θ-role from the same head. Unlike structural Case, which is independent of θ-role assignment, inherent Case is therefore dependent on θ-role assignment. Nominative and accusative are usually seen as the prototypical instances of structural Case, while genitive and oblique Case have often been argued to be inherent. In chapter 3, I will argue that Hebrew does not fit this classification: one of my central claims will be that accusative in Hebrew is inherent, while the genitive is structural.

Having defined the distinction between inherent and structural Case, it is important to note that this distinction has no direct implications for the Case Filter. The Case Filter, as a licensing condition, requires that an NP be licensed by either kind of Case. Thus, the structural/inherent distinction mainly encodes the observation that NPs may be licensed in two different ways. As such, the existence of this distinction is a standing problem, as it does not follow from any independent principle and is mainly a description of a non-uniform system. In chapter 4, I will argue that, at least for Hebrew, the theory can be simplified by reducing inherent Case to θ-role assignment to a nominal that does not require any additional licensing.

2.1.3 Case assignment and Case assigners

Case assignment has been defined as a licensing relation between a head and an NP that it governs. Putting aside inherent Case, which, by definition, involves a thematic relation as well, we may assume at this point that Case assignment is nothing more than a government relation. The term 'Case assignment' can thus be seen as a

convenient shorthand for the more formal notion of government by a suitable head. A statement like 'head X assigns Case to NP Y' is therefore equivalent to 'head X, a possible licenser, governs NP Y'.

A central issue in Case Theory, which will also be a major topic of this dissertation, is what characterizes the set of heads that may assign Case, and to what extent this is subject to parametrization. In Chomsky (1981, 1986), the Case assigning properties are listed individually for each of the lexical categories V, N, P and A, as well as for INFL. Apart from the generalization that the [+N] heads N and A share the property of assigning inherent genitive in English[3], the Case properties of each category seem quite arbitrary. Similarly, Marantz (1991), after arguing that many of the syntactic effects attributed to the Case Filter can be reduced to the EPP, defines the residue of Case Theory as follows:

(7)   RES(Case Theory): an NP argument is PRO iff not governed at
        S-structure by a lexical item or [+tense] INFL.   (Marantz 1991)

While this formulation makes it very clear that assignment of abstract Case is nothing more than government by a suitable head, its grouping of lexical categories with INFL is purely stipulative. Furthermore, the assumption that all lexical heads can license an NP does not seem to hold universally. As mentioned in Weerman (1997) and Haeberli (2001), the ability of adjectives and nouns to assign Case seems to be subject to parametric difference. For English, NPs are well-known to be ungrammatical

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[3]This assumes the analysis in Chomsky (1986), where *of* is argued to be the realization of genitive Case assigned by the [+N] head. If, on the other hand, *of* itself is taken to be the Case assigner, then the generalization is that [+N] heads do not assign Case in English.

when governed by N, unless the element *of* is used:

(8)   John's awareness *(of) the problem

If one adopts Chomsky's (1986) proposal that *of* is the realization of genitive Case assigned by the noun, then English might not be a counterexample to the claim that all lexical categories can assign Case. But there are some problems with this analysis: the possibility of stranding *of* in sentences like (9a), which is unexpected if *of* is the realization of Case; the possibility of having *of*+NP as well as a possessor, which under this account would mean that the noun assigns genitive Case to two different NPs; and the use of the same pronominal form after *of* as after all other prepositions, as shown in (9b):

(9)   a.   What did you see a picture of?

       b.   the teacher's humiliation of John/of him/*of his

If *of* is not the realization of genitive Case, but a preposition that assigns Case, then the class of Case assigners in English does not include N and A. The set of possible Case assigners in a given language is therefore not simply the set of lexical heads. Finding a natural characterization of the relevant set becomes a non-trivial issue, complicated by the fact that this is subject to parametrization. As I will argue in this dissertation, the set of Case assigners in Hebrew is significantly different from that of English.

A related issue involves the terminology used to describe various types of abstract Case. If languages differ with respect to the Case assignment properties of heads, the

number and kinds of different Cases probably also vary. It is not entirely clear whether it is actually necessary to refer to different Cases in a GB theory of Case, since the Case Filter simply requires that an NP have Case, no matter what kind (see Weerman 1997). Yet the distinction between different kinds of Case has sometimes been assumed to play an important role; see for instance Belletti (1988) and Lasnik (1992), who both rely on a distinction between two abstract objective Cases, Accusative and Partitive. In most other work that assumes different types of abstract Case, this has been motivated more by the morphological patterns than by the abstract licensing. Thus, for instance, accounts of the ungrammaticality of a sentence like (10) would rely on the idea that INFL can only assign nominative, not accusative:

(10)   * Me read the book.

Apart from issues of morphological realization, it seems that naming abstract Cases is important only if the same governor can license more than one abstract Case, as, for instance, in the theory of abstract Partitive of Belletti (1988). On the other hand, in a theory that equates Case with government by a suitable head, an alternation between two abstract Cases in the same syntactic position cannot even be formulated. I will therefore assume that names of Cases are important only as a means of classifying governing heads. "Nominative" is thus equivalent to "Case assigned by INFL"; "accusative" means "Case assigned by V", etc. Since different syntactic categories may have similar properties with respect to Case assignment, a single name might be used to refer to the Case assigned by more than one syntactic category. In particular, I

will discuss in detail a cross-categorial Case found in Semitic languages, which I will refer to as "genitive".

To summarize, I will assume that abstract Case is a structural licensing condition that is satisfied by a government relation between a suitable head and an NP. The Case Filter requires every argument NP to be licensed in this way. A central goal of Case theory, in this view, is to characterize the class of heads which can act as licensers.

2.1.4 Features and checking theory

As the Minimalist Program (henceforth MP; Chomsky 1993, 1995, 1998, 1999) aims to reduce the complexity of the syntactic machinery, different operations have been reanalyzed as specific applications of more general operations. One instantiation of this approach is the reanalysis of Case theory as an instance of checking theory. Rather than assuming that Case is assigned by a head to an NP, the MP assumes that a Case feature on the head has to be checked against a matching feature on the NP[4] (or, in Chomsky's 1998 formulation, the features must undergo the Agree operation). This means that, unlike in GB, the head of the noun phrase comes from the lexicon carrying a Case feature, rather than "receiving" Case at a later point.

Features in the MP fall into two groups: interpretable and uninterpretable. Of these, uninterpretable features must be eliminated prior to LF in order for the derivation to be successful. Case features are assumed to be uninterpretable, and therefore the

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[4]Or DP; see the next section.

Case-checking relation is obligatory. In this way, the empirical results of the GB Case Filter are mostly maintained in the MP: every nominal comes from the lexicon with a Case feature, which must be checked against a suitable head (i.e. a head carrying a matching feature). Failure to check the Case feature is equivalent to failure to receive Case in the GB framework.

To a large extent, it is a straightforward matter to restate many generalizations of GB theory in terms of feature checking. In order to maintain the government-based view of Case, the structural constraint that Case is always assigned by a head to an NP that it governs, it could simply be restated as a condition on checking configurations: a head can check a feature of a governed XP. Checking terminology per se does not make any predictions that GB terminology does not (or vice versa). Unless we make use of some specific characteristic of checking theory in order to formulate a generalization which cannot easily be formulated in GB, generalizations regarding Case can be stated using either government or checking terminology.

Checking relations in the MP (Chomsky 1995), however, are explicitly assumed to require a specifier-head configuration (a view which originated in GB; see for instance Koopman & Sportiche 1991 and Chomsky & Lasnik 1993). Therefore, Case features in the MP force the head and the NP to stand in the head and the specifier position of some projection, respectively. While implementing this idea is a straightforward matter when nominative Case is considered, more complicated structures are required in order to accommodate other Cases in this picture. Movement of objects

to the specifier of an agreement projection has been claimed to occur in order to allow checking of accusative Case, and similar configurations have also been proposed for other structural Cases. In chapter 4, I will make use of Siloni's (1997) analysis of genitive Case-checking in Semitic nominals, which involves movement of the nominal head and the genitive DP to AgrP (see §2.2.3).

Apart from theory-internal consequences like the existence of agreement projections, there are issues in which the GB and the MP approaches to Case make different empirical predictions. One example is the question whether a head which *may* assign Case *must* do so. In checking theory, a head checks a Case feature on an XP against a feature of its own. Both features have to be erased, as both are uninterpretable[5]. Thus, checking theory predicts that a potential Case "assigner" must *always* enter a Case-checking relation, and no optionality is allowed, unless the lexical specification of the Case feature is assumed to be optional. This prediction does not follow from the view of Case as a licensing environment: the fact that government by a given head can license an NP does not entail that an NP is obligatory, since Case in this view is a requirement on NPs, not on heads.

Similarly, checking theory makes it possible to assume that more than one Case is possible in a given structural position. An alternation between two objective Cases, as proposed in Belletti (1988), can easily be stated as an alternation between a [+partitive] and [+accusative] feature on the relevant head and NP; in a Case-as-government

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[5]See, however, Pesetsky & Torrego (2001) and Svenonius (2001) for proposals that Case is a tense/aspect feature on the nominal, and consequently that Case on the head *is* interpretable.

approach, it is harder to give any exact content to such an alternation if the governing head is fixed.

From the perspective of theory restrictiveness, there is a question of whether structural notions such as government are more restrictive than feature checking. As long as checking was assumed to require a spec-head configuration, as in Chomsky (1995), both government and checking were local relations and as a result both were quite restrictive. However, in Chomsky (1998), feature checking is replaced by the operation Agree, which is a less strictly local relation: a head may Agree with a DP that it c-commands, as long as they are both within the same "phase". Under this view, the notion of Case assignment under government can be reformulated as an instantiation of Agree, but the opposite is not always true: not every configuration in which Agree may occur can be classified as a government configuration. Thus, GB terminology seems to offer a more restricted notion of Case.

To conclude, both GB Case theory and MP Case theory have their advantages and disadvantages, and there is no obvious reason why one should be chosen rather than the other. However, there is one final consideration which is particularly important for this work: unlike GB Case theory, Case theory in the MP is concerned only with structural Case (Chomsky 1995: 386), while inherent Case is left without a satisfactory explanation. Since this dissertation is concerned with the licensing of NPs in positions where it is not a-priory clear whether structural or inherent Case is involved, there is a methodological advantage in using the more neutral GB terminology, at least as long

as it is not known whether the Case under investigation is structural, and hence covered by the Minimalist Case theory, or inherent. Keeping in mind all the issues discussed above, I will thus make use of the GB term "Case assignment" until the exact nature of the different kinds of Case found in Hebrew is clarified. In chapter 4, I will argue that Hebrew provides no reason to maintain the notion of inherent Case; accordingly, I will switch to Minimalist terminology once it becomes clear that we are dealing only with *structural* Case.

2.1.5 Case and interpretation

In the MP, it is assumed that Case is an uninterpretable feature, and therefore it must be checked and erased prior to spellout. A serious challenge to this view is posed by the fact that in many languages, there does seem to be a tight correlation between case morphology and interpretation in certain environments. The most widely observed and systematic manifestation of this involves semantic effects related to case marking of objects. In example (1), it was shown that accusative case in some languages seems to be interpreted as definiteness. A related pattern is that the object position is often not uniquely associated with accusative case; some languages have an alternative morphological case which can appear on an object. The alternation between these two cases may correlate with a semantic distinction, including, but not restricted to, definiteness versus indefiniteness. The following example from Finnish is taken from Maling and Vainikka (1996:186):

(11) a. Hän luki kirjan. (Finnish)
          he read book-ACC
          'He read a/the book.'

      b. Hän luki kirjaa.
          he read book-PAR
          'He was reading a/the book.'

As discussed in detail by Kiparsky (1998), the case marking (accusative or partitive) on the object in Finnish plays an important role in the interpretation of the VP, where it correlates with an aspectual property that Kiparsky refers to as *homogeneity*. Unlike inherent Case, whose relation to interpretation comes from the dependency on thematic roles, the partitive/accusative alternation is not thematically restricted and seems to play the same role as the perfective/imperfective verbal inflection in languages like Russian. Similar alternations in objective case morphology are observed in Hindi (Butt 1993), Scottish Gaelic (Ramchand 1997), Icelandic (Svenonius 2001), Russian (Babby 1994) and a variety of other languages, where, in addition to aspectual facts like those illustrated by the Finnish examples, alternations in objective case correlate with alternations in definiteness or specificity of the object. Thus, it is clear that the semantic role of case cannot be dismissed as an idiosyncratic property of one particular case system. This seems to contradict the view that Case is invisible at LF, as it points in exactly the opposite direction: case here seems to have a clear semantic effect. If by the level of LF all Case features were "erased", it is not clear how these strong semantic effects could be derived.[6]

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[6]It is very easy to come up with an apparent technical solution to this problem. For instance, we could argue that accusative and partitive objects in Finnish check their Case features against two

Two possible approaches can be taken to reconcile the tension between the view of Case features as uninterpretable and the systematic link between case morphology and interpretation. On the one hand, we could discard the hypothesis that Case is uninterpretable (see for instance Svenonius 2001); on the other hand, it might be argued that even though abstract Case is uninterpretable, morphological case is not. The second hypothesis can only be formulated if we assume that morphological case is *not* a reflection of abstract Case. It seems that the assumption that Case is uninterpretable is incompatible with the assumption that case is a straightforward realization of Case, in view of the empirical data.

The main empirical domain of this dissertation is the Case-theoretic difference between definite and indefinite objects in Hebrew. In the analysis I will develop, it turns out that in Hebrew abstract Case itself has no semantic contribution. What looks at first like semantic conditioning of accusative Case in Hebrew will be argued to be a purely structural constraint. At the same time, the preposition *et* will be argued in chapter 5 to have semantic content. Thus, principles of compositional interpretation will allow us to derive the properties of Hebrew objects without assuming that Case itself has any semantic content in this language. On the other hand, the implication of the analysis to languages that use morphological case where Hebrew uses prepositions is that morphological case *is* sometimes interpretable. Chapter 5 suggests a way of

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different functional heads, and that the different functional heads are in turn responsible for the differences in interpretation. The ease with which such an analysis can be formulated is indicative of how vacuous it is: any observed semantic property could simply be stipulated to be carried by an abstract functional head. Unless the existence of the various functional heads can be independently motivated, I do not think that such an analysis is worth pursuing.

deriving semantic effects of case without assuming that case morphology directly encodes notions such as definiteness (Maling and Vainikka 1996).

2.2   The structure of noun phrases and the DP hypothesis

Following Abney (1987) and Szabolcsi (1983, 1994), it has become standard to assume that noun phrases are not simply NPs, but DPs headed by the functional element D. Assuming that determiners such as 'the' or 'this' in English occupy the D position, the structure of a simple noun phrase under this hypothesis is thus the following:

(12)

```
            DP
            |
            D'
           /  \
          D    NP
          |    |
         the   N'
               |
               N
               |
              man
```
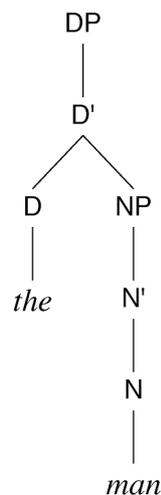
Subsequent work on the structure of DPs has resulted in a variety of proposals regarding the existence of additional functional projections between the NP and the DP. Among the most influential is the proposal made by Ritter (1988, 1991), according to which NP is dominated by a projection that she labelled NumP, which is the locus of the number features of the noun phrase. The central motivation for this proposal

stems from the analysis of Hebrew construct state nominals (CSNs), to which I turn in the next section. Siloni (1997), in her analysis of Semitic CSNs, argues that the intermediate projection dominating NP is an agreement projection where genitive Case is checked; consequently, she labels this projection AgrGenP. Considerations such as the placement of various APs have motivated the introduction of additional functional projections, but I will not elaborate on these proposals (see for instance Cinque 1994 and Shlonsky 2000). In what follows I will assume that DPs have, in some cases, one functional projection between NP and DP. Following Siloni, I will refer to this projection as AgrP. At this point, my use of this label carries no theoretic importance; in chapter 4, I will make use of Siloni's proposal that this projection is the site of genitive Case checking, thus justifying my choice of this label for the intermediate functional projection. Until then, I will only assume the *existence* of one intermediate functional projection between NP and DP.

Once we adopt the DP hypothesis and the possibility of having additional functional projections above the NP level, the next question is whether all levels are always present. The null assumption has usually been that all levels are indeed present in all nominals. Others, such as Szabolcsi (1987, 1994), Stowell (1989, 1991) and Longobardi (1994) have argued that *arguments* must be DPs, as the D is responsible for turning the nominal into a referential entity; within this approach, non-arguments such as nominals in predicate positions can be analyzed as bare NPs.

The claim that argument nominals are always DPs is not uncontroversial, and

some researchers have claimed that under certain circumstances, NPs may also function as arguments; most notably, this has often been proposed for the object position. Laka (1993), van Geenhoven (1998), Philippi (1997), Bartos (2001) and others, have all argued for this view based on facts from a variety of languages. This approach is often motivated by the observation that indefinite determiners are frequently omitted or phonetically null, thus spawning a rich literature on the syntax and semantics of bare NPs (see for instance Chierchia 1998, Carlson 1999, and Dayal 1999). Some proponents of the argument-DPs approach have argued, on the other hand, that even nominal arguments that appear bare contain more than an NP, and also have a null D position which either remains empty or is filled by the noun that raises from N to D (see for instance Contreras 1986, Ritter 1991, Longobardi 1994, Cheng and Sybesma 1999). The fact that, in many languages, bare nominal arguments tend to occur only in governed positions, has been used by some of these authors as evidence for an empty D position which is subject to the ECP. Still, there are languages where bare nouns can occur in positions which are not properly governed; see Dayal (1999) for evidence from Hindi, and Cheng and Sybesma (1999) for Mandarin Chinese, as well as Chierchia (1998), who proposes an analysis in which the possibility of bare NPs in ungoverned argument positions is derived from a more general semantic parameter. Hence, bare nominal arguments cannot automatically be equated with an empty D position.

Finally, if one adopts the view that languages allow bare NPs in addition to DPs, the question arises whether both NPs and DPs are subject to the Case Filter. If NPs

occur only in non-argument positions, the question is not a very interesting one, assuming that Case is a licensing condition on argument nominals (Chomsky 1986). On the other hand, if argument NPs do exist, then the question of Case becomes more important. Some authors, such as Ouhalla (1993), Bartos (2001) and Friedmann & Ruigendijk (2002) have explicitly assumed that only DPs are subject to the Case Filter. This view is justified by the assumption that the Case feature is located on D, and therefore lack of D immediately implies that no Case feature has to be checked.

In chapter 4, I will argue for an analysis of Hebrew nominals that allows both NPs and DPs to occur as arguments. Only the latter, however, require Case. This will play a central role in accounting for the different syntactic properties of definites and indefinites in Hebrew.

2.3   Construct State Nominals and the DP in Hebrew

2.3.1 Basic properties of Construct State Nominals

Construct State Nominals (CSNs; I will sometimes refer to these simply as 'constructs') are a form of complex DP found in Semitic languages, consisting of a nominal head followed by an embedded genitive DP. Many different semantic relations can be expressed in a CSN, such as possession, material composition, and a variety of thematic relations:

    (13)   a.   xulcat ha-yeled   ha-blondini
                  shirt   the-boy   the-blond
                  'the blond boy's shirt'

    b.   gag   re'afim adumim
          roof   tiles   red
          'a roof of red tiles'

    c.   mexirat   ha-bayit
          selling   the-house
          'the selling of the house'

In traditional grammars of Hebrew, the head is known as the *nismax* ('supported') and the genitive as the *somex* ('supporter'). I will use the theory-neutral terms *head* and *associate* to refer to these two parts of a CSN, respectively. For instance, in (13a), the head *xulcat* ('shirt') is followed by the associate *ha-yeled ha-blondini* ('the blond boy').

CSNs have received much attention in recent years, and are described extensively by Ritter (1988, 1991), Fassi-Fehri (1989, 1993), Hazout (1991), Borer (1998), Siloni (1997, 2000), Longobardi (1994, 1996, 1998), Dobrovie-Sorin (2000, 2001), Engelhardt (2000), Shlonsky (2000) and many others. Below I review the basic properties of this construction:

Morphological change: When a noun heads a CSN, 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-CSN DPs:[7]

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[7]In some cases the morphological operation produces no audible change; this happens, for instance, in words consisting of a single syllable.

(14) a. mapa
          map   (non-CSN)

      b. mapat ha-ir
          map   the-city   (CSN)
          'the map of the city'

Obligatory genitive: Following the head noun, an obligatory genitive DP must appear; 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, as opposed to Hebrew where Case is abstract. In either language, the genitive phrase is not marked by any prepositional element. This distinguishes CSNs in Hebrew from another method of assigning genitive Case, the "free genitive" (FG), in which the noun is used in its basic form with no morphological change, while the genitive phrase is preceded by the word *šel*, roughly equivalent to English *of*. The two methods of assigning genitive are illustrated below:

(15) a. mapat *(ha-ir)   (CSN)
          map   the-city
          'the map of the city[8]

      b. mapa (šel   ha-ir)   (FG)
          map   of   the-city
          'a map of the city'

Head initial: A CSN is always head-initial; unlike languages such as English, where possessors precede the head noun, the genitive phrase in Hebrew must follow the head and can never precede it.

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[8]This CSN can also be interpreted as 'a map of the city', even though the definite reading is usually more accesible. This issue will be discussed in detail in chapter 2.

Strict adjacency and AP position: The position of APs relative to the head noun and genitive phrase has played a central role in motivating the assumption that DPs dominate an additional functional projection (see Ritter 1991 and Siloni 1997). APs in Hebrew follow the noun that they modify. In a CSN, however, the genitive DP must be adjacent to the head noun even when that noun is modified by an AP; the AP then follows the associate, and may never intervene between the head and the associate:

(16) a. kvucat   mumxim   gdola
         group.FEM experts   big.FEM
         'a big group of experts'

      b. * kvucat   gdola   mumxim
           group.FEM big.FEM   experts

No article & definiteness spreading: The most important property of CSNs for the purpose of this dissertation is what is often called "definiteness spreading" (DS) or "definiteness inheritance" (DI). Unlike free genitives, the head of a CSN can never appear with the definite article, and the definiteness value of the entire CSN is determined by that of the associate. Thus, a CSN is definite iff its embedded DP is definite:

(17) a. ibadeti   *(et)   mapat ha-ir   *(ha-)meforetet.
         lost.1SG   *(et)   map   the-city   *(the-)detailed
         'I lost the detailed map of the city.'

      b. ra'iti   (*et)   migdaley misradim (*ha-)mexo'arim.
         saw.1SG   (*et)   towers   offices   (*the-)ugly
         'I saw ugly office towers.'

In addition to the definite interpretation, the definiteness of the CSN triggers definiteness marking on the AP that modifies its head, and the use of the object

marker *et*, which is used only with *definite* objects. In chapter 2, I will elaborate on

this and show that the spreading of a definite *interpretation* is actually not always

witnessed, as opposed to the more systematic *syntactic* manifestations of definiteness,

definiteness agreement and the use of *et*.

2.3.2 *The syntactic structure of CSNs: basic assumptions*

Much of the research on constructs has dealt with two aspects of CSN syntax: the

structure of CSNs, and in particular accounting for word order and the impossibility

of attaching the definite article to the head of a CSN; and the spreading of definiteness.

These issues are especially interesting since they distinguish CSNs from free genitives

(FG). A widely accepted hypothesis, which has been applied in various ways to

account for both of the issues mentioned above, is that a CSN is formed by head

movement from N to D (see, however, Dobrovie-Sorin 2000, 2001 and Shlonsky

2000 for an alternative view). Most authors have followed Ritter's (1988, 1991)

influential proposal that the head of a construct is generated under N, and subsequently

moves to D, where it precedes all other DP-internal material[9]. As to the relative

ordering between the associate and APs which modify the head of the CSN, the fact

that the associate follows the head but precedes APs is usually taken as evidence for

an intermediate functional projection; Ritter (1988, 1991) labels this projection NumP,

while Siloni (1997) uses the label AgrP. The associate is assumed to raise to the

specifier position of this functional projection, where it precedes any APs adjoined to

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[9]The specifier position of DP has not been used very often in most analyses of Semitic noun phrases. See, however, Danon (1996, 1998) and Shlonsky (2000).

the NP[10] [11]. Using Siloni's (1997) labelling for the intermediate projection, we get the

following structure for the CSN *mapat ha-ir* ('the city map', lit. 'map the-city') in

(15a):

(18)
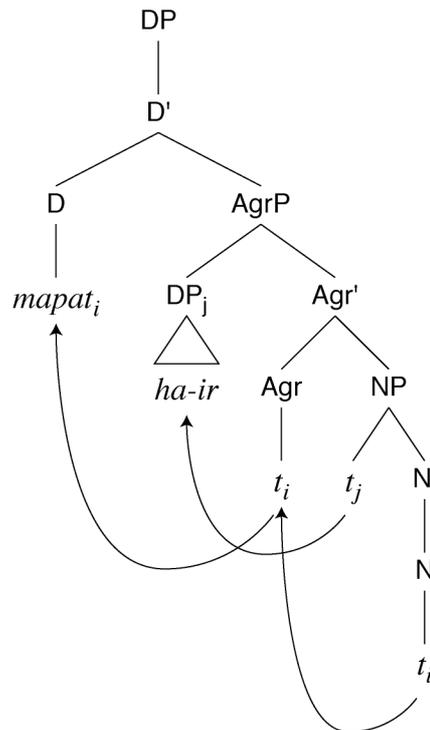
One point where analyses of CSNs tend to vary more sharply is with respect to

the status of the definite article, and definiteness in general. Some authors (Hazout

1991, Fassi-Fehri 1993) propose a phonetically-null D which carries the definiteness

value of the CSN, to which the raised N merges; others (Borer 1998, Siloni 1997)

assume that an abstract definiteness morpheme is base-generated on the N head and

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[10] See Borer (1998), who argues against this kind of argumentation.

[11]In addition to NumP and AgrP, another important proposal which has been made regarding the internal structure of the DP is that of Hazout (1991) and Borer (1998), who propose that event nominals contain a VP projection. As the debate surrounding the existence of a VP inside NP has to do mainly with event nominals, I will ignore this issue here. See also Siloni (1997) for counter-arguments to the VP-in-NP hypothesis.

raises with it to D. Shlonsky (2000), on the other hand, assumes that the article is the head of the DP and that nothing merges with it, and thus the definite article in Semitic parallels the article in languages like English. Here I will follow the article-on-N approach of Borer (1998) and Siloni (1997), assuming that N carries a [def] feature, while the D position is initially empty. As to the impossibility of having the definite article on the head of a CSN, I will assume that this is a morphophonological property related to the special morphology of heads of constructs. I will thus not adopt any of the various proposals that the definite article 'competes' for the same position with the raised N (Hazout 1991) or with the genitive-assigning Agr head (Siloni 1997).

As to the mechanism of genitive Case assignment (or checking) in CSNs, at least two distinct positions have been assumed in the literature: one which assumes movement of the genitive phrase to a Case position, and one which does not. According to Siloni (1997), genitive Case is checked in a spec-head configuration in the AgrP dominating NP. Thus, genitive is assimilated to other structural Cases, which are often assumed to require checking in spec-head configurations (Chomsky 1991, 1993). Siloni argues convincingly that genitive Case in constructs is structural rather than inherent, and thus it is expected that genitive will be checked in a way which is similar to other structural Cases.[12]

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[12]An alternative view of genitive Case in CSNs assumes that genitive Case does not require movement. Both Dobrovie-Sorin (2000) and Shlonsky (2000) suggest that the structural configuration in which the head of a CSN and the associate are merged is already a Case configuration. Thus, in this view the head assigns genitive Case to the associate (which is a complement in Shlonsky's view and a specifier in Dobrovie-Sorin's analysis), without need for any movement to a functional projection, at least not overtly. As a consequence, if movement of the nominal head and/or the associate occurs at all, it is not motivated by Case. The observed adjacency between the head and the genitive is thus a reflection of the fact that they are sisters; according to Shlonsky, if anything moves it is the phrase

In this dissertation, I will adopt Siloni's analysis of Case in CSNs, which involves movement of the head and the associate to a spec-head configuration in AgrP. This will play a central role in chapter 4, where I use this movement-based analysis to derive a new explanation for the phenomenon of definiteness spreading.

2.4   Definiteness

2.4.1 What is definiteness?

There are very few topics that have triggered such a huge literature, both in linguistics and in philosophy, as the notion of 'definiteness'. Even an attempt to answer the question 'what is definiteness?' would be way beyond the scope of this introduction; see for instance Russell (1905), Strawson (1950), Donnellan (1966), Bierwisch (1971), Heim (1982), Link (1983), Declerck (1986), Fiengo (1987), Keenan (1987), Kadmon (1990), Lyons (1999) and many others. The term "definite noun phrase" has been used in many different ways. The proliferation of definitions for definiteness has also led to great deal of confusion. Each of the proposed definitions might be suitable for a different purpose. It is not at all obvious that there is one "absolute" notion of definiteness which is the "correct" definition.

Definite NPs, or DPs, are often assumed to have certain semantic, pragmatic, and syntactic properties. Singular definites usually refer to a unique entity, which is a familiar discourse entity; plural definites usually refer to maximal sets of entities. Syntactically, definites are often introduced by definite or demonstrative articles. It is

containing N+DP, and thus adjacency remains even at spell-out. Despite the simplicity of this analysis of genitive Case assignment, it must be noted that both Shlonsky and Dobrovie-Sorin use it as part of a complex theory which relies on a variety of additional assumptions. I will not elaborate on this approach here, except for the discussion of Dobrovie-Sorin's analysis in chapter 4.

well known, however, that there are exceptions to each of these properties, and that they do not always correlate. Thus, the definite article can be used in DPs that do not refer to familiar discourse entities, and vice versa.

Luckily, for the purposes of this dissertation it is not necessary to define in advance the term 'definite'. My goal is to account for certain syntactic phenomena in Hebrew, that seem to be related to some notion of definiteness. In chapter 2, I will show that the relevant notion can be defined on the basis of morphosyntactic properties of the noun phrase. In this sense, 'syntactic definiteness' in Hebrew will thus be technical term which is independent of any previous definition of definiteness. We will then be faced with an empirical question, whether the class of syntactically definite DPs as defined has any characteristic semantic properties in addition to their defining syntactic properties.

2.4.2 The semantics of definite articles

Defining definiteness is often tied to defining the semantic content of the definite article. These are two different problems, however: first, not every definite noun phrase contains the definite article; furthermore, while presence of the definite article is an empirical fact, the classification of a DP as definite or indefinite may vary from one theory of definiteness to another.

Within the theory of generalized quantifiers, Barwise and Cooper (1981) propose that the definite article denotes a partial function that, when combined with a singular noun, maps a singleton set into the principal ultrafilter generated by the unique element

of the set. If the set is not a singleton, the denotation of the definite article is undefined. In this way, the presuppositions of existence and uniqueness associated with singular definites is accounted for. Within a theory that assumes that noun phrases do not always denote generalized quantifiers, Partee's (1987) analysis of the definite article as the *iota* operator is basically equivalent to the analysis of Barwise and Cooper, but at a different semantic type.

While this definition accounts very well for the uniqueness associated with singular definites, it fails to account for the possibility of using the definite article with plural and mass nouns[13]. Link (1983), in his semantics of plurality, proposed a generalization of the iota operator to the plural and mass domains. According to Link, the definite article denotes the *supremum* operator, which maps a set of entities into its maximal element. Applied to the denotation of a singular noun, the supremum operator is defined if and only if the noun denotes a unique element; in that case, this operator returns this unique element. Thus, the supremum operator is equivalent to the *iota* operator when applied to a singular. Applied to the denotation of a plural or mass noun, it yields the *sum* of all entities in the denotation of the noun. This definition thus provides a natural and unified interpretation for the definite article in the singular, plural, and mass domains.

In this dissertation I will assume that Link's supremum operator correctly captures the properties of the definite article in a language like English. One of my goals is to

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[13]With the exception of DPs like *the three men*, to which Barwise and Cooper provide a semantics along the same lines as that of *the (one) man*.

see to what extent the formal notion of definiteness that I define in chapter 2 has the same properties, and specifically whether the semantics of the English definite article matches the semantics of the Hebrew definiteness feature.

3   Outline

In chapter 2, I establish the distinction between semantic and syntactic definiteness. I show that definiteness in Hebrew plays a role in the syntax, triggering agreement within the noun phrase and giving rise to a difference in Case marking between definite and indefinite objects. A central claim of this chapter is that the classification of DPs into "definite" and "indefinite" for these purposes is determined by syntactic properties of the nominal and does not depend on its interpretation. Even though in most cases the syntactic and the semantic notions of definiteness coincide, this is not always the case. This means that for the most part, an analysis of the different Case-related properties of definites and indefinites in Hebrew should not be concerned with semantics.

Using this, chapter 3 addresses the issue of the different Case marking strategies used with definite and indefinite objects in Hebrew: only definites are preceded by the prepositional element *et*, often seen as a dummy accusative assigner or as the realization of accusative Case. I argue that *et* is actually a preposition that assigns structural Case independently of the verb. This is needed because verbs in Hebrew do not assign structural Case. To establish this, I show that Hebrew has no ECM constructions; the only apparent counterexample is the use of small clauses with several verbs, most

notably perception verbs. I argue that these are not really ECM constructions, and that they are licensed without the verb assigning Case to a DP which it does not assign a theta role to. Thus, if verbs in Hebrew are capable of assigning Case, it is not structural Case. I compare this analysis to Belletti's (1988) hypothesis that transitive verbs universally assign either a structural accusative or an inherent partitive, and show that my conclusions are incompatible with Belletti's analysis.

Chapter 4 focuses on the Case properties of indefinites in Hebrew. After establishing in chapter 3 the claim that definites require structural Case, which triggers the use of *et* where no other structural Case assigner is possible, the question is why indefinite objects in Hebrew do not seem to require structural Case. In chapter 3, I consider the idea that indefinites may get inherent Case; while this derives the possibility of using indefinite objects without *et*, it opens many other questions, most notably why such a difference between definites and indefinites should exist. Chapter 4 provides an alternative analysis, which does not give rise to these problems. I suggest that indefinites in Hebrew lack a DP level, which is the relevant level for structural Case. As a consequence, indefinites do not have a Case feature that they need to check. Data from a variety of language shows that indefinite objects often seem to be Caseless. Unlike chapter 3, where inherent Case is seen as a "weaker" kind of Case which is sufficient for indefinites, I argue in chapter 4 that inherent Case is just theta role assignment and nothing else. Thus, the theory is simplified and we get the generalization that in Hebrew, definites are DPs and hence require structural Case, while indefinites

are NPs and therefore do not require Case.

As a consequence of this analysis, I argue that the phenomenon of definiteness spreading in CSNs can be reduced to "DP-ness spreading": a definite associate, being a DP, requires Case and thus needs to be embedded in a structure where Case can be checked, which is itself a DP. Indefinite associates, on the other hand, do not require Case and hence can be embedded inside a simpler nominal structure, a bare NP. I also discuss genitive structures in Romanian, and show that a similar analysis can account for an interesting interaction between genitive Case and definiteness marking found in this language.

Chapter 5 addresses several semantic problems related to *et*. It is shown that even though the distribution of *et* is governed by syntax, nevertheless it seems to trigger various semantic "side effects". After reviewing the different effects associated with *et*, I argue that these can all be derived from the hypothesis that *et* restricts the semantic type of the DP that it precedes. Since *et* is analyzed as a preposition, and under the assumption that every overt lexical head participates in the compositional interpretation of sentences where it is used, I propose that *et* has the minimal semantic content of the identity operator on generalized quantifiers. This hypothesis, together with the syntactic analysis of chapter 4, derives the various semantic effects of *et*.

Chapter 2: Introducing Syntactic Definiteness

Overview

Definiteness has often been assumed to play a role in syntax, most notably in relation to various "definiteness effects" and Case alternations (see Belletti 1988, de Hoop 1992 and many others). The question whether this involves a semantic property which is relevant in syntax, or an independent syntactic representation of definiteness, remains to a large extent unanswered. In this chapter I will show 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. I define the class of syntactically definite DPs, which will play a central role in the analysis of the Hebrew Case system in the next chapter.

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 Borer 1988,

1998, Hazout 1991, Siloni 1997 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 motivation for discussing definiteness is almost always semantic and not syntactic. I will show that 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[14]. 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 dissertation.

With that 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

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[14]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'.

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. I will focus in this chapter mainly on Hebrew, in which overt definiteness marking is significant at the syntactic level.

2   Evidence for syntactic definiteness in Hebrew

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

The idea of viewing definiteness in Hebrew as a feature on the noun has already been proposed by Borer (1988) and in much subsequent work. Glinert (1989) also distinguishes formal definiteness from semantic definiteness in his descriptive grammar of Hebrew; see also Ziv (1982: 276) and Wintner (2000). In what follows, I review the salient facts that have led to the recognition that definiteness is syntactically significant in Hebrew and in some other Semitic languages.

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[15] (see also Wintner 2000):

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[15]See also Shlonsky (1997:229) for phonological evidence that the article in Biblical Hebrew and in Standard Arabic forms a word with noun that follows it.

(19) a. šlošet   ha-sfarim
        three   the-books
        'the three books'

    b. * ha-šlošet sfarim/ ha-šloša   sfarim[16]

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: 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.

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:

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[16]Hebrew numerals have two forms; the distinction between the two is not important at this point and will be discussed later.

(20) 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 (as witnessed by the fact that most languages do not have any kind of definiteness marking on adjectives).[17] 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 are 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*:[18]

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[17]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.

(21) a. ɾa'iti   *(et)   ha-yeled.
       saw.1sɢ *(et)   the-boy
       'I saw the boy.'

    b. ɾa'iti   (*et)   yeled.
       saw.1sɢ (*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 the 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 I 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. I will propose a syntactic analysis of these facts in chapters 3 and 4.

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[18]Similar facts found in Finnish, Turkish and othe languages will be discussed later.

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 judgements, 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][19]. 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 noun phrases 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, does not match any semantic classifications of

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[19]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 objects position seem to be clitics on *et*.

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].

It is possible to find minimal 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. As noted in Borer (1998), the semantic value 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:

(22)   a.   kara'ti   sefer   ze.
            read.1sG   book   this
            'I read this book.'

       b.   kara'ti 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 demonstratives in Hebrew that are syntactically indefinite makes the entire idea of matching formal and semantic definiteness seem very hard to maintain.[20]

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[20]Borer (1998) also notes that the use of definite articles together with demonstratives poses a problem for an analysis which would place the article in the D position. I find this argument to be

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[21]) indefinite or (singular/plural) definite nouns; the resulting interpretations are equivalent to English DPs with *each/every* and to those with *all*, respectively. In terms of syntactic definiteness, the former is indefinite while the latter is definite:

(23) a. ri'ayanti   (*et)   kol   mu'amad   (*ha-)recini.
          interviewed.1SG   (*et)   every candidate (*the-)serious
          'I interviewed every serious candidate.'

      b. ri'ayanti   *(et)   kol ha-mu'amadim   *(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

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relatively weak, since demonstratives in Hebrew are more naturally analyzed as adjectives than as syntactic determiners, and therefore they do not seem to occupy the D position, which would then still be available.

[21]Actually, some plural indefinites are also allowed, as in the following example:

(i)   kol   šloša   yeladim yaxinu   uga.
      every   three   children make.FUT   cake
      'Every three children will bake a cake.'

The correct generalization seems to involve semantic singularity, which could be defined as non-cummulativity.

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:

(24)   ɾa'iti   *(et)   axad   ha-yeladim.
          saw.1sɢ   *(et)   one   the-boys
          'I saw one of the boys.'

Here, the DP is syntactically [+def], as shown by the obligatoriness of *et*.[22] 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 account for a similar pattern in Turkish, 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 (24) into the same group as definites, thus matching the syntactic classification. However,

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[22]The use of *et* in this case is obligatory according to normative grammars; in everyday speech, there is a certain degree of optionality here. On the other hand, the more frequent kind of partitive (*exad me-ha-yeladim*), which involves the preposition *me-*, is used in colloquial Hebrew with optional *et*, as opposed to prescriptive grammar. This might be an indication of a reanalysis of the two structures which is currently underway.

it is easy to find cases where this approach fails: first, the demonstratives discussed in (22), 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:

(25) ra'iti   (*et)   šloša/harbe/xelek me-ha-yeladim.
       saw.1sɢ   (*et)   three/many/part   of-the-boys
       'I saw three/many/some of the boys.'

What makes the partitive in (24) different from all others is its syntactic structure, which is that of a construct state, 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 some 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 non-count 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.

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 [+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 (25), which include an embedded definite DP, while the embedding DP is not semantically definite.

Alternatively, some occurrences of the [+def] feature could be seen as 'expletives' which are motivated by grammatical requirements and are not interpreted. This possibility will be discussed further in chapter 5.

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

2.3   Definiteness and the animacy hierarchy

So far I have established the distinction between formal and semantic definiteness. A well-known typological generalization is that among the languages that have differential markings for objects of different classes, some distinguish definites from indefinites, while others are sensitive to properties such as specificity, animacy or person. As discussed for instance in Comrie (1981), Aissen (1999), Lyons (1999:213-215) and many others, there seems to be a hierarchy which ranks animate DPs higher than inanimates, first and second person pronouns higher than third person pronouns, and definites higher than indefinites. Many languages make a distinction in how they mark objects, distinguishing between nominals that are high on this scale and those that are low. There is no universal cutting point, however. For instance, one finds

languages that display object marking alternations similar to those in Hebrew, but where all inanimate objects pattern with indefinites.

If the definiteness feature that I have proposed for Hebrew is taken as an instance of a universal principle of grammar, then we must integrate it into this broader typological perspective. The central point that allows such an integration is that what I refer to here as "formal definiteness" is simply an arbitrary feature of DPs that is visible to syntax, regardless of its semantic origin. It has been suggested within functionalist frameworks that the source of differential object marking systems is the need to mark non-prototypical arguments, such as definite or animate patients.[23] While such an account might explain why languages choose to mark definite or animate objects by means of a special marker in the first place, it explains mainly the facts in languages where the relevant factors are systematically semantic or pragmatic. However, as I show in this chapter, in certain languages the defining characteristic of DPs which require special markers are no longer tied to their semantics. The prediction is therefore that, just as formal definiteness in Hebrew does not stand in a one to one relationship with semantic definiteness, there will be languages where "formal animacy" defines a class of DPs whose grammatical behavior differs from that of other DPs, even when this formal animacy does not match semantic animacy.

According to Torrego (1998:55), one such language is Spanish. In Spanish, the prepositional marker *a* is obligatory in front of animate objects. As noted by Torrego,

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[23]This has been pointed out to me by Yehuda Falk, p.c.

this includes proper names, even if they refer to inanimate objects. She illustrates this point with the following example:

(26)   Esconde *(a)   Bárbara.
        hide   (to)   Barbara
        'Hide Barbara.'

Torrego notes that *a* is required in example (26) even if *Barbara* refers to a boat or to a magazine rather than to a human being. Thus, the syntax of Spanish seems to be sensitive to a sort of "formal animacy" that doesn't always correspond to semantic animacy, even though the latter might be the diachronic origin of this formalized notion. The fact that in Spanish it is animacy and in Hebrew it is definiteness is quite irrelevant to my analysis, as long as both features give rise to similar syntactic effects.

3   Definiteness Spreading – semantic or syntactic?

The property of Semitic CS nominals known as definiteness spreading is central to the characterization of syntactic definiteness. It is quite easy to see that syntactic definiteness is spread in a CSN, 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 spread as well (see for instance Fassi Fehri 1989:92, 1993:225, and Hazout 1991:55). 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, Fassi Fehri 1993, Borer 1998, Dobrovie-Sorin 2000, and others) that even in some languages like English that don't have CSNs, a DP with a genitive possessor seems to inherit its

(semantic) definiteness from the genitive phrase. Hazout concludes from this that DS is not a unique property of Semitic CSNs, a position argued against by Borer (1998). However, a close inspection shows that DS is spreading of syntactic definiteness *only*, and not necessarily of semantic definiteness. In what follows, I will use the term DS to refer to the syntactic phenomenon, and 'semantic definiteness spreading' where semantic definiteness is involved.

Whether or not semantic definiteness is spread depends on various factors, including the syntactic position of the CSN and lexical semantic properties of the head. When a CSN with an embedded definite DP appears in subject position, it isn't always interpreted as a definite. In examples (27a-b), the most natural interpretation of the subject DP is as an indefinite, while a definite interpretation is much harder to get. Similarly, when a CSN follows a preposition, no obligatory semantic definiteness spreading is witnessed. Consider for example (27c), with *le-* ('to') preceding a CSN. 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.

(27) a. tošav   ha-štaxim   ne'ecar   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.'

Engelhardt (2000), discussing event nominals, also comes to the conclusion that definiteness spreading does not always occur. She notes that some CSNs with a definite associate are allowed in positions that usually disallow definites. For instance, only an indefinite may follow the preposition *tox* ('while') in (28) (=Engelhardt's (50a-b)):

    (28)   ha-pixut   be-ša'ar   ha-dolar   tox   (*ha-)horada šel
              the-devaluation in-rate   the-dollar while (the)decrease of

              ha-ribit
              the-interest
              'the devaluation in the exchange rate combined with the decrease of interest'

In this example, the nominal following *tox* can be the CSN *horadat ha-ribit*, which has a definite associate:

    (29)   ha-pixut   be-ša'ar   ha-dolar   tox   horadat
              the-devaluation in-rate   the-dollar while decrease

              ha-ribit
              the-interest
               'the devaluation in the exchange rate combined with the decrease of interest'

From this and similar examples, Engelhardt concludes that CSNs with definite associates may be either definite or 'non-definite', which she views as nominals lacking a definiteness specification. At this point it is only important to note that event nominals of this kind are not always semantically definite; whether or not this is tied

to a structural lack of definiteness specification, as Engelhardt proposes, is a question

I will return to in chapter 4.

A surprising fact is that, as opposed to the examples discussed above, when a

CSN is in object position, semantic definiteness *is* apparently spread, in addition to

syntactic definiteness. This is illustrated in the following examples, where the only

possible interpretation is one where the object is definite:

> (30) a. ha-katav   ri'ayen   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? In chapter 5, I

will argue that the object marker, *et*, has some semantic content. 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 (30)

semantically definite as opposed to similar DPs in other positions. I will return to this

issue in chapter 5.

In (24) it was shown that the numeral-headed CSN *axad ha-yeladim* ('one of the

children') is formally [+def] although semantically indefinite. This also falls under the

generalization that DS in constructs is a formal operation that doesn't necessarily

involve semantic definiteness.

The indefinite reading of a non-object CSN is not always available; the most important factor has to do with lexical properties of the head noun. In Dobrovie-Sorin (2000), it is argued that the head of a CSN denotes a function from individuals to individuals: the denotation of the associate, an individual, is mapped by the head of the construct into another individual. For instance, in *beyt ha-šaxen* ('the neighbor's house'), the head *beyt* ('house') maps the denotation of *ha-šaxen* ('the neighbor') into the entity denoting his house. This can account for the fact that relational nouns (such as body parts and kinship nouns) are more productive as heads of constructs than other nouns. However, the heads of the constructs in (27) do not fit into this pattern, as they denote functions from individuals into *sets* of individuals. For instance, *xayal* ('soldier') maps an army into the set of its soldiers. The general pattern here might be classified as a membership relation (*resident of-*, *representative of-* etc.); see also Glinert (1989). Thus, we might extend Dobrovie-Sorin's generalization to these cases by saying that a head of a CSN must denote a function which applies to individuals, giving either individuals or sets. In the latter case, an indefinite reading of the CSN is possible even when the genitive DP is definite. The most important thing to note is that the defining property of the set of nouns that don't induce semantic definiteness spreading is a *semantic* property: membership nouns are characterized by their interpretation, and not by any syntactic attribute. Since this semantic property of the N correlates with the lack of semantic definiteness spreading, we must conclude that

semantic definiteness spreading, where it occurs, cannot be the result of a syntactic operation as claimed for instance by Borer (1998). This does not mean, of course, that syntax plays no role here; it simply means that the syntactic representation does not specify *directly* the semantic definiteness of the entire CSN.

Other classes of nouns can be found where definiteness marking does not result in straightforward semantic definiteness of both the associate and the CSN as a whole. One surprising pattern is observed in constructs headed by measure nouns: when marked [+def], only the head is interpreted as definite, whereas the genitive DP which bears the definite article is semantically indefinite:

(31)   bakbuk   ha-yayin
         bottle   the-wine
         'the bottle of wine'

In (31), it is the bottle (or the amount) which is semantically definite, not necessarily the wine. In this case, [+def] in (31) seems to be interpreted *only* on the embedding DP. On the other hand, it could be argued that the associate refers to the *kind* 'wine', regardless of whether the CSN is [+def] or not. If kinds are taken to be definites, as in Chierchia (1998), then example (31) does seem to involve definiteness of both embedded and embedding DPs. But then it is the indefinite CSN *bakbuk yayin* ('a bottle of wine') which poses a problem to the claim that semantic definiteness is shared by the associate and the CSN, since at least one of the readings of this CSN is an indefinite one (in addition to the kind interpretation, which would be definite just as the kind *wine* is).

Certain determiners, which are syntactically heads of CSN (see Danon 1996, 1998), display the opposite pattern of DS:

(32)   maxacit/rov   ha-sfarim crixim la-avor   la-madaf.
half/most   the-books need   to-move   to-the-shelf
'Half/most of the books have to move to the shelf.'

At least on one of its readings, this sentence does not refer to any particular half or majority of the books; thus it seems that semantic DS isn't obligatory with these determiners.

Finally, many nominal constructs which are lexicalized as compounds, as well as those whose genitive argument denotes a kind, display semantic "percolation" of definiteness, in which [+def] is interpreted *only* at the higher CSN level:

(33) a.   aron   ha-metim   lo   mat'im li.
closet the-dead.PL   NEG   fit   to-me
'The coffin doesn't fit me.'

b.   aron   ha-sfarim omed rek.
closet the-books stands empty
'The book closet is standing empty.'

The subject in (33a), which is the [+def] version of a lexical compound, does not have to refer to any definite dead; and (33b) doesn't imply any definiteness of books – the closet, which is related to books in general (to the kind denoted by *sfarim*) is the only thing which is definite.

To conclude, it seems that, as opposed to syntactic definiteness, which is always spread in CSNs, there is no independent operation of semantic definiteness spreading. I will not try at this point to provide a full-fledged account of *why* semantic definiteness

seems to spread in some cases and not in others, but I think that by incorporating lexical properties of different classes of nouns into Dobrovie-Sorin's (2000, 2001) proposal, most of these semantic facts can be accounted for. For the following discussion, what is more important is the conclusion that the [+def] feature is spread from the embedded DP to the CSN that dominates it, and as a result the formal feature is eventually present on both the embedded and the embedding DP. This feature is not necessarily interpreted at every level on which it is marked, but it is reasonable to assume that it must be interpreted at least once in every "def-chain". 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 CSN 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:

1. Proper names and pronouns are [+def][24] [25]

2. Other non-CS nominals are [+def] iff the head noun is marked with *ha-*

3. A CSN is [+def] iff its associate is [+def]

It is important to note that the process of CSN formation can be applied recursively, giving complex phrases whose formal [def] value is determined only by that of the most deeply embedded DP[26]. The following examples illustrate this:

(34) a.   ha-mištara 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-mištara 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 (34a), a CSN *tošvey ha-kfar* is embedded as the genitive DP of a larger CSN; the innermost DP, *ha-kfar*, is [+def], and so are the two higher projections. Compare

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[24]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 *ba'al* ('husband') and *iša* ('wife'), which refer to relations which are more 'definite' than 'grandfather of-', are not formally definite without overt marking by the definite article:

(ii) pagašti   et *(ha-)ba'al   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).

[25]Some counterexamples will be discussed in chapter 4.

[26]Use of such recursive embedding is not as frequent in everyday spoken language as it is in written language. See for instance Ravid and Shlesinger (1995).

this with the phrase in (34b): here only the maximal DP is a CSN, whose genitive phrase *tošavim šel ha-kfar* is not itself a CSN (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 CSN 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 upwards.

4.2   Against 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) and Engelhardt (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 existence 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 non-binary features is logically possible and it 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 cannot 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.

Beyond this methodological reason for not assuming a [-def] feature, the proposed asymmetry makes strong empirical predictions. Following Danon (1996) and Borer (1998), I assume that the [+def] feature is what triggers head movement from N to D. If there is no such thing as a [-def] feature, then indefinites are predicted to differ from definites with respect to this kind of head movement, and the theory predicts that definites and indefinites will not have the same internal structure. I will return to this issue in chapter 4, where I argue that this prediction is correct; this formal asymmetry between definites and indefinites will then be used to derive the effects of "definiteness spreading".

4.2.2 Semantics and formal indefiniteness

Even though the focus of this chapter 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 & 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 generalized quantifier framework, are just as

natural as non-intersectability. 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, and de Swart 2001). 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[27]. 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 always 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

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[27]Other "definite determiners", such as *this* and *my* can also be defined as (contextually-dependent) operators of the type $<<e,t>,e>$.

definitions is that we would like to assume that whatever [def] features are found in the syntax, these are somehow interpreted. As shown in §2.2, 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 which has an overt morphological realization as *ha-*; this feature is interpreted like the definite article in English, at least once per DS-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.

4.3   Formal definiteness and determiners

Going back to the definition of syntactically definite DPs given in §4.1, it might be objected that its simplicity ignores the contribution of determiners other than the definite article *ha-*. 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.

Since determiners are often classified as definite or indefinite, it is important to see whether such classifications of determiners are relevant to formal definiteness. In this section I provide a negative answer to the following two questions:

1.   Are there any determiners other than *ha-* which can mark a DP as [+def]?

2.   Are there any determiners that block formal definiteness (in other words, are there any determiners that are formally indefinite)?

Consider the object DPs in the following examples:

(35)   ra'iti   *(et)   šlošet/aseret/kol/rov   ha-yeladim.
            saw.1sɢ   *(et)   three/ten/all/most   the-children
            'I saw the three/the ten children/all the children/most of the children'

As the use of *et* shows, all these determiners are part of [+def] DPs. This fact follows quite easily from the observation often made (see for instance Shlonsky 1987, Ritter 1991, Danon 1996, 1998) that many determiners display the same kind of morphophonological alternations that nouns do. This similarity is clearest in the case of numerals: each numeral in Hebrew (except for complex numerals) has two forms, which correspond morphophonologically to the two forms that nouns have, as discussed in chapter 1. For instance, the numeral 3 has the forms *šloša* (used in front of indefinite nouns, and as a bare numeral when not followed by a noun) and *šlošet* (used in front of definite nouns); compare this with a noun such as *macevà* ('tombstone'), whose derived form *macèvet* appears only when the noun heads a CSN and never in isolation (where the free form *macevà* must be used). This suggests an analysis of DPs like those in (35) as CSNs headed by the determiner, as in Danon (1996). Further evidence

to support this idea comes from similar structures in Standard Arabic, where the overt case marking on the noun and on the determiner follow exactly the same pattern as that in a 'regular' CSN. For example, as Benmamoun (1998) shows with the determiner *kull* in Standard Arabic (equivalent to Hebrew *kol*, 'all' in (35)), genitive case is realized on the noun that follows this determiner, which is itself marked for whatever case the entire DP receives, exactly like in CSNs headed by nouns.[28]

If we adopt the idea that the determiners in (35) are heads of CSNs, then the same analysis of formal definiteness that was applied to nominal CSNs can be applied to CSNs headed by determiners. The object DP in (35) is made of a determiner, which is the head of a CSN, followed by an embedded genitive. The embedded DP is marked [+def] by the definite article, and this definiteness value is spread to the embedding DP by the same mechanism responsible for DS in general. Thus, determiners in this case are no different than nouns.

This analysis can account for some of the cases mentioned in §2.3, where definiteness is not predicted on semantic grounds. For instance, the partitive *axad ha-yeladim* ('one of the boys') in (6) is formally [+def], despite its semantic indefiniteness. Syntactically, this is a CSN with an embedded definite, and this straightforwardly accounts for the [+def] value of the entire object. Other partitives,

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[28]Benmamoun concludes that *kull* heads a construct state with exactly the same structure as that of nominal CS, with the exception of having a QP projection instead of an NP. Since the choice of a Q head rather than an N does not seem in this case to reflect any syntactic distinction, but only the general assumption that *kull* as a quantifier should belong to a different lexical category, I will not assume a Q; but other than the choice of label for this node, Benmamoun's proposal is basically the same as the one made here.

like those in (7), use the preposition *me-* ('from' or 'of') and do not show CS morphology. According to the standard tests for syntactic definiteness, these are not formally definite. This is not surprising – prepositions in general are "opaque" to definiteness and don't give rise to DS, as the following example shows:

(36)   ra'iti   (*et)   tmuna   me-ha-sefer.
         saw.1SG   (*et)   picture from-the-book
         'I saw a picture from the book'

We can thus conclude that determiners behave just like nouns as far as DS is concerned. The following two cases cover a great deal of observed DPs which contain a determiner:

1.   A sequence of the form det_{cs} - dp, where det_{cs} is a determiner with CS morphology and dp is a string which might be analyzed as a DP, has the structure of a CSN headed by the determiner and is [+def] iff dp is a definite DP.

2.   Partitives which make use of the preposition *me-* are never [+def] (unless the determiner itself is marked by *ha-*, an option which is fairly rare).

As to indefinite determiners, my claim is that there aren't any in Hebrew. If a DP which contains a determiner is not formally [+def], the reason for this has nothing to do with the determiner itself. The reason is simply that there is nothing which can make the DP [+def]. There are some determiners that can never have the article attached to them (for independent reasons that will not be discussed here), but for the purposes of the current discussion these determiners are just like any noun that appears

without the article; there is no reason to assume that such determiners are marked by a [-def] feature.

5   Syntactic definiteness across languages

Is the definiteness feature found 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, since definite articles do not necessarily trigger any syntactic operation. Instead, I propose that a formal definiteness feature exists in the grammar of only some of the languages that have definite articles, 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, that must be rejected, is to account for the source of 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. One might argue for an independent abstract formal feature, with no morphological realization in Hebrew, 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.

In those languages where objective Case determines semantic interpretation as definite or indefinite (or some other related notion), 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 to be proposed in chapter 3 for Hebrew. One possible formulation of the second approach is in terms of a [def] feature which is only compatible with a certain type of Case. This, for instance, could be one possible interpretation of Belletti's (1988) ideas, who proposes that definite objects are incompatible with abstract partitive Case.[29] This hypothesis might be formulated as some sort of feature mismatch. Similar ideas are present in Maling and Vainikka's (1996) analysis of abstract partitive, where the presence of a [+COMPLETED] feature is explicitly assumed to interact with Case, and in de Hoop (1992). But the problem with assuming a [def] or similar feature in these cases is, again, a problem of evidence. Assuming such a feature in languages

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[29]Belletti's analysis is discussed in detail in chapter 3.

where case morphology triggers a certain kind of interpretation 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 would have no evidence that a given DP is [+def] other than its semantics; at the syntactic level, the available data is merely case morphology. Therefore, the claim that a DP interpreted as a definite carries an abstract [+def] feature is completely 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; see for instance Enç 1991 and Kiparsky 1998), 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.

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 realized as clitics on the noun trigger movement operations that lead to changes in word order. Scandinavian languages are a well-known example (see Hellan 1985, Delsing 1993, Giusti 1994, Hankamer and Mikkelsen 2001). This is illustrated in the following example from Danish:[30]

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[30]There are various restrictions on the possibility of using an enclitic article together with an adjective; see the references cited above.

(37) a. den   rode   hest
          the   red   horse
          'the red horse'

      b. hest-en
          horse-the
          'the horse'

Hellan (1985) argues that a [def] feature in Scandinavian can either adjoin to the head noun, where it appears as a suffix, or appear as an independent article. Head movement in examples like (37b) is argued to be triggered by this feature on N. I find this kind of argument for a [def] feature to be very convincing. Similar patterns in Romanian are discussed in Grosu (1988, 1994) and Giusti (1994, 1995). 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 variations, 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 place, 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 a language may have.

6   Summary

This chapter has established the fact that definiteness is formalized as a syntactic feature in the grammar of Hebrew. The description of this feature and of the syntactic effects that it triggers does not require 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.

So far, the discussion has been purely descriptive, and none of the syntactic effects related to formal definiteness has been accounted for. In chapter 3, I use the descriptive generalizations developed in this chapter to account for the use of the object marker *et* in front of definite objects. An explanation of the phenomenon of definiteness spreading in CSNs will be given at the end of chapter 4.

Chapter 3: The Hebrew Object Marker et

Overview

This chapter focuses on the Hebrew object marker *et*, which appears only in front of DPs bearing the syntactic definiteness feature. I argue the need for *et* stems from a combination of two factors: a requirement that definites get structural Case, and the inherent nature of the Case assigned by verbs in Hebrew. In light of this proposal I consider Belletti's (1988) theory of abstract Partitive, and show that Hebrew object marking seems to provide evidence against it.

1   Introduction: properties and problems of *et*

As was already noted in the previous chapter, *et* appears in front of objects if and only if they are [+def][31]. The standard assumption has usually been that *et* is either 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). Either way, the restriction of *et* to definite noun phrases is a mystery. If *et* is the realization of accusative Case, this seems to suggest that indefinite objects are licensed

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[31]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 given in the previous chapter does not make any reference to *et*.

without accusative, and perhaps without Case at all; and if *et* is a Case-assigning preposition, this implies that, for some reason, even transitive verbs cannot assign Case to a definite object in Hebrew. The distribution of *et* has so far been stipulated, leaving open many intriguing questions, such as: Why must *et* be followed by a definite? Why do definites require *et*? And does *et* really have the typical distribution of accusative Case? I will begin by spelling out these problems more clearly.

1.1   Selection of [+def] objects

One notable property of *et* that this dissertation hopes to clarify is its interaction with 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 the semantic properties of the DP that follows it. Since previous discussions of *et* did not make a clear distinction between syntactic and semantic definiteness, this fact was just stated 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 this restriction in terms of what is available at the lexical and syntactic levels; as a consequence, the problem which requires a solution becomes a purely syntactic one. Can the observed requirement for *et* in front of [+def] objects be derived from independently motivated structural properties of Hebrew? Can some general property of the Case system of Hebrew be shown to create this need for *et*? We 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 which is only compatible with some interpretations and not with others, as proposed in Danon (2002). But since syntactic definiteness doesn't match any known semantic partitioning of DPs, no semantic analysis by itself is sufficient, and any account of the distribution of *et* that relies only 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 syntactic, even though in its presence *et* could also have some effect on interpretation, as suggested by the data in section 3 in the previous chapter. I postpone discussion of these semantic issues until chapter 5.

As mentioned in chapter 1, similar interactions between Case marking of objects and semantic definiteness appear in many languages that are unrelated to Hebrew. For instance, such phenomena are found in Finnish (Belletti 1988, Maling and Vainikka 1996, Kiparsky 1998), Turkish (Enç 1991), Hindi/Urdu (Mahajan 1990, 1992, 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, non-accusative, form of Case marking of objects (such as partitive in Finnish, genitive in Russian, or the lack of overt Case marking in Turkish), which usually gives rise to indefinite or non-specific interpretations (although, as

claimed by Maling&Vainikka 1996 and by Kiparsky 1998, the exact semantic effect

is often much harder to identify than in this simplistic overview). However, what

makes Hebrew special in this context is the existence of overt definiteness morphology

which can be characterized as the realization of a formal feature. In the other languages

listed above, with the exception of Scottish Gaelic, there are no definite articles. This

difference is substantial enough to justify a restriction of the discussion at this point

only to Hebrew. I will return to discuss other languages in section 2, where I compare

my analysis with Belletti's (1988) theory of Case assignment to indefinite objects.

Before going on to discuss other problems related to *et*, 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:

(37) a. * Dan   kara   et sefer.
          Dan   read   et book

      b. * Dan   kara   ha-sefer.
          Dan   read   the-book

Native speakers' judgements on these two violations are not the same. Even

though both are bad in the spoken language, most speakers tend to judge (37a) as

considerably worse than (37b); omission of *et* is actually quite common in written

language, especially in formal or literary uses. 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]?

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 get accusative directly from 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 2, I 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. The status of indefinite objects with respect to Case is the topic of Chapter 4.

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. If we assume that a noun phrase is accusative iff it is governed by transitive V (Chomsky 1981), then the use of *et* in any other position requires an explanation. It is an empirical fact that morphological accusative is found not only on objects of transitive verbs, but this alone does not provide an automatic account of the use of *et* in non-verbal contexts. I will start by describing the facts.

As shown by Hazout (1991), 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):

> (38)   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 (1991) and Borer (1998) take the use of *et*

in derived nominals to be evidence for the existence of a verbal projection there.

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[32] (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 lead to ungrammaticality, even without *et*:

(39)   * 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. Derived nominals differ from verbs in not being able to

license the complementary indefinite arguments[33]. This intensifies the question of

what exactly is the nature of the Case assignment mechanism involved.

Other environments where *et* can appear without a verb are found in colloquial

Hebrew. In possessive sentences, *et* is used by most speakers following the non-verbal

element *yeš*, roughly equivalent to English *have* or *be*, and in its negation *en*:

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[32]This generalization is not entirely accurate, as complex indefinites are much better than bare nouns in this enviroenment (Hazout 1991). I will return to this point in chapter 4.

[33]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*; in particular, I will not assume that *et* is sometimes the realization of externally-assigned Case and sometimes an independent Case assigner.

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

As in nominals, this is an unexpected environment for accusative Case[34]. 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 cannot 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 cannot be inflected for tense); cf. Shlonsky (1987):

(41)   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.

1.4   *et* and *gam*

Objects composed of a conjunction of two or more definite DPs give rise to another peculiar property of *et*, noted by Winter (1999). Consider the following example:

(42) a. kaniti   gam   et ha-xulca ve gam   et ha-

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[34]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*.

bought.1sG   also   et the-shirt   andalso   et the-

mixnasayim.
pants
'I bought both the shirt and the pants.'

    b. * kaniti et gam   ha-xulca   ve gam   ha-mixnasayim.

As the example shows, *et* must follow each occurrence of *gam* ('also', 'both'). If *et* is associated mainly with the verb, one would expect it to appear only once and to govern the entire complex object. But instead, *et* is duplicated and appears in a position which isn't even governed by the verb, assuming that *gam* forms a barrier to government. In this respect, *et* is not different from other prepositions; when the verb selects for a PP, the same pattern appears:

(43)   a.   yašavti   gam   al ha-kise   ve   gam   al ha-sapa.
            sat.1sG   also   on the-chair   and   also   on the-sofa
            'I sat both on the chair and on the sofa.'

    b. * yašavti   al gam   ha-kise   ve gam   ha-sapa.

This suggests an analysis of *et* as a P, which would allow us to derive some of its properties from general properties of prepositions. Note that the occurrence of prepositions next to the DP, in a position not governed by V, is expected since P assigns Case to the DP.

Another related observation is that the duplication of *et* with *gam* is not a simple requirement that all nominal heads in a conjoined object bear accusative marking, as would be expected if *et* is the realization of morphological accusative. A simple conjunction or disjunction (without *gam*) does not require *et* to appear in front of

every conjunct, even though this is possible:

(44)   kaniti   et ha-xulca   ve   (et)   ha-mixnasayim.
         bought.1sɢ   et the-shirt   and   et   the-pants
         'I bought the shirt and the pants.'

As this example shows, the sentence is grammatical even if *et* appears only once, preceding the entire conjoined DP[35]. Thus, the duplication of *et* after *gam* cannot be simply explained as an instance of the general tendency of morphological Case to be realized on all nominal heads in a conjoined DP.

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[36][37]. 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 of the requirement for structural Case. Thus, what I propose actually reverses what is often assumed in the literature: accusative, which is usually taken to be structural, will be analyzed as inherent Case, while prepositions, which are frequently associated with inherent Case, will be argued to assign structural Case.

After reviewing the basics of the structural/inherent Case distinction, in §2.2 I

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[35]Traditional grammars of Hebrew state that *et* must appear in front of every conjunct; this rule is usually rejected by most native speakers.

[36]As mentioned earlier, at this point I use the term "Case assignment" as in GB theory, rather than the Minimalist Program's "Case checking". The main reason is that the former term applies to both structural and inherent Case, while checking theory is often taken to involve only structural Case. I return todiscuss the nature of inherent Case in chapter 4.

[37]This will be revised in chapter 4, where I reconsider the notion of inherent Case.

will defend the claim that Hebrew verbs do not assign 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 §2.3, I will discuss the nature of the structural Case associated with *et*, and I will argue that this is not accusative assigned by the verb, but structural genitive assigned by *et* itself. Finally, in §2.4 I will show that definite DPs always get structural Case in all positions where they appear.

2.1   Background: structural and inherent Case

Case theory makes an important distinction between two kinds of Case: structural and inherent. Structural Case is defined *only* in terms of government: a head that assigns structural case must govern the DP that gets Case. Inherent Case is more restricted than this. Chomsky (1981) defines inherent Case as Case which is lexically determined by the governing head; others, such as Babby (1994), have referred to this as 'lexical Case'.

Inherent Case is also assumed to differ from structural Case in terms of the level in which it is assigned: inherent Case is assigned to a DP at D-structure, whereas structural Case is assigned at S-structure. As a consequence, DPs bearing inherent Case do not allow A-movement, since such DPs already get Case in their D-structure position.

Following the analysis in Kayne (1979), Chomsky (1981:292-294) uses the

distinction between structural and inherent Case to account for differences in preposition stranding between English and French. Crucially, this relies on the assumption that the nature of Case assigned by a given type of head is subject to parametrization; specifically, Chomsky proposes that in English, prepositions assign *structural* Case, while in French they assign *inherent* Case. Similarly, it has also been proposed that accusative and genitive Case are inherent in some languages or environments and structural in others (see, for instance, Belletti and Rizzi 1988:332-333, Siloni 1997).

The observation that inherent Case is 'closely linked to θ-role', noted in Chomsky (1981:171), has become part of the modified definition of inherent Case given in Chomsky (1986). Chomsky (1986:193, 202) restates the distinction between structural Case, which is assigned in terms of S-structure position, and inherent Case, which is assigned by a head at D-structure only to a noun phrase that is assigned a θ-role by the same head. Structural Case is thus independent of θ-role assignment, unlike inherent Case. Note that this definition is not identical to the one in Chomsky (1981). For instance, when the preposition *for* is used as a complementizer, it might be argued that it assigns inherent Case as defined in Chomsky (1981), whereas according to the definition that links inherent Case to theta role assignment it is clear that *for* is not an inherent Case assigner. In what follows, I will assume the definition given in Chomsky (1986).

Using this definition of inherent Case, it is clear that nominative Case is structural, since it is assigned by AGR (or tensed I), a head that never assigns any theta roles.

Accusative has usually been assumed to be structural, because of the existence of 'Exceptional Case Marking', or ECM, structures, in which accusative is assigned by a V to the subject of an embedded clause (Chomsky 1981, Kayne 1981, Stowell 1983):

(45) a. John expects [$_{IP}$ **me** to resign].

   b. I consider [$_{AP}$ **him** stupid].

In these examples, the embedded subject cannot get Case within the clause, which lacks inflection. However, the matrix verb governs the embedded subject, and apparently assign accusative Case to it. Since the verb does not assign a theta role to the embedded subject, which gets its role from the embedded predicate, accusative in English cannot be inherent Case, and it is thus classified as structural.

Following this reasoning, the crucial test for distinguishing between structural and inherent Case is whether or not Case can be assigned in ECM-like constructions. For instance, Chomsky (1986) uses this to argue that genitive in English is inherent, since it cannot be assigned in such a manner:

(46)   * The consideration [of **the problem** difficult]

As to the Case assigned by prepositions, Chomsky (1986: 201-202) considers both the possibility that it is inherent and the possibility that, in English, it is structural, perhaps as the result of English having a degenerate Case system which lacks oblique Case. Later in this chapter I will argue that Hebrew also lacks a distinct oblique Case, and that Hebrew prepositions assign structural *genitive* Case.

2.2   Hebrew verbs as inherent Case assigners

Whenever a transitive verb assigns Case to its object, a theta role is also assigned; therefore, the idea that objective Case (such as accusative) might be inherent in some languages is a reasonable one. The existence of ECM constructions in a language like English is 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 (47a).

2.   Clausal complements with a bare infinitive, (47b).

3.   Small clauses with an *-ing* participle. (47c).

4.   Small clauses with an AP/PP/NP/DP,[38] (47d).

> (47)   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 much more restricted. Consider first ECM verbs such as *expect* that take infinitival clauses. As the following example

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[38]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.

shows, the Hebrew parallel of (47a) is ungrammatical with the 'accusative' pronoun *oto* and requires the use of a preposition (*mi*, 'from'):[39]

(48) a. ani   mecape   mi-   Dan/   mimenu   lehitpater.
         I   expect   from- Dan/   from-him to-resign
         'I expect Dan/him to resign.'

      b. * ani   mecape   et Dan/   oto   lehitpater.
           I   expect   et Dan/   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 (48) 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 it does not involve 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, even with a preposition:

(49) a.   I believe/consider/want/find Dan to be innocent

      b. * ani ma'amin/maxšiv/roce/moce   (et/mi/be) Dan   lihiyot
           I   believe/consider/want/find   et/from/in Dan   to-be

           xaf mi-peša.
           innocent

---

[39]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.

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 English *to, le-*, attached to the root, and the root itself never appears in isolation.[40] What Hebrew does have is what corresponds to 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):

(50)   šama'ti   et Dan   šar.
             heard.1SG et Dan   singing
             'I heard Dan singing.'

The beynoni has several properties typical of participials, and is the equivalent of the English gerund[41], and not of a BI. To establish the fact that (50) corresponds to type 3 ECM in English and not to type 2, consider the verb *make*. In English, this verb can precede an ECM complement with a BI (type 2) or an adjective (type 4), but not a complement with a full infinitive (type 1) or a gerund (type 3):

(51)   a. * John made Mary to sing.

       b.   John made Mary sing.

       c. * John made Mary singing.

       d.   John made Mary happy.

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[40]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.

[41]In this I am not claiming that the *beynoni* is the same as the gerund, but only that SCs using the *beynoni* behave similarly to English gerund SCs. See Siloni (1997) for a discussion of both the *beynoni* and the gerund.

In Hebrew, the corresponding verb *asa* can only be used with adjectival small clauses (type 4):

(52) a. * Dan   asa   et Rina   lašir.
          Dan   made   et Rina   to-sing

      b. * Dan   asa   et Rina   šara.
          Dan   made   et Rina   sing(ing)

      c.   Dan   asa   et Rina   me'ušeret.
          Dan   made   et Rina   happy

Assuming that the selectional properties of *make/asa* are the same in both languages, the crucial example is (52b), which shows that *rina šara* behaves like *Mary singing* in (51c) and not like *Mary sing* in (51b). This is consistent with the claim that the beynoni is the Hebrew equivalent of English participials and not of a BI. Thus, I conclude that like type 1, Hebrew has no type 2 ECM. Clauses with the beynoni thus correspond to participial clauses in English.

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[42]. The fact that with some verbs there is something very close to type 1

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[42]This is not limited to Hebrew. Kayne (1981) proposes an account of the lack of ECM in French; according to Kayne's proposal, even in English what looks like Case assignment by the verb to the subject of an embedded clause is actually Case assignment by a null complementizer P, which may govern the subject in English but not in French. Extending this proposal to Hebrew seems problematic, since Hebrew does have ECM-like constructions with overt prepositions, and therefore there is no

ECM that involves 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 §2.3, I will argue that *et* assigns structural Case independently of the verb, and therefore the discussion should be restricted 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:

> (53) a. šama'ti   yeladim   šarim.
>   heard.1SG   children   singing
>   *'I heard children singing.'*

>   b. ha-šofet   maca   ne'ešam   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.[43] The first of these is the subject position. As noted by Safir (1983), a SC can sometimes appear as the subject when the matrix verb is *be* or a raising verb. The following is from Safir (1983); similar facts hold for Hebrew:

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principled way of ruling out a null P which may also act as a governor, as Kayne proposes for English.

[43]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.

(54)   **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 cannot receive Case from outside the SC, and yet the sentence is grammatical[44]. Furthermore, the SC itself behaves like an NP with respect to Case: it moves to the subject position where it receives nominative Case and satisfies 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 get Case from the verb, which assigns Case to the same object that it theta-marks: the SC.

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[45]:

(55)   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 (55a-b) is easily accounted for by the hypothesis that

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[44]Stowell (1983:299) discusses these examples and suggests (fn. 21) that the subject of the SC in this case is assigned Nominative. It is not clear, however, what would be the mechanism involved in Nominative assignment here.

[45]This is not possible with all verbs which allow a SC. As noted by Raposo & Uriagereka (1990:531 fn. 47), the verb *consider* does not allow pseudoclefting:

(i)   *What I consider is John intelligent.

I return to this issue in chapter 4.

the subject of the infinitival does not receive Case in this configuration. But then, the grammaticality of (55c) 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):

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

b. John is proud of [his son speaking Chinese].

Similarly, in Hebrew it is possible to have a SC inside a noun phrase, following *šel* ('of'):

(57) a. ra'iti   tmuna   šel [yeladim   mesaxakim].
    saw.1sɢ   picture   of children   playing
    'I saw a picture of children playing.'

b. šama'ti   kolot šel [ciporim   šarot].
    heard.1sɢ   voices of birds   singing
    'I heard voices of birds singing.'

It should be noted that the examples in (57) illustrate what might be viewed as the nominal counterpart of perception verbs; the phrase in brackets is of the same type as the complement of a perception verb such as *see* or *hear*. There are two possible answers to the question how the subject of the SC is licensed: one is that *šel* assigns Case exceptionally to the subject of the SC[46]; alternatively, these facts could be taken as further evidence that SCs do not require external Case for their subject. The analysis that I will propose in this chapter and in the next one is compatible with both

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[46]This kind of analysis is compatible with an analysis of *šel* as a *structural* case assigner, as I will propose; it is incompatioble with an analysis that assumes *šel* assigns *inherent* genitive, as claimed by Siloni (1997); see also Chomsky (1986) for a discussion of the nature of the case assigned by English *of.*

of these explanations.

Similar facts are found in other languages. Chung and McCloskey (1987) show convincingly that Irish allows SCs in a variety of environments where no external governor is found which can assign Case to the subject of the SC. Still, such sentences are grammatical, and the subject of the SC typically bears morphological accusative. The authors conclude that Irish has a mechanism of default Case assignment, leaving open the question whether this mechanism is specific to subjects of nonfinite clauses or "a general default mechanism that assigns Case to any NP that does not already have it" (p. 188). Furthermore, they claim that similar rules seem to exist in other languages, for instance in Latin and in Classical Greek, and thus this should not be dismissed as an idiosyncratic property of a single language.

The notion of "default Case", however, has the potential of turning the Case Filter into a vacuous notion. As long as one restricts "default case" to morphological realization, such that a noun phrase that doesn't bear an abstract Case feature in syntax gets a default morphological case at PF (Jones 1988), the accusative found on ungoverned subjects of SCs in languages like Irish might be accounted for. This assumes, however, that there are clearly defined conditions under which a noun phrase may be Caseless in syntax. What exactly would be the conditions that allow such Caseless NPs, however, is an open question. Under the view that Case is needed only if a nominal bears a theta role, as in the formulation of the Case Filter as a Visibility Condition (Chomsky 1986; see also Jones 1988), the subject of a SC is still predicted to require Case. I will

return to the issue of Caseless NPs, as well as the status of subjects of SC in Hebrew, in chapter 4. At this point I will simply conclude that while an ECM strategy of licensing the subject of a SC is one possibility that some languages employ, it is not the only licensing strategy available.[47]

The generalization that emerges is that what Hebrew has is only the kinds of SCs that can appear in non-ECM configurations. SCs in Hebrew are not ECM constructions, and that they do not require Case assignment to the embedded subject by the verb. Even when a SC is the object of a transitive verb, the verb assigns its Case to the entire 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 assigns Case to the subject of the embedded clause.

2.   Bare infinitives: This morphological form does not exist in Hebrew.

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[47]At least in Hebrew and English. In a language like English, which does have ECM structures, a SC is prehaps 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 (p.c.), French too allows only SCs and not infinitival ECM:

(i)   Je crois Jean intelligent.

        *Je crois Jean être intelligent.

See also Kayne (1981) and Stowell (1983:297-298).

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 do not assign *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. This will be revised in chapter 4, where "inherent accusative" will be argued

to be nothing more than theta role assignment. Until then, I will use the term "inherent

accusative" to denote the licensing relation between a verb and its complement.

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 *et* isn't needed with indefinites. Indefinites,

unlike definites, don't require structural Case, and hence they may be governed by the

verb rather than by a structural Case assigning head. 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 noun phrases: structural Case and formal

definiteness. As to *why* these two things should be so tightly linked to each other – I

will try to address this issue in chapter 4.

2.3   P′s do it, A′s do it: structural Genitive

I have argued that verbs in Hebrew don't assign structural Case, and proposed that *et* itself assigns structural Case to definite objects. If this is correct, then referring to *et* as assigning *accusative* Case is misleading: although *et* appears mostly (but not uniquely) in positions governed by a verb, the DP which follows *et* is not governed by the verb and does not receive Case from it.

What kind of Case does *et* assign? Since *et* is not related to any particular theta role, it is reasonable to assume that this is some sort of structural Case, as required by definite DPs. As a language with no morphological Case, a typology of abstract Cases in Hebrew should rely on properties of the Case-assigning head and on properties of the configuration in which Case is assigned. In this section, I will show that the most widespread method of Case assignment in Hebrew is the one used in CSNs. I will argue that the construct state serves as an extremely productive cross-categorial Case-assignment construction, used not only with nominal heads but also with a variety of other heads. Specifically, I will argue that the Case assigned by *et* to definite objects is of the same kind as the Case assigned in CSNs.

The idea that the Semitic construct state is not limited to nominal constructions is not new, and an analysis of cross-categorial CS is developed in Siloni (2000). Ritter (1991), and later Danon (1996, 1998), 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 (2000) and Hazout (2000). This kind of AP, illustrated in (58a) 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. (58b) 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 (58a) acts like an AP that must modify a noun, while in (58b) the CS has the distribution of a DP. This difference apparently stems from the fact that the postadjectival noun in (58a), but not in (58b), is an inalienable-possession noun (see Siloni 2000 for details):

(58) a. yalda   <u>kxulat</u>   <u>enayim</u>   sipra   ma   kara.
         girl.FM   blue.FM   eyes   told.FM what   happened
         'A blue-eyed girl told what happened.'

    b. <u>gdoley</u>   <u>ha-xokrim</u>   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 construct. 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 chapter 2.

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 morphology as embedded genitives in nominal CS. This suggests the possibility that the Case assignment process in Semitic PPs is also the same one as in nominal CSs. The DP in Hebrew PPs is obligatory and can never be omitted or extracted, just like genitive DPs in CS. 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 construct.

Further evidence for the idea that Ps are Gen assigners comes from the pronominal system. When a pronominal form is used with a preposition in Hebrew, the pronoun must cliticize to the P. What is important to note is that the inflection pattern is exactly the same as the inflection of genitive clitics on nouns. Consider for instance the following partial paradigm:

(59)

N	P
sus 'horse'	mul 'against'
sus-i 'my horse'	mul-i 'against me'
sus-xa 'your horse'	mul-xa 'against you'
sus-o 'his horse'	mul-o 'against him'
sus-eynu 'our horse'	mul-eynu 'against us'

Thus, the preposition takes precisely the same form of clitics as a noun does.

Interestingly, some prepositions like *al* 'on', *axarey* 'after' and *lifney* 'before' are inflected like *plural*, rather than singular, nouns:

(60)

N	P
sal-im 'baskets'	al 'on'
sal-ay 'my baskets'	al-ay 'on me'
sal-exa 'your baskets'	al-exa 'on you'
sal-av 'his baskets'	al-av 'on him'
sal-eynu 'our baskets'	al-eynu 'on us'

Putting aside the question of why some prepositions pattern with plural nouns

and not with singulars, the overwhelming generalization is that as far as morphology

is concerned, there doesn't seem to be any reason to assume that prepositions assign a

different kind of Case than nouns do[48]. Note that *et* inflects in basically the same way,

suggesting that *et* also assigns Gen:[49]

(61)

P	et
im 'with'	et
it-i 'with me'	ot-i 'me'
it-xa 'with you'	ot-xa 'you'
it-o 'with him'	ot-o 'him'
it-anu 'with us'	ot-anu 'us'

   I thus conclude that prepositions and *et* can be added to the list of heads that

assign genitive Case. With respect to Ps, an objection that might be raised is that they

assign various kinds of oblique Case. One example is the dative, which is often

assumed to be the Case of DPs preceded by the preposition *le-* (Landau 1994). But in

fact, dative Case provides another interesting argument in favor of viewing prepositions

as Gen assigners in Hebrew. Among the only traces of morphological case in Modern

Hebrew, there exists a form of morphological dative, which is totally incompatible

with the preposition *le-*:[50]

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[48]See Kayne (1984) for a similar idea concerning English. Kayne argues that prepositions in English assign Objective Case, and suggests that English has no Oblique Case.

(62) a. halaxti   ha-bayt-a/   ha-ir-a/   yamin-a
          went.1SG   the-home-DAT/   the-town-DAT/   right-DAT
          'I went home/to town/to the right

      b. halaxti   la-bayit/   la-ir/   la-yamin
          went.1SG   to-the-house/   to-the-town/   to-the-right

      c. * halaxti   la-bayt-a/ la-ir-a/ la-yamin-a

As shown in (62a), the suffix -*a* licenses a dative DP in a manner similar to what

happens in languages with a morphological case system (although the use of this

suffix in Modern Hebrew is much more limited). Even though the same meaning can

be achieved by using the preposition *le*-, as in (62b), the two can never co-occur, as

(62c) illustrates. This shows that not only does the preposition assign Case when it is

used, but that this Case is incompatible with morphological dative.[51] So unless one

assumes that morphological case is unrelated to abstract Case, the assumption that all

prepositions in Hebrew assign structural Gen seems to be superior to the traditional

taxonomy of oblique Cases, which is not suitable for describing Hebrew PPs.

In terms of the acquisition of Case, the idea that the same kind of structural Case

is involved in all PPs, as well as in some other positions, is clearly an attractive one.

Any claim that each preposition assigns a different kind of Case runs into the problem

of how this abstract Case taxonomy could be learned, in the lack of any morphological

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[49]I ignore some minor idosyncracies, both with *et* and with some prepositions. For instance, *et* turns into *ot*- when a pronominal clitic is attached to it.

[50]When *le*- is followed by the article *ha*-, as in these examples, they merge into *la*-.

[51]If one assumes, as in Landau (1994), that *le*- is not a Case *assigner* but the *realization* of morphological dative, then the data above would be interpreted as showing that Hebrew has two distinct morphological forms of the dative which are incompatible with each other.

evidence; and although PPs differ in many respects from other types of phrases, it is not clear whether there is any reason to assume that the *Case* assigned is different too. The null hypothesis, then, is that all PPs in Hebrew manifest just another occurrence of the same 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 is compatible with various hypotheses regarding 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.

2.4 Structural Case assigners

I have argued that the presence of *et* in front of definite objects is needed because these 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 the object position – [+def] DPs must receive structural Case wherever they appear. We must show that all the 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 which appear as complements of prepositions, adjectives, certain determiners, and nominals in CS are

all assigned structural Gen. This allows us to account for one special option which 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), to distinguish them from full partitive DPs in which *me-* is preceded by a determiner (as in *xelek me-ha-sfarim*, 'part of the books'). Many transitive verbs in Hebrew allow an alternation between *et* and partitive *me-* as object markers[52]. A BP object differs from an *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:

> (63) 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 (63b) or as arguments in CS with derived nominals – exactly what the analysis predicts if *et* is needed in these positions only for structural Case assignment. Wherever the semantics

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[52]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.

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 Case assignment by the head of a CS is not possible, either because it assigns Case to another DP as in (64a), or because the noun is in its free, non-Gen-assigning, form, as in (64b):

> (64)   mapat ha-ir   šel Dan
>   map   the-city   of Dan
>   *'Dan's map of the city'*

>   b.   mapa šel ha-ir
>   map   of the-city
>   *'a map of the city'*

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 *šel* is analyzed 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 also solves the structural problem of "*šel* insertion", making the position of *šel* no more problematic than that of any other preposition. 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.[53]

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.

2.5 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 which 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, adjectives and determiners with CS morphology, as well as prepositions (which have only a Gen-assigning form). The particles *et* and

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[53]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 CSNs are (see Siloni 1997). However, since *šel* isn't restricted to event nominals and can express non-thematic relations as well, I won't adopt Siloni's proposal that *šel* assigns inherent genitive.

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 3 and in chapter 4.

The abstract Case system of Hebrew is thus very similar to the morphological three-way distinction found in languages like Standard Arabic, Modern Greek, or the Nubian languages (Blake 2001:156).

With the additional assumption that *et* is a P with only minimal semantic content (in a sense which will be made clear in chapter 5), the fact that Case-related "definiteness effects" in Hebrew involve *et* and no other head easily follows: *et* is the only Case assigner that is used *only* in order to satisfy a need for structural Case. Furthermore, definites require a 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 the beginning of this chapter, 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* appears, which seem at first to be totally arbitrary, turn out to be environments that have one simple defining property.

3   Assignment of inherent accusative

So far, I have argued that verbs can only assign inherent Case, and that *et* assigns structural Case. An important issue which was left open is what happens to the

inherent accusative 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 does not 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 (which 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 I 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 in Caseless positions. As illustrated in (38), repeated below as (65), when a derived nominal heading a CSN 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:

(65) 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 (65a), the definite DP *ha-ir* receives Case from *et* (the first argument of the nominal, *ha-cava*, gets Gen from the nominal which heads the CSN). The

ungrammaticality of (65b) can be explained as a violation of the Case filter[54], if we assume that the nominal lacks the accusative-assigning properties of verbs, as is usually assumed (see Siloni 1997). But if there is nothing that can assign Case to the indefinite in (65b), then there is also no Case available for [*et*+DP] in (65a). Thus, we have clear evidence against the hypothesis that *et*+DP requires Case. If this hypothesis was true, then (65a) would have been predicted to be ungrammatical, for the same reason that (65b) is. The conclusion is that Case is not obligatory for *et*+DP. Thus, there is no reason to assume that transitive verbs *always* assign inherent accusative, and it turns out that inherent accusative is only needed for indefinite objects. In chapter 4, however, I will reexamine the question whether we really need to assume the existence of this "inherent accusative", and will conclude that this notion can be reduced to theta role assignment.

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

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[54]In chapter 4, I will offer a slightly different analysis of the ungrammaticality of this kind of phrase. The claim that this is a Caseless position still holds under the modified analysis.

(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], which must be checked against a suitable DP.

There are many other issues related to indefinite objects and to the inherent accusative of Hebrew. These issues will be addressed in chapter 4.

4   Belletti (1988) and the notion of abstract Partitive

In the previous section I proposed that verbs in Hebrew assign inherent Case, while *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[55]. But the analyses differ in at least two respects: under my hypothesis, inherent accusative is the *only* kind of Case which verbs in Hebrew can assign; Belletti, on the other hand, assumes that Partitive Case is optional and that transitive verbs may also assign structural Case (Accusative). Furthermore, while Belletti uses semantic criteria 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.

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[55]I use Belletti's notation, which distinguishes the abstract Partitive (capitalized) from the morphological partitive (lowercase).

4.1   Overview of Belletti's analysis

The main goal of Belletti's (1988) paper is to give a syntactic 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, as in (66) below; 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):

(66)   a.   There is a man in the garden.

b. * There is the man in the garden.

(67)   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[56].

Based mainly on data from Italian, Belletti argues that Partitive is inherent Case,

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[56]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 her proposals, they should by no means be taken as a full explanation of the DE.

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 chapter. 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.

4.2   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, fn. 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.[57][58] It thus seems that without the Finnish evidence, what remains of Belletti's

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[57]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-

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 Sigur∂sson'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.

4.3   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

European languages is itself an instantiation of abstract Case.

[58]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.

ways from both of these.

4.3.1 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 marking 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 noun phrases, 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 which acts as the only formal marking on objects. 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 we have already seen, 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:

(68)   axalti   uga/   et ha-uga/   me-ha-uga.
         ate.1sɢ   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.[59] 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

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[59]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.

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 to this similarity is not yet clear.

4.3.2 *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. The question is whether Hebrew object marking is compatible with Belletti's explanation of the DE. The lack of semantic uniformity within the class of formally [+def] DPs in Hebrew should already suggest that the answer is negative. Consider now the syntactic evidence.

Existential sentences in Hebrew differ from their English counterparts in two notable respects: Hebrew has no overt expletive like English *there*; and, in the present tense, Hebrew has no verbal equivalent to English *be*, and instead uses the element *yeš*, already mentioned in section 1.3:

(69) yeš   šloša   anašim   ba-xacer.
      yeš   three   men   in-the-garden
      'There are three men in the garden.'

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

(70)　　* yeš　(et)　ha-anašim ba-xacer.
　　　　　yeš　(et)　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 might seem very difficult to judge whether the DE in such structures can be attributed to Case. 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 (70) as a Case violation comes from the fact noted in §1.3, that there are contexts in Hebrew where definites *are* allowed in the position following *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*:

(71)　a.　yeš　li　　ha-sefer　ha-ze.　　　　(formal)
　　　　　yeš　to-me　the-book　the-this
　　　　　'I have this book.'

　　　b.　yeš　li　et ha-sefer　ha-ze.　　　(colloquial)

But if these sentences are grammatical, then it is clear that Case can be assigned to the position following *yeš*, and thus the DE in (70) is not the result of a Case Filter violation. In colloquial speech, *et* assigns Case to the definite in (71b); in (71a), it seems that nominative Case is assigned to this DP, as with postverbal subjects of unaccusatives (Borer 1986). 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 judgements in Hebrew; in some cases, the judgements tend to be similar to those cited for Italian:

(72) a. higi'u   šloša   anašim   ba-boker.
        arrived.PL   three   men   in-the-morning
        'Three men arrived in the morning.'

    b.?? higi'u   šlošet   ha-anašim ba-boker.
        arrived.PL   three   the-men   in-the-morning
        'The three men arrived 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 (72b). It seems plausible that the fact that (72a), with an indefinite postverbal subject, is better than (72b) 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 some speakers, unaccusative and passive verbs are acceptable with a postverbal DP which doesn't trigger agreement with the verb; when this DP is definite, it is often preceded by *et* (see also Borer 1986 and Siloni 1997). Contrary to Belletti's prediction, it is indefinites that are less acceptable in this environment:

(73) a. nimsar   li   et ha-hoda'a   ha-zot.
            handed.MASC to-me et the-message.FEM   the-this.FEM
            'This message was delivered to me.'

      b.?? nimsar   li hoda'a.

This is precisely what my analysis predicts: (73a) is possible because Case is assigned by *et* and not by the verb. Belletti's analysis would predict (73a) to be ungrammatical, assuming that unaccusatives are only able to assign a kind of Case which is incompatible with definites. As to (73b), the prediction of Belletti's analysis is that it should be grammatical, since the indefinite argument should be able to get Partitive Case.[60]

I conclude that Belletti's proposal of an abstract Partitive receives no support from the Case alternation found in Hebrew, and that existential sentences in Hebrew do not pattern according to Belletti's prediction. 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 do not seem to be relevant to the Hebrew Case system.

4.4   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

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[60]Costa (2001) discusses similar facts from colloquial European Portuguese, where unaccusative verbs allow, optionally, non-agreeing postverbal subjects. Both definites and indefinites are allowed in this construction, contrary to the prediction of Belletti's analysis, which would predict the definites to be ruled out, since they are incompatible with Partitive Case, which is presumably the only Case available in this construction.

to definiteness effects, but doesn't give any explanation why these effects are found only with objective Case. As noted before, this is something that happens in a variety of languages (see 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 which 'competes' with nominative for the subject position in a manner similar to the way Partitive is claimed to do in object position?[61] The analysis developed here tries to derive the object Case alternations observed in Hebrew from more general properties and solves at least part of this puzzle. Of the three kinds of Case found in Hebrew, only one (accusative) is theta-related, and therefore inherent; this, together with the hypothesis that definites need structural Case, explains why the object position is the only environment where an alternative method of Case assignment is 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 (as opposed to the standard assumption in Generative syntax that accusative is a prototypical example of structural Case). If inherent accusative (and the lack of 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

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[61]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 sysetm, but I am not aware of any split-ergative language in which the Case on the subject is systematically related to its definiteness.

languages.

Another important property shared by languages like Finnish, Turkish and Russian, where objective case interacts with definiteness, 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 morphology and definiteness marking. For instance, case marking of objects in Scottish Gaelic is reminiscent of Finnish (Ramchand 1993), even though this language does have definite articles.

There are thus two possible parameters that together might be responsible for definiteness effects in object position:

- Structural versus inherent accusative

- The degree of overt specification of definiteness and case, which could both be seen as some sort of "D-feature"

In the next chapter, these two parameters will be further developed, with the goal of reducing as much as possible of the puzzling Case/definiteness interactions to the structural properties of Case.

5   Summary

In this chapter, I have argued that DPs marked [+def] require structural Case. The different Case-assignment to definite and indefinite objects in Hebrew has been proposed to follow from this requirement of definite DPs and from the fact that verbs in Hebrew cannot assign structural Case. 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 other syntactic environments. The prepositional element *et*, which has been traditionally taken to be a marker of accusative Case assigned by the verb, was in turn reanalyzed as a genitive Case assigner which projects a PP and assigns Case independently of the verb. The proposal that accusative in Hebrew is not structural thus explains why a special object marker is needed for definite objects, while also accounting for the lack of ECM constructions in Hebrew.

Chapter 4: Indefinite Objects

1. Introduction: Indefinite objects as Caseless NPs

In the previous chapter, I have argued that verbs in Hebrew are incapable of assigning structural Case; the role of *et* was then claimed to be that of a dummy Case assigner, fulfilling the requirement for structural Case posed by [+def] DPs. Other prepositions were also argued to be structural Case assigners. Consequently, the only major environment in Hebrew where no structural Case is available is the position of objects where *et* is not present.

As to indefinite objects, the claim was that they do not require structural Case, and that verbs can assign inherent accusative which is sufficient for indefinites. Although this analysis is plausible, it raises two questions: Why is inherent Case "weaker" than structural Case, in the sense of not being sufficient for definites? And if inherent Case is in some sense weaker than structural Case, why is it still good enough for indefinites? As defined in Chomsky (1981:171, 1986:194), the relation between a DP and a head which assigns inherent Case to it is actually "stronger" than the relation involved with structural Case, as it requires a thematic relation in addition to a structural one such as government. Furthermore, under the GB view of inherent and structural Case being

two varieties of the same general notion, restrictions of certain DPs to one kind of Case do not get any explanation.

In the Minimalist Program (Chomsky 1995), structural and inherent Case are no longer viewed as belonging to the same system. Structural Case is a central part of the computational system, represented as a formal feature that must be eliminated in the course of the derivation. The nature of inherent Case, on the other hand, is not entirely clear. This is stated by Chomsky in the following way:

> *"...Recall that Case theory as discussed here is concerned only with structural Case. Inherent Case, which is assigned only in a θ-relation to the Case assigner, is a different phenomenon. It is assigned and also realized, typically within the domain of the θ-marker... though sometimes in structural Case positions, in various ways. The topic is an interesting one, but has not been shown to have any bearing on (structural) Case theory..."*   (Chomsky 1995: 386, fn. 55)

Thus, at least in one sense, structural Case within the MP is indeed stronger than inherent Case: only structural Case triggers a formal checking relation between a head and a DP. This raises the question of how inherent Case is represented in the grammar. If inherent Case turns out to be of a totally different nature than structural Case, it might be best to reformulate the relevant generalizations in terms that no longer subsume the two kinds of "Case" under the same module of grammar, as assumed by the GB Case Filter. While the MP goes one step in this direction by viewing only structural Case features as part of the computational system proper, it still has to be shown that the range of facts which have been formerly attributed to inherent Case

can get an account that does not rely on Case checking.

The approach that I will develop here is based on this intuition that "inherent Case" is not a formal relation in the sense that structural Case is. In fact, it might be little more than a pure thematic relation. If this is correct, we can dispense with the notion of inherent Case altogether, since restrictions on theta role assignment form an independent module of the grammar (see Reinhart 2000), and there is no point in duplicating parts of the functionality of the theta system within Case theory. I propose that if we put aside the aspects of inherent Case which are independently accounted for by the theta system, it turns out to be a vacuous notion.

Let us then pursue the hypothesis that Case theory is indeed concerned only with structural Case. Under this perspective, the analysis of Case assignment to objects in Hebrew can be substantially simplified: unlike what I claimed earlier, it is not that verbs in Hebrew assign inherent Case instead of structural Case – rather, they do not assign Case at all. Thus, the difference between definite and indefinite objects is simply that the former require Case, while the latter do not.

This chapter has two main goals. In terms of accounting for the empirical facts, I aim to show that an analysis of indefinite objects as lacking Case is indeed possible, at least for Hebrew; in other words, I will argue that indefinites do not require structural licensing, as opposed to definites. From a theoretical viewpoint, I will show that in Hebrew there is no need to refer to inherent Case, since nominal arguments that are not licensed by structural Case require nothing beyond thematic licensing.

Inherent Case can thus be dismissed as a redundant notion.

I will begin by presenting evidence for the claim that indefinites do not require Case; then, I will discuss the general conditions under which Caseless arguments are allowed. Finally, I show that the phenomenon of definiteness spreading in Semitic CSNs can be derived from this Case-theoretic difference between definites and indefinites.

2. Cross-linguistic evidence for Caseless objects

Two kinds of evidence support the claim that indefinite objects are Caseless: cross-linguistic generalizations regarding Case-related morphology, and language-internal properties of Hebrew. It is well-known that many languages show differential Case-marking of definite and indefinite objects (cf. de Hoop 1992, Lyons 1999 and many others). This differential marking involves not only Case morphology on the object itself, but also verb-object agreement and transitivity morphology. The extremely clear generalization is that if a language displays such differential marking of objects, it is always *indefinite* objects that are zero-marked. Below, I illustrate this cross-linguistic tendency with data from a variety of languages which are historically unrelated to each other.

2.1. Case morphology

In many languages with Case morphology, indefinite objects are not marked for Case. Probably the best known example is Turkish, where accusative morphology

appears only on definite or specific objects, while indefinite or non-specific objects

have no morphological marking of Case (see Enç 1991, Erguvanli Taylan & Zimmer

1994, and Lewis 1991). This is illustrated in the following sentences:

(74) 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.'

A similar pattern is found in Persian (Karimi 1996, Lyons 1999). In that language,

however, it is less clear whether the marking on definite/specific objects is indeed a

Case marker, since in general Persian does not have morphological Case. In this

respect, Persian *ra* resembles Hebrew *et*:

(75) a. Man pūl   gereftam.   (Persian)
      I   money   took.1SG
      'I took (sm) money.'

   b. Man pūl-rā   gereftam.
      I   money-OBJ took.1SG
      'I took the money.'

(Lyons 1999:203)

Similarly, in Hindi/Urdu, the accusative suffix *-ko* is obligatory on names,

pronouns, and definite descriptions, as well as on all animates, while no Case marker

is required on non-specific indefinite objects (Butt 1993: 95-96).[62]

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[62]If the object is not marked with *-ko*, it can, under certain circumstances, trigger agreement
on the verb, which could be taken as evidence that it is not Caseless. However, whether or not this
happens depends on whether the verb can agree with the subject, and therefore we may still conclude
that nonspecific objects can indeed be zero marked, when they are neither case-marked nor trigger verb

The standard assumption in generative syntax has usually been that lack of case morphology does not imply lack of abstract Case: abstract Case should be present on every nominal argument, while morphological case is a language-specific realization. However, in languages that do mark morphological case, if we assume that abstract Case is always present then the absence of case morphology in specific instances is an unexplained fact. An alternative would be to adopt Kiparsky's (2001:321) approach of "taking morphology seriously", and to consider the possibility that lack of case morphology in languages with overt marking systems actually reflects a lack of abstract Case. If this is correct, then the morphological pattern is no longer an idiosyncratic property that generative grammar has nothing to say about, but rather the reflection of a systematic syntactic phenomenon.

The notion of *Caseless object* should be made more precise. If a verb in Turkish can check a Case feature of a definite, there is no obvious reason why it would not be able to check a similar feature of an indefinite. The question is whether an indefinite has a feature to check; I propose that it does not, and it is therefore invisible to checking. To motivate the lack of Case features on indefinites, we could assume that the relevant functional projection is missing from indefinites in languages like Turkish. If Case features are specified on D, then something which is not a DP would also lack a Case feature, and hence the lack of any need for structural licensing.

Since we are assuming that the DP contains at least one additional functional projection between NP and DP, the proposal that Caseless objects lack a DP level

agreement. See Butt (1993).

does not rule out the possibility of having complex Caseless indefinites. Just like unmarked indefinite objects in Hebrew, caseless objects in Turkish are not restricted to bare nouns. Bare N objects have been claimed to be incorporated into the verb (Erguvanli Taylan & Zimmer 1994), and hence they must be adjacent to the verb. More complex indefinite objects, on the other hand, are not subject to an adjacency requirement, and they can still appear without case morphology:

(76)	Ali	**üç**	**yeni**	**kitap**	dün	okudu.	(Turkish)
	Ali	three	new	book	yesterday	read	

'Ali read three new books yesterday.'

Let's assume, then, that Turkish has both noun incorporation, which is limited to bare nouns which immediately precede the verb, and Caseless phrasal objects. It is the latter which interest us here, since noun incorporation could be argued to be a process limited to X^0 categories and therefore irrelevant to the discussion of Case.

One thing we clearly predict now is that an object can only be caseless if it has no lexical head of D, namely a definite article. Turkish has no definite articles, so this condition is vacuously satisfied. In fact, similar object case alternations are mostly found in languages that lack articles (see Maling & Vainikka 1996). This is now predicted: in a language that uses articles with all nominals, DP must be projected, and as a result all nominals will be visible to Case checking. A language without articles, on the other hand, does not necessarily project a DP. I therefore propose that nominals with no articles and no case morphology in a language that has morphological case lack a DP layer. For a DP-less nominal, potential abstract Case (in the form of

government) is irrelevant, as the requirement for Case applies only to DPs.

2.2. Object agreement

A common assumption in recent years is that Case and agreement are two sides of the same coin. Chomsky and Lasnik (1993) claim that agreement morphology is one of the possible overt realizations of abstract Case, which is an abstract relation between a head and an XP. While nominative is clearly linked to verb agreement even in languages with poor agreement morphology such as English, the unification of Case and agreement has been assumed to involve other structural Cases as well. In Chomsky (1995) and many others, the assumption is that accusative Case is checked in a spec-head configuration in an agreement projection (AgrOP). Empirical support for this idea comes from the fact that in many languages verbs agree with their accusative objects. Thus, the idea is that abstract accusative is overtly realized in some languages as agreement morphology on the Case-assigning head.

Just like case morphology, object agreement also tends to show definiteness effects. In many of the languages that show object agreement, it is limited to definite objects, while indefinite objects do not always trigger agreement. One clear example for this is Hungarian. As discussed in Bartos (2001) and Lyons (1999: 86-87, 207-208), the verb in Hungarian has two different inflectional paradigms: one that is used with transitive verbs, the *objective* inflection; and one that is used with intransitive verbs, the *subjective* inflection. In the objective paradigm, the agreement morpheme on the verb encodes phi features of the subject, as well as the presence of an object. However,

the objective inflection is used only if the object is definite (but see the discussion below); indefinite objects are used with the *subjective* inflection. The following examples from Bartos (2001:312) illustrate this fact:

(77) 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.'

In (77a), the verb appears with the objective inflection, which is triggered by the definite object. In (77b), on the other hand, an indefinite object triggers the same subjective inflection which is found in (77c), when the verb is used intransitively. Thus, indefinite objects are in some sense "invisible".

As argued in detail in Bartos (2001), characterizing the class of objects which appear with objective morphology as definites is actually not the correct generalization. Although in most cases definiteness of the object correlates with objective agreement, the crucial factor actually seems to be a *syntactic* property of the object. Based on the analysis of Hungarian noun phrases developed in Szabolcsi (1994), Bartos argues that objective inflection appears iff the object has a DP projection. Thus, determiners that occupy a position below the DP level, such as the indefinite article, numerals, and

certain quantifiers, do not trigger objective agreement; this contrasts with determiners that occupy D, and in particular with the definite article. Thus, there seems to be a striking resemblance between the notion of 'syntactic definiteness' developed for Hebrew in this dissertation and the factors controlling Hungarian object agreement. In both languages, "definite" objects trigger a syntactic process which is not triggered by "indefinites", and in both languages the relevant notion of "definiteness" turns out to be syntactic rather than semantic. As shown by Bartos, the fact that Hungarian shows an overt split between determiners that appear low and those that are positioned high in the noun phrase, and the fact that this split correlates with the object agreement pattern, provides strong evidence for basing the distinction on the presence of a DP level. My hypothesis is that the same analysis can be applied to Hebrew as well.

As mentioned in Lyons (1999:87), other Uralic languages show similar patterns, sometimes with richer agreement features of definite objects marked on the verbs. I will not elaborate on this here.

Another language group that Lyons (1999:87, 210) discusses in this context is the Bantu languages. The following example is from Swahili:

(78) 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 1999:210)

As seen from this example, the object agreement morpheme in Swahili plays the same role as the accusative suffix in Turkish, and is absent when the object is indefinite; more precisely, when the agreement morpheme is absent, the object is interpreted as an indefinite.[63]

Georgopoulos (1998:309-311) and Woolford (2000) discuss Palauan, an Austronesian language where only specific/definite singular objects trigger verb agreement[64]. In (79a), a definite object triggers verb agreement, unlike the object in (79b), which cannot be interpreted as a singular definite:

(79) a. Te-'illebed-ii a bilis a rengalek.   (Palauan)
          3PL-PF-hit-3SG dog   children
          'The kids hit the dog.'

      b. Te-'illebed   a bilis a rengalek.
          3PL-PF-hit   dog   children
          'The kids hit a dog/the dogs/some dog(s).'

(Woolford 2000)

Within certain early versions of the MP, absence of overt agreement could be claimed to indicate post-spellout checking of the Case feature, which would thus have to be weak on indefinites and strong on definites. But this would be a mere stipulation with no explanatory content and no independent motivation. A more straightforward interpretation of these facts, taking morphology to reflect the presence or absence of

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[63]See Seidl and Dimitriadis (1997) for a more detailed analysis of the conditions governing object agreement in Swahili, where it is argued that the relevant factor might not be definiteness. The authors argue that the object agreement morpheme functions as a pronoun. Since pronouns are heads of DPs, this proposal is probably compatible with the analysis developed here.

[64]Or, to put it differently, "the presence of object marking or agreement signals the definiteness of the object." (Georgopoulos 1998: 311)

relevant syntactic information, is that some objects lack a certain "ingredient" which is essential for agreement. If object agreement is a realization of Case, these objects lack a Case feature. Just as with missing case morphology, lack of object agreement could also be caused by lack of DP level. This is precisely the analysis proposed in Bartos (2001), who argues that while definite objects in Hungarian are DPs, indefinites are not. Thus, we can maintain the simple generalization that verb-object agreement in languages like Hungarian and Swahili is more precisely characterized as agreement of the verb with a DP that it governs; this perhaps involves a checking relation which takes care of the Case feature on the object DP. Indefinite objects in these languages are not DPs, and as a result, they are not subject to the same formal requirements as definites, namely the need to check a Case feature.[65]

Thus, we get a theory in which morphology is quite consistent in the way it reflects syntactic structure: in a language that has verb-object agreement morphology, absence of such morphology in certain environments entails that something is missing in the syntax as well. This is more explanatory than stipulating that an abstract checking relation always holds, as this would leave morphology unexplained and perhaps miss an important syntactic generalization hinted to by the morphological pattern.

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[65]One difficulty is the agreement patterns in Hindi and Icelandic, which is more or less that the verb agrees with the highest unmarked argument. Unmarked objects agree if the subject is ergative in Hindi, quirky in Icelandic. The problem is that this means that agreement is more "permissive" than case morphology, and maybe verbs can agree not just with DPs. However, it seems reasonable that this might vary from language to language, and then the conclusion that lack of agreement is due to lack of a DP level holds only for languages where object agreement is triggered by DPs.

2.3. Intransitive morphology

In some languages, transitive verbs can be "intransitivized" using some sort of morphological marking on the verb. Relevant to the current discussion is the fact that in some cases, verbs must undergo this morphological process if 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 agreement pattern discussed above. Moreover, in the presence of an indefinite object, the verb bears the same morphology as an intransitive verb (see Basri and Finer 1987, Georgopoulos 1998); an "intrasitivizer" morpheme is prefixed to the verb, and the subject agreement morpheme becomes a suffix, as with intransitives. This agreement pattern contrasts with transitive verbs with definite objects, where subject agreement is marked as a prefix and the object agreement morpheme is a suffix:

> (80) a. La-ʔalle-i doe-iñjo I Basoʔ.   (Selayarese)
>   3-take-3 money-the h Basoʔ
>   *'Basoʔ took the money.'*
>
> b. (A)ng-ʔalle-i doeʔ I Basoʔ.
>   INTR-take-3   money h Basoʔ
>   *'Basoʔ took (some) money.'*

(Georgopoulos 1998:311-312)

It is important to note that the observed "intransitivity" is only formal, in the sense that it affects morphology but not theta role assignment. The "intransitive" verb

can still assign a theta role to an indefinite object, even though in terms of agreement morphology the object is invisible. I take this to be a common property of all the morphological alternations discussed above: languages that do not mark case on indefinite objects allow a thematic object but do not mark it morphologically, and languages with object agreement restricted to definites, likewise, treat indefinite objects as invisible morphologically but as ordinary objects thematically. We thus get a clear split between Case and theta role assignment: indefinite objects are Caseless, yet they receive a theta role. If Case theory and theta theory are independent of each other, such splits are expected; however, if Case is taken to be a visibility condition on theta role assignment (Chomsky 1986, Jones 1988), Caseless arguments are not predicted to be possible. I will return to this point in chapter 5.

3. Evidence for Caseless indefinite objects in Hebrew

A claim which has been made quite often in the literature is that Case assignment under government is subject to an adjacency constraint: the Case-assigning head must be adjacent to the Case-assigned DP (see for instance Stowell 1981, 1983:299, 1991:189, Chomsky 1981, Lasnik and Uriagereka 1988:11, Rizzi 1996:82, and Siloni 1996:251). This is illustrated in the following example from English:

(81) a. John (often) reads books (often).

b. * John reads often books.

Within GB, since structural Case is assigned at S-Structure in a specified configuration, adjacency requirements are expected to hold more or less universally if

a head assigns Case to a governed position. Case theory in the MP allows some more freedom, since Case is one manifestation of the general operation Agree, which does not necessarily involve two linearly-adjacent elements. Still, the empirical fact is that Case relations are often (although not in all languages) restricted in this way.

In Hebrew, which does display adjacency effects in some environments (see below), objects do not have to be adjacent to the verb. Definite objects must be adjacent to *et*, which I assume to be the Case assigner; indefinite objects, on the other hand, are more or less free with respect to their position relative to the verb and can be separated from the verb by an adverbial:

(82)   Dan   kore   kol   yom   šloša   sfarim.
         Dan   reads   every day   three   books

Under the hypothesis that indefinite objects in Hebrew are Caseless, this is expected: just like adverbial phrases, indefinites do not need to be adjacent to the verb. If by "Caseless" we mean that an indefinite object does not need to be governed by any particular kind of head, then the word order freedom of indefinite objects with respect to the verb is immediately predicted.

Note that the possible lack of adjacency between objects and verbs contrasts sharply with the strict adjacency required in construct states nominals between the head of the CSN and the genitive DP. An AP or an adverbial PP can only follow the genitive DP and may not intervene between the head of the CSN and the associate:

(83) a. kri'at   ha-sfarim ha-txufa /   bi-mhirut
         reading   the-books the-frequent/ in-speed
         'the frequent/speedy reading of the books'

    b. * kri'at   ha-txufa /   bi-mhirut ha-sfarim
         reading   the-frequent/ in-speed   the-books

The requirement for adjacency between the Case-assigning head and the DP to which Case is assigned has been argued in Siloni (1996:251) to be the reason for raising of the genitive DP in CSNs to a position higher than that of the AP. If this analysis is correct, and if one assumes that accusative Case is assigned by verbs to their object under government, then it is not clear why indefinite objects do not show any adjacency restrictions in Hebrew.[66]

Similarly, prepositions must be adjacent to the DP to which they assign Case[67]. We can conclude that although the adjacency requirement on Case assignment is manifested in Hebrew, indefinite objects do not seem to be sensitive to it. This is explained by the hypothesis that indefinite objects in Hebrew do not require Case.

4. Caseless NPs and the Case Filter

The hypothesis that indefinite objects in Hebrew, and possibly in some other languages, do not need Case, although empirically motivated by various overt morphological patterns, might seem problematic from a theoretical point of view. The

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[66]It should also be noted that when the object is definite, the *et*+DP complex does not have to be adjacent to the verb either. This provides further support for the idea that *et* is the Case assigner and not the realization of Case assigned by the verb.

[67]Again, this supports the analysis of P as a Case assigner, rather than the realization of some "inherent" Case which originates from the verb. See for instance Engelhardt (2000:63) for the claim that the prepositional element *šel* is the realization of genitive Case.

Case Filter, as proposed in Chomsky (1981), refers uniformly to all overt noun phrases and provides a straightforward generalization. The reformulation of the CF as a visibility condition on theta role assignment (Chomsky 1986), while excluding non-argument DPs, such as adverbial DPs, from the CF, still provides a natural characterization of the situations where Case is required. If we claim that indefinite objects do not need Case, this should be shown to result from general principles rather than being an idiosyncratic property of one particular syntactic environment. The question is then what are the conditions under which Case is still required, and what is it that makes indefinite objects exempt from it. Simply discarding the Case Filter from the theory, or listing exceptions where it does not hold, would have the unwanted consequence of turning "abstract Case" into a vacuous notion.

In the previous chapter, I have argued that definites in Hebrew differ formally from indefinites: the presence of a formal feature, which I labeled [+def], distinguishes definites from indefinites. The question arises whether this difference in features gives rise to a structural difference between definites and indefinites. The natural place to look for such a difference is the DP level, especially in light of the data in Bartos (2001) that strongly suggests that this is the relevant factor in other languages with similar phenomena. Since Hebrew lacks independent articles, and since N-to-D movement has been assumed to occur in Hebrew (Ritter 1991, Longobardi 1996 and many others), it is natural to assume that the D position is only filled if some element raises to that position. I propose that N-to-D raising is motivated by the presence of

the [+def] feature (see also Borer 1998 and Danon 1996). When this feature is not present, and as there is no evidence for a [-def] feature, nothing would raise to D. Rather than assume that the D position is always projected in argument nominals, even when it is empty, as proposed for instance by Longobardi (1994), I will assume that the DP layer in Hebrew does not project in indefinites. Unlike languages like Italian, in which nominals lacking an overt determiner display ECP effects, such as not being allowed as preverbal subjects (Longobardi 1994), Hebrew indefinites do not seem to provide evidence for an empty D position. Thus, I suggest that indefinites in Hebrew are not DPs. As noted by Bartos (2001), implementing such a proposal within a Minimalist framework would allow a straightforward account for the Case-related effects, since Case is a feature of DPs and thus lack of a DP level would immediately imply lack of Case.

In what follows, I will refer to DP-less nominal projections as NPs, leaving open the possibility that additional functional projections (such as NumP, as proposed by Ritter 1988, 1991, or AgrP as in Siloni 1996, 1997) dominate NP even in indefinites.

A DP-less analysis of Hebrew indefinites, a possibility already suggested in Ritter (1991, fn. 12), has previously been developed by Dobrovie-Sorin (2000, 2001), where it is restricted only to bare nouns, and by Engelhardt (2000), where it is restricted to "non-definite" CSNs. Leaving open at this point the details of the internal structure of DP-less NPs, I will extend this analysis to cover all indefinites in Hebrew, where by "indefinite" I refer to the lack of formal [+def] marking rather than to any

semantic property.

As mentioned above, there are many other languages where indefinite objects seem to be caseless; for some of these languages, similar analyses of indefinite objects as NPs have already been proposed. Laka (1993) argues that in Basque, "objects" of unergative verbs, which differ from all other arguments in that they appear without a determiner, are NPs; she further claims that NPs check Case inside the VP, while DP objects move out of the VP for Case[68]. Philippi (1997) discusses Germanic languages from a diachronic perspective, and argues that weak noun phrases are NPs and cannot leave their base-generated position, unlike strong DPs.[69] Massam (2001) provides evidence for Caseless NP objects in Niuean. Thus, there seems to be cross-linguistic support for this approach, and it should not be seen as a peculiarity of Hebrew alone; yet the degree to which a language allows NP objects does seem to vary.

4.1   Formalizing the notion of Caseless NP

If the bare NP analysis of Hebrew indefinites is correct, then the intuition behind the Case Filter can simply be retained as a condition on overt DPs, with no effect on NPs (Ouhalla 1993:7). The fact that in some languages indefinite objects do not require Case now follows simply from the fact that in these languages, indefinites are

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[68] It should also be noted that like in Hebrew, it is very clear that the relevant factor in Basque is not a semantic property such as specificity or definiteness, but a morphosyntactic property; the same determiner, when present, can give rise to both specific and non-specific readings, with no syntactic difference between the two readings. See Laka (1993) for detailed discussion.

[69] See also Haeberli (2001), who implements the ideas of Laka (1993) and Phillipi (1997) within a checking-theory framework.

not DPs. On the other hand, since indefinites can, nevertheless, function as subjects in Hebrew or appear in environments where genitive is assigned (in CSNs, as well as within PPs), it is clear that Case positions do not exclude NPs. Informally, the generalization for Hebrew seems to be:

- Indefinites are NPs, and therefore they do not require Case.

- Indefinites are allowed to appear in positions that may license DPs.

How can this pattern be formalized? If we assumed a GB view of Case as a licensing environment, rather than as some sort of 'entity' which is 'assigned' or feature which is checked, then the generalization above would be a non-issue: a Case position is simply a position governed by a head that is a possible licenser; there is no such thing as 'unassigned Case'. Questions such as "does the head assign its Case to the NP?" would be irrelevant, since Case exists, in this view, only in relation to a DP, and it is not something that the head carries independently.

If we try to formalize the same generalization in Minimalist terms, we must assume that a head which *may* carry a Case feature does not *have* to; thus, T would optionally be specified with a Case feature which would allow it to check a Case feature on a DP, but we should also allow for T without a Case feature, which would be used with an NP subject. The only place where a Case feature is obligatory is on D, since only DPs need Case. Thus, DPs have one more feature to check than NPs.

In contrast to Case features, other features would be common to both NPs and DPs. Following Reinhart (2000), I assume that theta roles are encoded as features on

the verb. These features can be checked by merging the verb with either a DP or an NP, and in the case of *et*+DP, also by a PP. Thus, any extended projection of the noun can check a theta feature of the verb[70]. The pattern which emerges is that every argument can check theta features, and must do so, but only DPs must also check structural Case features. This suggests a simplified view of the structural versus inherent Case distinction, in which "inherent Case" is reduced to the checking of a theta feature. Structural Case is the checking of an additional Case feature. Theta features are invariant across languages since they encode universal verbal concepts; Case features, on the other hand, may differ from one language to another. Thus, transitive verbs in all languages would have the same theta features, but the additional accusative Case feature would appear in some languages, such as English, but not in others , like Hebrew.

If we try to extend this picture from the verbal domain to the domain of other argument-taking heads, we are faced with the difficulty of characterizing the "thematic" relation between some heads, for instance Ps, and an NP/DP that merges with them. P can optionally be specified with a Case feature, which would check a feature of a merged DP. But given that most prepositions are not systematically linked to one particular theta role, what feature on P would be the equivalent of the theta feature which forces a transitive verb to merge with an argument, be it NP or DP? Basically we are dealing with some sort of subcategorization; adopting a term from HPSG

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[70]Subject to semantic restrictions that I will not discuss here.

(Pollard and Sag 1994), I propose that P is always specified for a SUBCAT feature, which could be seen as a generalization of theta features to non-verbal heads. Without attempting to develop a full-fledged theory of SUBCAT features, the crucial assumption for my analysis is that any head that requires a nominal argument is specified with such a SUBCAT feature. In the case of verbs and event nominals, "SUBCAT" is the theta feature; in the case of prepositions, non-event nouns, and adjectives in their derived form (i.e. the form used when an adjective heads a construct state), the content of the SUBCAT feature might simply be [+N], meaning that the head carrying this feature must merge with some extended nominal projection.

A consequence of the hypothesis that Hebrew indefinites have less features that they need to check than definites, is that what looks at first like a property of objects is actually not restricted only to objects: NPs are predicted to be allowed in other "Caseless" positions, as long as all other principles of the grammar are respected. In what follows, I will discuss several environments where the Caseless NP analysis can provide an explanation for otherwise puzzling facts.

4.2.   Null subjects and unaccusative verbs in Hebrew

Hebrew is usually classified as a *pro*-drop language. As such, null subjects are witnessed in a variety of environments. In this section I will discuss a variety of null subject constructions involving unaccusative verbs, in which the internal argument seems to be Caseless.

4.2.1 Introduction: Null expletives in Hebrew

Like many other languages, Hebrew can be argued to have two kinds of expletive

subjects: those that appear with a CP associate (like English *It*) and those that appear

with an associate which is a noun phrase (similar to English *There*). I will informally

refer to these as *it*-type and *there*-type, respectively. The first kind is usually null in

Hebrew; the second is always null:

(84) a. (?ze) nidme li   še-ha-rakevet acra.
          (it)   seems to-me that-the-train stopped
          'It seems to me that the train stopped.'

      b. (*ze) haya   tapuz al ha-šulxan.
          (there)was   orange on the-table
          'There was an orange on the table.'

As discussed in Borer (1986), expletives of the first kind always trigger third

person singular agreement on the verb, as seen in (84a). With the second kind, in

(84b), the verb agrees with the postverbal noun phrase: if the postverbal *tapuz* ('orange')

is replaced by a plural, the verb will surface with plural agreement morphology:

(85)   hayu   tapuz-im al ha-šulxan.
         were.PL   orange-PL on the-table
         'There were oranges on the table.'

This is similar to the agreement pattern found with English *There*, where the

verb agrees with the nominal that follows it. As proposed in Chomsky (1986), sentences

of this type could be analyzed as involving LF-movement of the postverbal element to

substitute *there* or adjoin to it (Chomsky and Lasnik 1993), thus accounting for the

agreement pattern as well as allowing the overt nominal to receive nominative Case as

part of a CHAIN headed by *there*.

The agreement pattern displayed by *there*-type expletives is not universal. In French, for instance, verbs do not agree with the associate of the expletive, even when it is a noun phrase. Thus, the agreement/non-agreement pattern seems to be subject to a parametric difference.

Apart from the agreement pattern, *there*-type constructions in Hebrew differ from the ones with *it*-type expletives by disallowing an overt pronoun, as shown in (84); see also Borer (1986: 382). Hebrew apparently has no overt equivalent of the English expletive *there*. In contrast, the option of using an overt pronoun with *it*-type expletives is sometimes available; this is not always possible, however, and should not be relied on as a dependable test for distinguishing between the two kinds of null expletives.

Another typical property of *pro*-drop languages that is frequently found in Hebrew is the possibility of postverbal subjects. This is illustrated in the following example:

(86)   ne'elmu   kol   ha-ugiy-ot.
        disappeared.3PL all   the-cooky-PL
        'All the cookies disappeared.'

As argued by Borer (1986), the agreement on the verb is a manifestation of nominative Case assignment to the postverbal subject. For the purpose of the current discussion, it is not important to commit ourselves to any particular analysis of postverbal subjects. The only thing I will assume in what follows is that a nominal that does not agree with the verb cannot be nominative (Borer 1986: 378).

4.2.2 Internal arguments of passives and unaccusatives

My hypothesis is that indefinites in Hebrew are not subject to the Case Filter. Since I claim that verbs in Hebrew do not assign Case, internal arguments of unaccusatives should be licensed just like objects of transitive verbs, by a theta-role alone. As a result, the prediction is that the internal argument of a passive or unaccusative verb will have no Case-related reason to move outside the VP. Lack of an external theta role should have no direct influence on the internal argument. However, assuming the EPP, a subject is obligatory; therefore, movement of the internal argument to subject position is possible in order to satisfy the EPP. Alternatively, the EPP could also be satisfied by employing a null expletive subject. The prediction is that if Case is not an issue, the expletive strategy would also be possible. This would have to be a *there*-type expletive, since its associate is an NP.

In standard Hebrew, *there*-type expletives must trigger agreement of the verb with the postverbal argument. As a consequence, there is no immediate way of distinguishing an expletive-argument chain from a postverbal subject, since the agreement on the verb would be the same in both cases, and the expletive is null. However, in colloquial Hebrew, the possibility of having expletive-argument chains where the verb does not agree with the argument seems to be available. For many speakers, certain unaccusative or passive verbs are acceptable without agreeing with the overt argument, instead showing default agreement (3rd person singular). In this case, the internal argument must also be postverbal:

(87) a.   nafl-u alay   egozey   kokos.   (SH/CH)[71]
               fell-PL on-me nuts.PL   coconut
               'Coconut nuts fell on me.'

        b.   nafal alay   egozey   kokos.   (CH)
               fell.SG on-me nuts.PL   coconut

        c.   egozey   kokos   nafl-u   alay.   (SH/CH)[72]
               nuts.PL   coconut   fell-PL   on-me

        d. * egozey   kokos   nafal alay.
               nuts.PL   coconut   fell.SG on-me

(88) a.   hayu   li   hamon   ra'ayonot.   (SH/CH)
               was.PL   to-me plenty   ideas.PL
               'I had plenty of ideas.'

        b.   haya   li   hamon   ra'ayonot.   (CH)
               was.SG   to-me plenty   ideas.PL

        c.   hamon   ra'ayonot hayu li.   (SH/CH)
               plenty   ideas.PL was.PL to-me

        d. * hamon   ra'ayonot haya li.
               plenty   ideas.PL was.SG to-me

It seems that while standard Hebrew has the parameter setting of English, where the verb agrees with the argument in expletive-argument chains, colloquial Hebrew allows also the French setting, with default agreement on the verb. Note that the structures where the verb does agree with a postverbal nominal might also involve a null expletive subject and the English setting of the agreement parameter, but this would be equivalent

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[71] SH stands for standard Hebrew; CH stands for colloquial Hebrew.

[72]Without a proper context, indefinite preverbal subjects are often judged to be marginal by many speakers. I assume that this follows from discourse considerations that are irrelevant to the current discussion.

in surface realization to a structure with no expletive, with a postverbal subject which checks nominative Case.

It should be noted that when the unaccusative verb is embedded as an infinitive under a raising verb/adjective, a non-agreeing postverbal indefinite is even more acceptable to many speakers:[73]

> (89) a. asuy/alul likrot kama dvarim.
> may.SG happen several things.PL
> *'Several things may happen.'*
>
> b. yaxol lipol alexa egozey kokos.
> can.SG fall on-you nuts.PL coconut
> *'Coconut nuts can fall on you.'*

Crucially, the possibility of having an internal argument that does not agree with the verb, and hence is not nominative, and that has no alternative way of getting Case, is limited to indefinites. If a non-agreeing internal argument in examples of this kind is definite, it is always preceded by one of the Case-assigning prepositions *et* or *me-* in colloquial Hebrew. This is expected, since a definite requires Case and the only possibility other than nominative is to use a preposition. An agreeing definite, on the other hand, is nominative, and therefore it cannot co-occur with a preposition. The pattern is therefore that agreement with the verb and the use of *et/me-* are in complementary distribution when the argument is definite:

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[73]The degree of acceptability of the examples discussed in this section varies widely from speaker to speaker, and there are also significant differences from verb to verb. I have no explanation for these facts, beyond noting that this is clearly a construction which is undergoing change, and as a result some inconsistency is expected.

(90) a. niš'ar-u   li   ha-dgamim   ha-yešanim.   (SH/CH)
          remain-PL to-me the-models.PL the-old.PL
          'I have the old models remaining.'

      b. niš'ar   li   me-ha-dgamim   ha-yešanim. (CH)
          remain.SG to-me from-the-models.PL   the-old.PL
          'I have (some of) the old models remaining.'

(91) a. hayu li   ha-ra'ayonot haxi   tovim.   (SH/CH)
          was.PL to-me the-ideas.PL   most   good.PL
          'I had the best ideas.'

      b. haya   li   et ha-ra'ayonot haxi   tovim.   (CH)
          was.SG   to-me et the-ideas.PL   most   good.PL
          'I had the best ideas.'

To summarize, the existence of non-agreeing unaccusatives only with indefinites

is exactly what the hypothesis that indefinites do not require Case predicts. In this

case, the EPP is left as the only potential motivation for movement of the internal

argument, but the EPP can also be satisfied by a null expletive.

4.2.3 New idiomatic uses of unaccusatives

Modern Hebrew has another construction, in which certain unaccusative verbs are

followed by a "dative" PP and a nominal that does not agree with the verb[74]. This is

illustrated in the following examples:

(92) a. ba   li   glida   be-gavi'a.
          comes.MASC   to-me ice-cream.FEM in-cone
          'I feel like having (some) ice cream in a cone.'

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[74]The lack of agreement here is much more widely acceptable than with the "regular" uses of
unaccusatives discussed above, for which the acceptability of non-agreeing arguments is limited to a
minority of speakers and is often considered to be "wrong". The constructions described in this
subsection are used very often even by speakers who tend to frown upon other non-agreeing
unaccusatives.

b.   magi'a   lo   makot.
    arrives.SG.MASC   to-him blows.PL.FEM
    'He deserves spanking.'

c.   mat'im   li   mis'ada   sinit.
    fits.MASC to-me restaurant.FEM Chinese.FEM
    'A Chinese restaurant suits me.'

Examples of this sort are very common in everyday speech; these uses of the unaccusative verbs illustrated above are fairly new developments in the language, indicating a productive process which is currently active in Hebrew. Note that these unaccusative verbs tend to get a new meaning when used in this construction, further supporting the claim that these are not simply unaccusative verbs with non-agreeing subjects. However, the crucial point is that the input to this process is always an unaccusative verb. Like other non-agreeing arguments of unaccusatives, there does not seem to be anything which may assign Case to the postverbal NP. As unaccusatives, the verbs in question are not expected to assign Case, even if we did not assume that verbs in Hebrew lack Case-assigning capability in general. In addition, if the NP was nominative, it would have to agree with the verb, but as the examples above show there is no such agreement, and the verb bears default agreement features (3rd person, singular masculine). Hence, we must conclude that the postverbal NPs are Caseless.

Definites are impossible in these constructions unless they are preceded by *et.* Without *et*, the only way to use a definite is with a pronounceable intonational break preceding it and an optional preverbal pronoun *ze* ('it', 'this')[75]; otherwise, the following

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[75]This suggests that it might be an extraposition structure rather than the same structure found with indefinites, which do not require any intonational break and do not make use of a pronoun.

are ungrammatical:

(93) a. * ba   li   ha-glida   še-kaninu.
         comes.MASC   to-me   the-ice-cream.FEM   that-bought.1PL
         'I feel like having the ice cream that we bought.'

      b. * magi'a   lo   ha-makot.
         arrives.SG.MASC   to-him   the-blows.PL.FEM
         'He deserves the hitting.'

      c. * mat'im   li   ha-mis'ada   ha-sinit.
         fits.MASC   to-me   the-restaurant.FEM   the-Chinese.FEM
         'The Chinese restaurant suits me.'

Since the postverbal position in these construction is not a Case position, only indefinites (or definites following *et*) are allowed in it. On the more traditional view that every nominal argument requires Case, such data are left unexplained. Furthermore, it is expected that such constructions will be found only in languages where indefinites can be bare NPs rather than DPs.

4.3.   Cognate objects and semi-arguments

Another class of constructions which fits in naturally within the approach to Caseless NPs advocated here is that of cognate objects. The possibility of using certain nominal projections as apparent objects of intransitive verbs in various languages has received several explanations in the past; see for instance Jones (1988), Massam (1990), Mittwoch (1998) and Pereltsvaig (2001). However, as noted, for instance, by Pereltsvaig (2001),the phenomenon of cognate objects is much more wide-spread in Hebrew than in most other languages. While many languages allow cognate objects only with unergative verbs, Hebrew allows it with virtually any verb. In addition to

unergatives, which may take a cognate object as in (94a) or a nominal denoting

manner or measure as in (94b), other kinds of verbs can take a cognate object whose

nominal head is the action noun derived from the relevant verb. Some examples are

given in (94c-e):

(94)   a.   Dan   rakad   rikud/ vals.
             Dan   danced   dance/waltz
             'Dan danced a dance/a waltz.'

       b.   Dan   rac   kilometer.
             Dan   ran   kilometer
             'Dan ran a kilometer.'

       c.   Dan   nafal   nefila recinit.
             Dan   fell   fall   serious
             'Dan had a serious fall.'

       d.   Dan   kilef   et ha-tapu'ax   kiluf   mušlam.
             Dan   peeled et the-apple   peeling   perfect
             'Dan peeled the apple perfectly.'

       e.   Dan   daxaf   et ha-delet   dxifa   kala.
             Dan   pushed   et the-door   pushing light
             'Dan pushed the door lightly.'

Following Rothstein (1992), we may assume that cognate objects of unergative

verbs receive accusative Case, as expected from Burzio's generalization: since an

unergative verb assigns a theta role to an external argument, it should also be able to

assign accusative Case. While this may account for the distribution of cognate objects

in English, it does not cover the entire range of cognate objects found in Hebrew.

One possible solution comes with the formulation of the Case Filter as a Visibility

Condition on theta role assignment: if Case is required only for true arguments which need a theta role, then cognate objects do not need Case if they can be shown not to be true arguments of the verb (Jones 1988)[76]. But if one assumes this analysis, it leaves open the following problem: in Hebrew, when a cognate object is definite, the use of *et* in front of it is obligatory, just like with "regular" definite objects:

(95)   a.   Dan   caxak   ***(et)   ha-cxok   ha-mitgalgel šelo.**
            Dan   laughed   *(et)   the-laughter   the-rolling   his
            'Dan laughed his rolling laughter.'

       b.   Dan   daxaf et ha-delet   ***(et)   ha-dxifa   ha-rišona.**
            Dan   pushed et the-door   *(et)   the-pushing   first
            'Dan pushed the door first.'

If cognate objects, as non-arguments, did not require Case, then it would be a mystery why definite cognate objects cannot be left without *et*. This suggests that cognate objects *do* require Case just like regular objects. Within the analysis developed here, a cognate object in Hebrew needs Case only when it is definite, as in (95), since only then it is a DP. Indefinite cognate objects are NPs and therefore do not need Case. This analysis also explains why cognate objects are allowed in Hebrew with a wider range of verbs than in English: in English, only unergative verbs may assign accusative Case to a cognate object; in Hebrew, on the other hand, indefinite cognate objects do not need Case, while definites may get Case from *et* regardless of the properties of the verb. Thus, the fact that unaccusative and transitive verbs cannot assign Case to a cognate object, the former because they cannot assign Case at all, and

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[76]See, however, Massam 1990 and Pereltsvaig 2001, who argue against the view of cognate objects as nonarguments.

the latter because they assign accusative to their true object, predicts that cognate objects will be allowed with these kinds of verbs in languages that use a prepositional "accusative" like Hebrew or in languages in which cognate objects are not DPs.

4.4.   Action nominals with indefinite internal arguments

A well-known fact, which has been noted by many authors who studied action nominals in Hebrew (see for instance Hazout 1991 and Siloni 1997), is the difficulty of having two postnominal arguments if the second of these is indefinite. This is illustrated by the following contrast, from Hazout (1991:275):

> (96)   a.   axilat Dan   et ha-uga
>   eating Dan   et the-cake
>   *'Dan's eating of the cake'*
>
>   b. * axilat Dan   uga
>   eating Dan   cake

As seen in this example, the second argument can be a definite, as in (96a), which is preceded by *et*, but not an indefinite, as in (96b). This has often been linked to Case. Siloni, for instance, claims that *et* in nominal contexts is a dummy Case marker that assigns *inherent* accusative, but that it is only compatible with definites; (96b) would then be ruled out as a Case Filter violation.

However, as noted by Hazout (1991:275), the facts are more complicated than this. When the bare indefinite argument in (96b) is replaced by a slightly "heavier" indefinite, grammaticality is vastly improved, and the phrase is actually considered grammatical by many speakers:

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

Thus, the relevant contrast is not a two-way distinction between definites and indefinites, but rather a three-way distinction between definites, indefinites, and bare nouns; only the latter are clearly excluded from such contexts. As bare nouns are known to be rather restricted in their syntactic distribution (see for instance Zamparelli 2001), their ungrammatical status in this context might not be related to Case issues. If, for instance, one assumes that bare nouns must be properly governed (Contreras 1986, Torrego 1989, Longobardi 1994; see also Carlson 1999:6), then their status in action nominals is straightforwardly accounted for, as the raised head of the CSN properly governs the first argument, which is also adjacent to it, and not the second. Similarly, if one adopts an incorporation analysis of bare nouns (Baker 1988) or a pseudo-incorporation analysis along the lines of Massam (2001), in which adjacency is a prerequisite, the facts regarding bare noun arguments in Hebrew nominals are accounted for, since the second argument is not adjacent to the head noun.[77]

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[77]In object position, bare noun are also more sensitive than full NPs to the presence of adverbials that intervene between the verb and the object. While complex indefinite objects can be separated from the verb by an adverbial phrase, bare nouns are only marginally acceptable in similar cases:

(i)   a.   Dan kore   kol   yom   kama   sfarim.
             Dan reads   every   day   several   books.

      b.   ?? Dan kore   kol   yom   sfarim.
             Dan reads   every   day   books.

      c.   Dan kore   sfarim   kol   yom.
             Dan reads   books   every   day.

As pointed out to me by Tali Siloni, there are environments in Hebrew where a bare nominal object does not need to be adjacent to the verb; for instance, in ditransitive verbs:

Assuming now that bare nouns receive an independent explanation, we may focus only on the presence of other indefinites as internal arguments in action nominals. If these are indeed grammatical, the question arises how an indefinite internal argument receives Case. Genitive Case is assigned to the external argument, which is linearly adjacent to the head of the CSN. But apparently, there is nothing that can assign Case to the second argument. When it is a definite, *et* is used. When it is an indefinite, we are led to the conclusion that it remains Caseless. We thus get further support for the hypothesis that Caseless indefinites in argument positions do not lead to ungrammaticality. As with indefinite objects of verbs, the Caseless NP hypothesis is actually the null hypothesis, which avoids the problem of having to stipulate an abstract Case assigner which is only compatible with indefinites.

4.5.   Small Clauses

One Case-theoretic issue that was left open in the previous chapter is the status of small clauses. I have argued that Hebrew has no ECM constructions, and that apparent counterexamples involve SCs that can appear in environments where it is clear that no external Case-assigner exists which can assign Case to the subject of the SC. This allowed us to conclude that verbs in Hebrew do not assign structural Case,

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(ii)   natati   le-Dan   egozim.

gave.1SG   to-Dan   nuts

' I gave (some) nuts to Dan.'

The correct generalization is therefore not based on linear order – a conclusion which is hardly surprising. For our purposes, however, it is sufficient to note that the behavior of bare nouns in event nominals is an instantiation of the general syntactic properties of bare nouns, rather than a special property of indefinites in event nominals.

but left open the question how subjects of SCs do get Case.

If my claim that indefinites in Hebrew do not require Case is correct, then the existence of SCs in Hebrew no longer poses a problem. Consider the following sentences:

(98) a. Dan   ra'a   šloša   yeladim   racim.
          Dan   saw   three   children   running

      b. Dan   ra'a   et ha-yeladim   racim.
          Dan   saw   et the-children   running

In (98a), the subject of the SC is an indefinite; even if there is nothing which can assign Case to it, the sentence is still grammatical since the indefinite does not require Case. The fact that it receives a theta role from the SC predicate is sufficient for interpretability, and no further formal requirement has to be fulfilled.

In (98b), the subject of the SC is [+def], and therefore, being a DP, it does require structural Case. This requirement is fulfilled by the presence of *et*. Thus, neither definite nor indefinite subjects of SCs pose any problem.

In chapter 3, I noted that there are other environments which allow Small Clauses despite the fact that no Case seems to be available to the subject. These can now be explained in exactly the same way: if the subject of the SC is indefinite, no Case is required, as long as the NP is the subject of a predicate and therefore semantically licensed. When the subject is definite, Hebrew resorts to the use of *et*, as illustrated in the following pseudocleft examples[78]:

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[78]In the gloss, the pronoun *ze* is translated as ' is' ; this might not be the correct translation, though, and a more accurate gloss might be ' it' . See Doron (1983, 1986), Hazout (1994) and Heller

(99) a. ma   še-Dan   ra'a   ze šloša yeladim   racim.
         what   that-Dan   saw   is three children   running

b. ma   še-Dan   ra'a   ze et ha-yeladim   racim.
    what   that-Dan   saw   is et the-children running

However, one problem raised by this analysis is that English also allows SCs in pseudoclefts, both with definites and indefinites. Even if indefinites in Hebrew are exempt from the Case Filter because they are NPs, there is no clear evidence that indefinites in English are also NPs and not DPs. Since English has indefinite articles, an NP analysis of indefinites in English would have to rely on the assumption that indefinite articles are not located in D. But even if we made this assumption, it would leave us with the problem of definite subjects of SCs, since English does not use a preposition similar to Hebrew *et*. The question, then, is how the subject of a SC in English pseudoclefts such as the following gets Case[79]:

(100)   What I saw was <u>John/three children</u> running.

An important observation in this respect is made by Raposo and Uriagereka (1990:531 fn. 47), who note that not all verbs that take SC complements also allow pseudoclefts with SCs; this is illustrated with the verb *consider*:

(101) a. I consider John intelligent.

b. * What I consider is John intelligent.

Raposo & Uriagereka do not attempt to account for this fact, which they leave as

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(1999) for discussions of the status of the Hebrew copula and the pronominal element *ze*.

[79]This problem is not specific to my analysis, even though under the proposed analysis for Hebrew SCs the unanswered questions regarding the English data stand out more clearly.

an open problem. On the other hand, they do make a claim which seems to have the potential of providing a solution. They propose that some apparent SCs are actually ambiguous between a true SC and a secondary predicate analysis. The secondary predicate analysis is more restricted: it is only possible with stage-level predicates. Thus, a sentence such as (102a), with a matrix perception verb like *see* and an embedded stage-level predicate, is actually ambiguous between a structure involving a SC complement of the verb, as in (102b), and a structure with a DP *object* and a secondary predicate adjoined to the VP, as in (102c)[80]:

(102) a. I saw John running.

b. I saw [$_{SC}$John running].

c. I [$_{VP}$[$_{VP}$ saw John] [running]].

According to Raposo & Uriagereka, when a sentence like (102a) is pseudoclefted, the two structures are mapped into two different surface forms:

(103) a. What I saw was John running.

b. Who I saw running was John.

In what follows, I adopt Raposo & Uriagereka's idea that this kind of sentence is ambiguous. However, I claim that the specific structure that they propose for the secondary predicate analysis is not the correct one, as it suffers from two shortcomings: First, it does not explain why *consider* followed by a SC does not allow pseudoclefting,

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[80]As noted by Tali Siloni (p.c), perception verbs do not seem to allow individual-level predicates at all:

(i)   *I saw John clever.

As a result, it could be that perception verbs allow *only* the secondary predicate structure and not a SC complement, and therefore sentences with perception verbs might not be ambiguous after all.

as shown in (101): if we assume that *consider* differs from perception verbs in selecting

for a SC with an individual-level predicate, and that it does not allow a secondary

predicate, a pseudocleft equivalent to (103a) should be allowed. Second, it still leaves

open the issue of Case assignment to the subject of the SC in pseudoclefts. Thus, even

though I agree with their intuition that the structures are ambiguous, I do not think the

specific analysis proposed by Raposo and Uriagereka solves the problems.

Assume, instead, that the secondary predicate analysis in the case of perception

verbs involves having the predicate adjoined to the DP. This option is apparently

possible only with stage-level predicates. We get a structure reminiscent of a relative

clause, as in (104a):

(104)   a.   I saw [$_{DP}$[$_{DP}$ John] running].

        b.   I saw [$_{DP}$ John, who was running].

This "reduced relative" analysis is supported by the fact that the sentence in

(104a) can be paraphrased more or less correctly with a true relative clause, as in

(104b). Extraction facts in Hebrew also seem to support this analysis; both structures

allow extraction out of the complement of the matrix verb:

(105)   a.   et mi   ra'ita   rac?
            et who   saw.2SG   running
            'Who did you see running?'

        b.   et mi   ra'ita   še-   rac?
            et who   saw.2SG   that-   running
            'Who did you see that was running?'

Two other facts that receive an explanation under the predicate adjunction analysis

are the optional raising of a SC to the subject position of raising verbs like *seem*, as noted in chapter 3, following Safir (1983); and the "thematic sharing" observed with perception verbs (Rizzi 1990). In the following pair, (106a) entails (106b), unlike what happens with true SC complements of verbs like *want* (Rothstein 1995) where no entailment holds, as in (107a):

(106) a.   I saw John running.

b.   I saw John.

(107) a.   I want John out of here.

b.   I want John.

If *John running* has the structure in (104a), then *John* heads the complement of *saw*, and thus the entailment is expected.

Back to the issue of Case assignment, we note that in the reduced relative analysis, Case assignment is not 'exceptional' (in the sense of ECM): the entire postverbal phrase is a DP, which functions as the object of the verb. This DP can then be the postcopular element in a pseudocleft:

(108)   What I saw was [$_{DP}$[$_{DP}$ John] running].

As pointed out to me by Dimitra Papangeli (p.c.), pronouns are impossible in the postcopular position of a pseudocleft "small clause":

(109)   * What I saw was them running.

This is exactly what we predict, if pseudoclefts are possible only with a reduced relative structure and not with a true SC, since pronouns are impossible as heads of full relative clauses as well[81]:

(110)   * What I saw was them, who were running.

A reduced relative analysis is not possible for *consider*, which requires a true SC with an individual-level predicate. Thus, *consider* with a reduced relative is ungrammatical whether or not it is pseudoclefted, as shown in (111a-b), while *consider* with a SC is grammatical only in its non-pseudocleft variety, as in (111c-d):

(111) a. * I consider [$_{DP}$[$_{DP}$ John] intelligent].

  b. * What I consider is [$_{DP}$[$_{DP}$ John] intelligent].

  c.   I consider [$_{SC}$ John intelligent].

  d. * What I consider is [$_{SC}$ John intelligent].

The pseudocleft with *consider* in (111d) would be ruled out as a Case Filter violation, since a SC in a pseudocleft construction has a Caseless subject position. In other words, my analysis predicts that pseudoclefts with apparent SCs will only be possible where a secondary predicate analysis of the "SC" is possible.

This prediction seems to be borne out. The following examples establish the fact that verbs like *want*, *make* and *find* allow only true SC objects: in the examples below, no entailment holds between the (a) and (b) sentences, and no near-equivalence between (a) and (c):

(112) a.   I want John out of here.

  b.   I want John.

  c.   I want John, who is out of here.

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[81]As pointed out to me by Dimitra Papangeli, this fact also supports the claim that the postcopular position in a pseudocleft does not license accusative Case.

(113) a.   I made John happy.

   b. * I made John.

   c. * I made John, who is happy.

(114) a.   I found the defendant guilty.

   b.   I found the defendant.

   c.   I found the defendant, who is guilty.

As predicted, none of these examples allow pseudoclefting:

(115) a. ?? What I want is John out of here.

   b. * What I made is John happy.

   c. * What I found is the defendant guilty.

Thus, the lack of a reduced relative analysis, and as a consequence, the availability of a SC analysis only, coincides with the impossibility of pseudoclefting. We get the result that the reduced relative analysis predicts a cluster of properties, namely, thematic sharing/semantic entailment, the possibility of pseudoclefting, and the possibility of appearing as objects of perception verbs even in a language like Hebrew, which lacks ECM.

We can conclude that the existence of pseudoclefts with perception verbs in English does not pose a problem to the proposed analysis, since perception verbs give rise to an ambiguous sentence which does not necessarily involve a SC.

4.6   "Null Case" and PRO

A standing problem in Case theory is the status of PRO with respect to Case. If all argument nominals must receive Case, there is no obvious reason why PRO should be

an exception. Chomsky and Lasnik (1993) suggest that untensed INFL assigns "Null Case", which is only compatible with PRO. Since this kind of Case is, by definition, never found on overt nominals, there is not much explanatory power in assuming Null Case, and it is mainly a technical solution to a theory-internal problem.

As pointed out to me by Eric Reuland (p.c.), the idea that nominals that are not DPs do not require Case suggests a very simple alternative solution. If we assume that PRO is a null *NP,* then no Null Case has to be stipulated, since PRO would then be licensed by its thematic role alone.[82] I do not see any immediate reason why PRO should be assumed to be a DP, if we assume that overt NPs are allowed as arguments. The lack of person features on PRO supports the idea that it is not a DP, assuming that these are features of D, as they appear on lexical DPs, namely pronouns. Furthermore, PRO must either be controlled or arbitrary – in other words, PRO has no referential content of its own; as the D position is frequently linked to a nominal's referential content (see for instance Longobardi 1994), an analysis of PRO as an NP seems to be

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[82]The question that remains open is why Hebrew does not allow overt indefinites as subjects of infinitival clauses:

(i) *Dan mekave harbe talmidim le-hacli' ax.
     Dan   hopes   many   students   to-succeed.

According to my analysis, there should be no Case-related problem here; if we kept the Null Case analysis, (i) could be explained by the incompatibility of Null Case with overt NPs.

A possible solution to this problem is suggested by Belletti (1988: 22-25), whose theory of abstract Partitive is faced by the same problem if the embedded verb is unaccusative. Belletti argues that a sentence like (i) is ruled out because it violates the requirement that an A-chain must terminate in a Case position. The chain headed by the indefinite in (i), which raised from the VP-internal position to the subject position of the infinitival clause, is not headed by a Case position. Furthermore, if the indefinite remained inside the VP, the sentence would have been ungrammatical because neither *pro* nor PRO would be able to satisfy the EPP: expletive *pro* can only appear in a governed position, while something like expletive PRO does not seem to exist. Belletti thus concludes that there are independent reasons to rule out sentences like (i). See also Marantz (1991: 244-245).

independently motivated.

One might further develop this idea by considering the difference between PRO and *pro*. Unlike PRO, *pro* has person and number features, and it behaves in many ways like an overt pronoun. Assuming that pronouns are lexical DPs, it is a straightforward assumption that *pro* is a null DP. As such, it does require Case, and consequently *pro* is found in the subject position of tensed clauses. If this idea is correct, then the difference between PRO and *pro* is simply that the former is a null NP, while the latter is a null DP. The fact that only PRO, and not *pro*, can be used as a subject of an infinitive would then follow from the absence of Case in that position without any additional stipulation.

There are many additional issues related to this analysis of empty categories that I will not discuss here; I leave this hypothesis as a topic for further research.

5. Syntactic definiteness and "Definiteness Spreading" revisited

In this section, I return to the notion of syntactic definiteness which was introduced in chapter 2. The main question I will address is whether syntactic definiteness can now be reduced to having a DP projection. In the process, I develop an analysis of definiteness spreading in CSNs which is based on the DP/NP distinction and Case theory.

5.1. Proper names and pronouns

Names and pronouns that are used as objects require *et*. Following Longobardi (1994, 1996), we may assume that names in Hebrew raise to the D position from N, as Hebrew has no lexical D (recall that the definite article is generated as an affix on the noun). Following Abney (1987) and many others, I assume that pronouns are base generated in D. Thus, both proper names and pronouns form DPs that consequently need Case, and hence their co-occurrence with *et* receives a straightforward explanation which is more elegant than stipulating that they are lexically [+def], as I assumed in the previous chapter.

Another advantage of this proposal over a stipulation that names are lexically specified as [+def] is that it allows us to consider exceptions to the rule that proper names must follow *et*. Consider the following example (see Longobardi 1994 for a discussion of similar constructions in other languages):

(116) ani makir (*et) Sara axat.
     I know (*et) Sara one
     'I know one (person named) Sara.'

In (116), even though the object is a proper name, in the presence of a numeral it may not be preceded by *et*. Within an analysis that relies on a lexical specification of the definiteness feature, we would be forced to say that proper names carry an *optional* [+def] feature, which would be a mere stipulation. But within the framework developed by Longobardi (1994, 1996), another explanation suggests itself. Assume that proper names are generated under N, from where they normally raise to D. However, this

raising is not obligatory; whether or not it occurs affects the interpretation of the phrase. If the name raises to D, we get the usual referential interpretation of a proper name. But except for the referential use, there is also the "predicative" interpretation, which, in Longobardi's framework, is tied to N staying in-situ and not raising to D. When N does not raise to D, only NP is projected. In the analysis proposed here, the use of *et* is linked to the presence of a DP level, and therefore the correlation between the use of *et* and the referential interpretation of proper names is expected.

We now have a systematic way of predicting in what cases *et* is required in front of proper names. There is more to be said about the semantic consequences of having a DP level. In chapter 5, I will discuss in detail various semantic phenomena related to the use of *et*. At this stage, it should be noted that the proposed analysis of proper names suggests an alternative to approaches that argue for a *direct* link between Case and interpretation, as in Belletti (1988), de Hoop (1992) and others. The different interpretations of proper names with and without *et* can be derived from differences in the internal structure of the noun phrase, giving rise to either "weak" or "strong" interpretations.

To sum up, we now have the generalization that DP is projected in the following cases:

    a.   Simple nominals which are morphologically marked [+def]

    b.   Proper names in their referential use

    c.   Pronouns

These are precisely the simple noun phrases which were stipulated in chapter 2 to be [+def], with the exception that now we make the empirically-motivated distinction between proper names used referentially and those that are predicational. Thus, for simple nominals, the notion "[+def]" can be equated to "DP". What remains to be discussed is the correlation between the presence of a [+def] feature and the projection of a DP in CS nominals.

5.2   Hebrew CS genitives

5.2.1. Introduction: definiteness spreading and genitive Case

Recall that construct state nominals in Semitic display the property that I refer to as definiteness spreading (DS): the definiteness value of the embedded genitive phrase (which I refer to by the theory-neutral term *associate*, also called the *somex* in traditional grammars of Hebrew) is "inherited" by the entire CSN. Since we are attempting to reduce the difference between definites and indefinites in Hebrew to the DP-NP contrast, it is important to see to what extent the phenomenon of "definiteness spreading" can be reduced into "DP-ness spreading". Such a reduction would give a new kind of explanation for an issue which has been central to much of the work on Hebrew noun phrases in the past decade (see for instance Siloni 1997, Borer 1998 and Dobrovie-Sorin 2000, 2001).

My primary goal is to simplify the discussion of the [+def] feature and its relation to structural Case. The set of "atomic" [+def] DPs has now been shown to be

equivalent to the set of simple DPs. In order for the reduction of formal definiteness to DP-hood to be complete, what I need to show is that, if the associate in a CSN is a DP, the resulting CSN is also a DP, and otherwise it is an NP. The hypothesis is that DS results from a pattern which is roughly the following:

(117) An NP is possible inside an NP, while a DP can only be embedded inside another DP.

To motivate this hypothesis, one additional assumption is needed:

(118) Genitive Case in CSNs is checked above the NP level.

This claim is not new. In some previous analyses of the Hebrew CSNs, such as the one in Siloni (1997), the intermediate functional projection which dominates NP (AgrP in Siloni's analysis) is taken to be the site of genitive Case checking, which occurs in a typical spec-head configuration between the raised N and the raised genitive DP. Similarly, Fassi Fehri (1993) proposed that genitive is checked in a spec-head configuration in DP. Other authors (following Ritter 1988, 1991) have assumed that in order for the N to assign Case to the genitive in [spec, NP] under government, the N must first raise to a position which governs [spec, NP]. In either analysis, the functional projection dominating NP plays an essential role in genitive Case assignment/checking. Following Siloni (1997), I refer to this functional projection as AgrP. I will also follow Siloni in assuming that Genitive Case in CSNs is checked in this projection: N raises to Agr and checks the Case feature of the associate, which raises to the specifier of AgrP. Hence the relationship of this projection to Genitive

Case is simply a manifestation of the general idea that structural Case is checked in a spec-head configuration.

5.2.2. Can CSNs be NPs?

If (118) is correct, bare NPs that are not dominated by a functional projection are not predicted to allow embedded genitives. To the best of my knowledge, until recently the possibility of having CSNs which are bare NPs in addition to CSNs which are DPs has not been explicitly discussed; recently, however, this issue has been brought up by Engelhardt (2000) and Dobrovie-Sorin (2000, 2001). The null assumption in the past decade has been that definite and indefinite CSNs are composed of the same functional projections, so if definites can be shown to be DPs then it follows that indefinites are DPs as well. Most work on DP-structure in Hebrew has focused on the difference between event nominals and non-event nominals, where various structural differences have been proposed, but with little explicit interest in comparing definites to indefinites.

Independently of the issues of Semitic CSNs, there is also some debate whether argument NPs are allowed at all in natural languages. Some authors have claimed that arguments must always be DPs (see Szabolcsi 1987, Stowell 1989 & 1991, Longobardi 1994). Others, such as McNally (1995), Dobrovie-Sorin (1997), Chierchia (1998) and Dayal (1999), have defended the opposite position, namely, that NPs can indeed be used in argument positions, with various semantic consequences. But the issue of NP CSNs is actually independent of the possibility of NPs serving as arguments, since the embedded genitive in a CSN is not always an argument, and neither is the entire CSN.

It is important to note that the central arguments in favor of a complex structure for CSNs are based mainly on the properties of definites. Across languages, event nominals are well-known to be restricted to definites, as observed by Grimshaw (1990):

> (119) a.   The frequent assignment of difficult problems annoyed the
> students.
>
> b.?? A frequent assignment of difficult problems annoyed the students.

Taking this fact into consideration, most authors who studied Hebrew event-denoting CS nominals have focused almost exclusively on definites; see for instance Hazout (1991), Siloni (1997) and references cited there. In all these discussions, indefinites are mostly ignored. One notable exception is found in Engelhardt (2000), who argues that some event nominals are "non-definite", a notion that she explicitly distinguishes from "indefinite". Consequently, Engelhardt does consider the option of DP-less constructs. I will return to Engelhardt's proposals in chapter 5.

One piece of evidence in support of non-DP CSNs in Hebrew comes from the fact that many non-event CSNs display syntactic word-like behavior. One aspect of this is that a bare CSN, i.e. a CSN without a preceding numeral or quantifier and with no modifying material, such as APs or relative clauses, has the syntactic distribution of a bare noun. For instance, bare CSNs, like bare nouns, are usually not allowed in subject position, while they are allowed in other argument positions. The following examples are based on an observation made by Siloni (2001):

(120) a. * tmuna   (hi)   xadaša.
          picture   is   new

    b.   tmuna   axat   (hi)   xadaša.
          picture   one   is   new
          'One picture is new.'

    c.   šaloš tmunot   (hen)   xadašot.
          three pictures   are   new

(121) a. * tmunat   praxim   (hi)   xadaša.
          picture   flowers   is   new

    b.   tmunat   praxim   axat   (hi)   xadaša.
          picture   flowers   one   is   new
          'One picture of flowers is new.'

    c.   šaloš tmunot   praxim   (hen)   xadašot.
          three pictures   flowers   are   new
          'Three pictures of flowers are new.'

This kind of pattern poses a problem to any analysis which assumes that all CSNs are DPs, since in that case there is no explanation for the similarity between 'bare CSNs' and bare nouns, or for the difference between bare and modified CSN. If, however, *tmunat praxim* ('picture flowers') in (121) does not have the same structure as a definite event nominal, a syntactic solution for these facts is possible. One possibility is that simple CSNs like *tmunat praxim* are formed at the N^0 level, and therefore they act like bare nouns because they *are* bare nouns.

A related observation made by Tali Siloni (p.c.) is that the associate in bare CSNs cannot be referential, and a pronoun cannot be used to refer back to it. Compare the following, where the pronoun *ota* refers back to the associate in boldface:

(122) a.   kaniti   et tmunat **ha-saxkanit**. ani ma'aric   ota.
            bought.1sɢ   et picture the-actress   I admire   her
            'I bought the picture of the actress. I admire her.'

     b.?? kaniti   tmunat   **saxkanit**. ani ma'aric   ota.
            bought.1sɢ   picture   actress   I admire   her
            'I bought a picture of an actress. I admire her.'

According to Siloni, this contrast can be derived if we assume that the embedded nominal *saxkanit* ('actress') in (122b) lacks a DP level. I believe this is too strong, as it implies that if all indefinites in Hebrew are NPs then all indefinites would be non-referential. If we restrict the impossibility of having a referential index to bare nouns, however, then the contrast in (122) can be explained without ruling out the possibility of referential indefinites.

A notable break with the tradition of assuming the same structure for definite and indefinite CSNs is found in Dobrovie-Sorin (2000, 2001), where a Bare Phrase Structure framework is used to develop an analysis of definiteness spreading in Hebrew, Romanian and English. There are two aspects of Dobrovie-Sorin's analysis that I will adopt in the analysis that I present below: the idea that definite and indefinite CSNs do not have the same structure, and the idea that definiteness spreading is linked to this duality of structure. Where Dobrovie-Sorin's analysis differs from mine is in not relating the structural difference between definites and indefinites to Case considerations. Instead, Dobrovie-Sorin focuses mainly on semantic composition rules, with the syntactic structure being driven by semantics. Before going on with my own analysis of DS, I will briefly review Dobrovie-Sorin's analysis. My goal is to show that if one

takes Case into consideration, then not all of Dobrovie-Sorin's assumptions are really needed in order to derive the DS facts, though they might be needed in order to account for other facts that Dobrovie-Sorin tries to explain, such as the incompatibility of an overt D with genitive specifiers.

In Dobrovie-Sorin's analysis, the syntax allows the associate in a genitive phrase to occur either as a specifier of Nmax or as a complement to the noun. Some of the syntactically possible structures, however, are blocked by rules of semantic composition. On the semantic side, the main points of her analysis can be summarized as follows:

- Syntactic determiners occupying the D position are also determiners in the *semantic* sense, as defined in Generalized Quantifier theory (see Barwise & Cooper 1981): they maps an $<e,t>$ type denotation to a generalized quantifier.

- A genitive possessor in [spec, Nmax] triggers an interpretation of the head N as a function from individuals to individuals, i.e. with the semantic type $<e,e>$.

- From the two assumptions above, the incompatibility of D with a genitive specifier follows on semantic grounds: the determiner combines with the N to give a generalized quantifier, which is already an argument type. This cannot combine with a genitive specifier.

- Definites denote individuals, while indefinites denote individual variables, as assumed in Discourse Representation Theory. Combined with the functional interpretation triggered by genitive specifiers, this gives the result that

"definiteness" (basically, the constant/variable distinction) is "spread" from the possessor to the entire Nmax, as the application of a function to a constant yields another constant, while applying a function to a free variable does not bind this variable. "Definiteness spread" is thus a simple semantic phenomenon[83].

- Bare nouns denote properties; as a result, they do not have the correct semantic type for combining with a type $<e,e>$ function, which would be the semantic type of the head of the CSN if the associate was a specifier. Thus, bare noun associates of CSNs can only be complements of the N and are not located in [spec,Nmax].

This semantic analysis is implemented within a syntactic framework that makes the following assumptions:

- Associates of CSNs may surface either as specifiers or as complements.

- Structural Case is assigned in spec. As a consequence, when no prepositional element is used, possessors must be in the [spec, Nmax] position. This gives the structure of what Dobrovie-Sorin calls "simple genitives", which is a cross-linguistic term covering Hebrew CSNs as well as prepositionless genitives in other languages. In what Dobrovie-Sorin refers to as "complex genitives", a prepositional element assigns Case to a possessor which is not necessarily in spec.

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[83]Note that this accounts only for the semantic aspects of DS, not for the syntactic aspects such as the use of *et* and definiteness agreement with APs.

Although Dobrovie-Sorin does not explicitly discuss the Case-theoretic status of associates that are complements, it follows from the second assumption that complements do not receive structural genitive in simple genitives. The question, then, is when can an associate be a complement, and what licenses it. For reasons that have to do with interpretation, Dobrovie-Sorin argues that Hebrew CSNs with indefinite associates differ structurally from CSNs with definite associates, as well as from indefinite genitives in English and Romanian. Specifically, she proposes that indefinite associates in Hebrew are complements, and as a result they trigger a different kind of interpretation than the one triggered by a specifier.

The consequence of all this, which is most relevant to my own analysis, is that for reasons that are independent of the ones that I have proposed, Dobrovie-Sorin's analysis also entails that indefinite associates in Hebrew do not receive Case, while definites do. Dobrovie-Sorin actually makes the distinction between definites and bare nouns, with the status of complex indefinites not being entirely clear (even though she does tend to apply to them the same analysis that she proposes for definites). For bare nouns, it seems straightforward to assume that Case is not a requirement, and accordingly Dobrovie-Sorin does not discuss the Case-theoretic implications of her analysis.

I believe that even though Dobrovie-Sorin's analysis is based on several correct insights, the emphasis that it places on semantic rules to derive the syntactic facts is problematic. In what follows, I will retain some of the syntactic aspects of her analysis, such as the idea that definites and indefinites do not have the same structure, while

pursuing a somewhat different approach, that places more weight on Case theory than on semantic composition, which I will discuss in chapter 5. By doing so I do not reject the validity of Dobrovie-Sorin's semantic analysis, which is still compatible to a large extent with my own syntactic analysis. But by deriving definiteness spreading from syntactic principles which can be independently motivated, I claim that semantics plays a smaller role in determining the structure of CSNs than Dobrovie-Sorin claims.

5.2.3. Deriving definiteness spreading from Case

I now return to the goal of showing that definiteness spreading can be reduced to "DP-ness" spreading, which in turn is derived from the Case Filter. The proposed pattern for Hebrew is that a DP can be embedded inside another DP, where Case can be checked, but not inside NP, which lacks the functional projections necessary for checking genitive Case. An NP associate, on the other hand, can be embedded inside another NP (or DP), since it does not require Case. The following pattern is straightforwardly accounted for in this framework, where the phrases in boldface are DPs, which must check Case against a raised N[84]:

(123) a.   ra'iti   et [$_{DP}$ tmunat   **ha-yeled**].
       saw.1SG   et   picture   the-boy
       'I saw the boy's picture.'

    b.   ra'iti   [$_{NP}$ tmunat   yeled].

    c. * ra'iti   [$_{NP}$ tmunat   **ha-yeled**].

The structures for the objects in (123a-b) are given in (124a-b), respectively. I

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[84]In view of the similarity between ' bare CSNs' and bare nouns, which was noted earlier, it might be better to include numerals or APs in the examples to distinguish NPs from N[0]. In order to simplify the presentation, however, I use simple nominals in these examples.

assume that movement from N to D is motivated by the need to check the [+def]

feature (see also Danon 1996, 1998, Borer 1998, and Engelhardt 2000).

(124)   a.
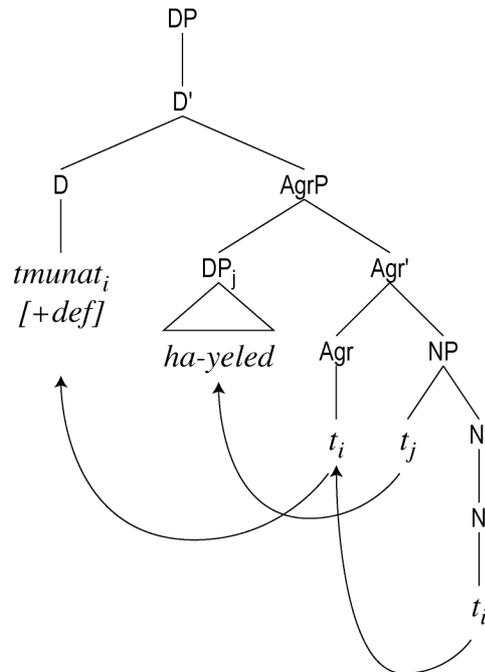
   b.
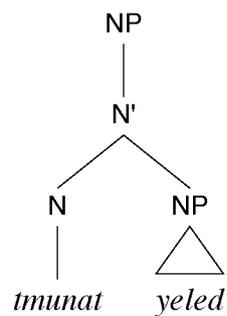
One possible objection to these structures is that the associate is generated in

two different positions: [spec, NP] in definite CSNs, and as a complement to N in

indefinite CSNs. One solution would be to assume that the associate is *always* generated

as a complement, and that it raises for Case to the specifier position if it is a DP[85]. On

the other hand, if these structures were to be implemented within in a Bare Phrase

Structure framework, it is not obvious that the specifier/complement distinction would

still be relevant in this case (see Dobrovie-Sorin 2000, 2001 for a discussion of this

issue).

In the case of nouns in their underived, non-CS, form, the same restrictions

against definites inside indefinites do not hold. Underived nouns cannot check genitive

Case (regardless of their position, even if they raise outside the NP), and the prepositional

element *šel* must be used for Case, whether or not the head noun is definite (and thus

a head of DP) or indefinite[86]:

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[85]The picture is complicated when we consider event nominals, where two or more arguments
may appear at the same time. The crucial point for my analysis is that the argument that checks its Case
against the raised N moves from [spec, NP]; whether it is generated there or moved from the
complement position of the NP is irrelevant to the current discussion.

The hypothesis that one argument is always generated externally, as a specifier, seems to contradict
previous analyses of the CSN, for instance Siloni's (1997), which assumed UTAH and therefore could
not allow the possibility of having the same argument, such as a patient, generated either as a specifier,
when no agent is realized, or as a complement, when an agent is realized. If, instead of assuming
UTAH, we adopt a view of the lexicon-syntax interface along the lines of Reinhart (2000), in which a
given argument may be merged into different positions, depending on factors such as what other
arguments are realized, then the hypothesis that the genitive argument is merged as a specifier does
seem to be possible.

[86]What needs an independent explanation is the fact that simple N-N combinations are not
allowed in Hebrew if the head noun is in its underived form:

(i)   *tmuna   yeled

        picture   boy

Case theory does not account for this, as *yeled* is now assumed to be a bare N or NP. However, this
could be ruled out for a variety of independent reasons. For instance, there is apparently a semantic
mismatch which blocks a direct N-NP combination when the first noun is in its free (non-CS) form. If
both noun and NPs denote sets (type $<e,t>$), then direct combination of two such elements would lead
to a type mismatch. The operation that maps a simple noun into a CSN head seems to change not only
its syntactic properties but also its semantic type, allowing it to combine with an NP.

There are some exceptions to the restriction against simple N-N combinations, mainly when the first is
a measure noun and the second is a mass noun, as in the colloquial *mana falafel* ' serving falafel'
(' a serving of falafel'). If the characteristic property of possible N-N combinations is indeed semantic,
this supports the idea that there is no problem with Case in the ungrammatical (i).

(125) a.   ra'iti   et [_{DP}ha-tmuna   šel   **ha-yeled**].
           saw.1sɢ   et the-picture   of   the-boy
           'I saw the picture of the boy.'

      b.   ra'iti   [_{NP} tmuna   šel   **ha-yeled**].
           saw.1sɢ picture   of   the-boy
           'I saw a picture of the boy.'

Thus, DS is restricted only to CSNs and does not occur with free genitives, a well-known fact that is now straightforwardly accounted for. In other words, of the cluster of properties which characterize CSNs, we now have an explanation in which two properties turn out to be systematically related to each other: the possibility of assigning Case without the use of a prepositional element is a necessary condition for the existence of DS.

We now no longer need to refer to the definiteness feature in order to account for the distribution of *et*, but only to the existence of a DP level: it now follows that every nominal bearing the [+def] feature, as defined recursively in chapter 2, has a DP level. Still, the [+def] feature cannot at this point be eliminated from the inventory of formal features, as it is needed independently for describing the fact that APs must agree in definiteness with the noun. The current analysis now allows us to explain the lack of definiteness marking on APs in certain CSNs with embedded proper names. Consider the following paradigm:

(126) a. hexela mexira šel sifrey Amos Oz xatumim.
           began selling of books Amos Oz signed
           'A sale of signed Amoz Oz books has begun.'

    b. hexela mexira šel sifrey Amos Oz ha-xatumim.
           began selling of books Amos Oz the-signed
           'A sale of the signed Amos Oz books has begun.'

(127) a. * hexela mexira šel sifrey ha-sofer   xatumim.
            began selling of books the-author signed

    b. hexela mexira šel sifrey ha-sofer   ha-xatumim.
           began selling of books the-author the-signed
           'A sale of the signed books of the author has begun.'

CSNs with an embedded proper name, as in (126), allow either a definite or an indefinite AP; the definiteness marking on the AP correlates with the semantic definiteness of the entire CSN. When the embedded phrase is a definite common noun, as in (127), only a definite AP is allowed, and the CSN is interpreted as a definite[87]. The analysis of DS proposed above can account for these facts. Proper names can project either NP or DP; when they are NPs, they do not need Case and they may be embedded inside another NP. In this case, illustrated in (126a), the head of the CSN may lack a [+def] feature, and it will agree with an indefinite AP[88]. On the other hand, if the embedded proper name projects a DP, it must be embedded inside a [+def] DP, where the [+def] feature triggers head movement which allows for Case

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[87]The fact that only proper names allow indefinite APs in such environments has been pointed out to me by Tali Siloni.

[88]The proposal that NP proper names are non-referential probably needs to be improved, as it does not seem to correctly describe the interpretation in these examples. In the indefinite *sifrey amos oz* (' Amos oz books'), the embedded *Amos Oz* must be interpreted as a modifier denoting a *kind* of books, even though it still refers to the same unique person. For the purposes of the current discussion, it is sufficient to note that the name gets a special interpretation in this environment.

checking. This derives (126b). The semantic difference between (126a) and (126b) is thus the result of the fact that only in the second sentence the head of the CSN is [+def].

The examples in (127) show that the same is not possible with common nouns. The overt [+def] marking on the embedded nominal means that it *must* project a DP; as a result, the embedding nominal must also be a [+def] DP, as witnessed by the obligatory definiteness of the AP.

Finally, we should note that in colloquial Hebrew, being specified as [+def] is not necessarily equivalent to having a DP layer: the presence of a [+def] feature is a *sufficient* condition for the projection of DP, but it might not be a *necessary* condition– if an alternative reason for projecting a DP exists. The current theory predicts that if non-[+def] DPs actually exist, they should require *et* when used as objects. Optional use of some indefinites with *et* is witnessed in colloquial Hebrew, usually accompanied by a marked, "specific", reading (to which I turn in chapter 5). The following example illustrates this:

(128)   ani   mexapes (et)   exad   me-ha-sfarim   šeli.
         I   search   et   one   from-the-books   my
         'I am looking for one of my book.'

Leaving aside the issue of interpretation for the moment, it should simply be noted that within the analysis that links the presence of *et* to the NP/DP distinction, it seems that the object in (128) can optionally project a DP, even though the unmarked structure (and the only one according to prescriptive grammar) is where the object is a

bare NP. A bare NP does not require *et*, but the less common possibility of projecting a DP without being [+def] still requires *et*.

To conclude, the assumption that indefinites are NPs and therefore do not require Case, combined with the assumption that genitive Case assignment in nominals requires the presence of a functional projection higher than NP, provides us with a new Case-based explanation for the phenomenon of DS. The apparent spreading of definiteness can now be seen as a by-product of the process of Case checking, and there is no need to stipulate any construction-specific mechanism such as feature percolation. In this respect, the analysis proposed here bares a similarity to the analysis proposed in Dobrovie-Sorin (2000, 2001), where DS is also derived from independent factors having to do with the structural differences between definites and indefinites. My proposal differs from Dobrovie-Sorin's analysis in relying on the Case-theoretic consequences of these structural differences, rather than on their semantic implications.

5.3. Romanian genitives

If the analysis proposed above is correct, it predicts that the presence of genitive DPs without a prepositional element in positions lower than [spec, DP] should be cross-linguistically sensitive to N raising. More precisely, the analysis implies that genitive Case which is assigned without the aid of prepositions and not in a spec-head configuration between D^0 and its specifier, as in English, should be possible only when N raises, and therefore it should not occur in bare NPs or in languages that do not have N raising at all.

An interesting illustration of this link between Case and DP structure can be found in Romanian. As noted in Dobrovie-Sorin (2000, 2001), Romanian genitives share many properties with Hebrew CSNs. One property of Romanian genitives which is lacking in Hebrew is the existence of both definite and indefinite articles, as well as overt Case morphology. Thus, interactions between Case and definiteness are immediately visible in Romanian. Like Hebrew, Romanian has two methods of embedding a genitive DP inside a nominal projection: using the terminology of Dobrovie-Sorin, these are *simple genitives*, where no prepositional element precedes the genitive, and *complex genitives*, which require the use of a prepositional element *a* (glossed as A in the examples below, to distinguish it from the English indefinite article) in front of the genitive DP (see also Grosu 1988, 1994).

Simple genitives in Romanian are only possible when the head of the embedding nominal is overtly marked by the definite article, which is as a suffix attached to the noun.[89] Otherwise, only the complex form is allowed. The following data, adapted from Dobrovie-Sorin (2000), illustrates simple and complex genitives:

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[89]Grosu (1988, 1994) argues that this clitic is not really a definite article, but another realization of the genitive Case assigner glossed here as *a*. Whether or not this element is actually *interpreted* as a definite article is irrelevant for the current discusion (see also Giusti 1997); what is important is that D is projected when this element is present on the noun, which is indeed what Grosu claims. I will continue to refer to this as the realization of [+def], keeping in mind that like in Hebrew, this formal feature does not stand in a one-to-one relation to semantic definiteness.

(129) a.   casa   vecinului
           house-the neighbour-the.GEN
           'the neighbor's house'

     b.   o cas**à**   **a**   vecinului
           a   house A   neighbor-the.MASC.GEN
           'a house of the neighbor's'

Example (129a) illustrates a simple genitive, where there is no prepositional element between the head noun, marked with the enclitic definite article, and the genitive. The indefinite in (129b) is an example of a complex genitive, where the preposition *a* precedes the genitive. The presence of *a* in (129b) could be taken to be the equivalent of the Hebrew "genitive preposition" *šel*: it is *a* itself which is responsible for Case assignment/checking in complex genitives. In simple genitives, where this "auxiliary" Case assigner is not present, genitive Case is checked by the N, which raises to D as a result of being specified as [+def]. In accordance with the assumptions made earlier regarding Hebrew, I will assume that nouns in Romanian simple genitives check the Case of the associate after the former raises to Agr and the latter to [spec, AgrP].

Now consider the fact that *a* is required when the head noun is not marked by the enclitic definite article:

(130) a. * o casà   unui   om
         a   house a.GEN man

     b.   o casà   a   unui   om
          a   house A a.GEN man
   *'a man's house'*

Informally, it seems that indefinite nouns in Romanian lack Case assigning capabilities, and they must resort to the use of *a* (see also Grosu 1988). The head in (130) cannot check genitive Case, and the dummy P is used as in (130b) for this reason.

At first, it might seem that a direct adaptation of the analysis proposed for Hebrew nominals cannot explain the Romanian facts: since an indefinite nominal in Romanian does contain an indefinite article, it seems somewhat problematic to claim that it has to be a bare NP, as I proposed for Hebrew indefinites. However, there is an important difference between definite and indefinite articles in Romanian: while definite articles appear as a suffix on the noun, indefinite articles are independent lexical items. Following Giusti (1994), we may assume that enclitic definite articles in Romanian trigger N to D movement, while indefinite articles are base generated in D (but see Grosu 1988: 944). Thus, Romanian has N raising to D only in definites. We get the following two structures, for the definite in (129a) and the indefinite in (130b), respectively (assuming that AgrP is not projected unless needed for Case checking):

(131) a.
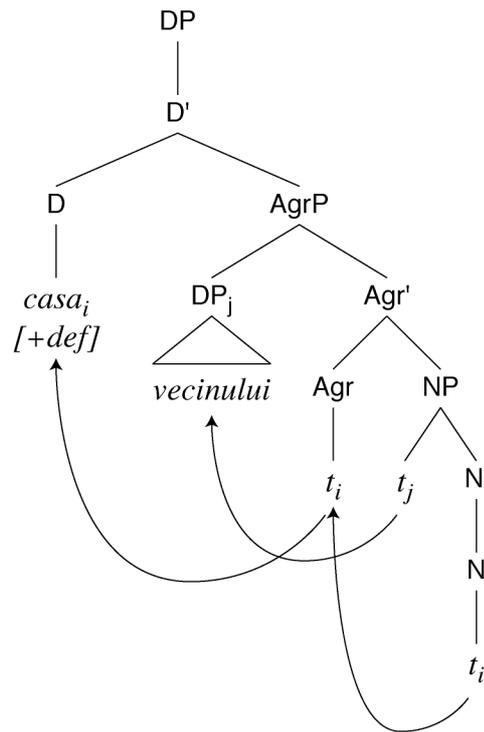
b.
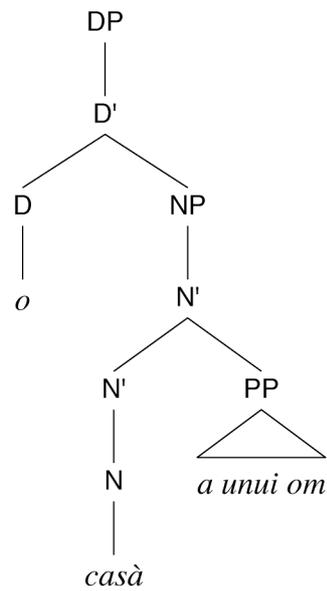
This immediately provides us with an explanation for the incompatibility of indefinite nouns with simple genitives. The configuration required for direct genitive Case assignment does not occur in Romanian indefinites: an indefinite N never raises

to the Agr position. As an alternative strategy, Romanian allows prepositional genitives which do not depend on N raising.[90]

To conclude, what Romanian simple genitives have in common with Hebrew CSNs is the property of being formed by N raising, which is possible only when the head noun is formally definite. In Hebrew, definiteness is morphologically realized as a prefix, while in Romanian it appears as a suffix. Formal definiteness then licenses N to D raising through the Agr position in both languages, where genitive can be checked. Where Romanian and Hebrew differ is in the reason why this derivation is impossible in indefinites: in Hebrew, it is because indefinites do not project anything above the NP level; in Romanian, it is because the indefinite article is an independent head rather than the realization of a formal feature which could trigger N raising. In both languages, the outcome is that indefinite nouns do not raise and hence cannot check genitive Case. In Hebrew this does not affect the possibility of having indefinite CSNs, because the associate may be an NP which does not require Case. In Romanian, on the other hand, simple genitives with indefinites are blocked, because indefinites are DPs and therefore they requires Case.

We thus get a non-trivial parametric account of the different strategies for genitive Case assignment. The two relevant factors are:

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[90]Dobrovie-Sorin also notes that it is the presence of the definite article, and not of a strong determiner, which is relevant to the possibility of forming a simple genitive. This further supports the hypothesis that it is the syntactic marking of definiteness and its related structural representation that are responsible for the contrast, rather than a more semantically-oriented property of the definite article, as assumed by Dobrovie-Sorin herself (2001 §3.4).

- Does the language have definite articles which are affixes on the head noun, and, consequently, the possibility of N to D raising?

- Does the language have indefinite articles, and, consequently, the projection of a DP level in indefinites?

It should not come as a surprise that languages where Case and definiteness seem to interact are exactly those languages where the answer to the first of the above questions is positive. The answer to the second of these questions then accounts for further differences among those languages.

6   Summary

In this chapter, I have argued that indefinite objects in Hebrew are Caseless, rather than bearing "inherent accusative". This proposal is complemented by the claim that indefinites in Hebrew lack a DP level, which is the level relevant to Case. Thus, excluding indefinites from the need to check Case does not imply any substantial modification or weakening of the Case Filter, which applies to DPs.

As a consequence of the structural distinction between definite DPs and indefinite NPs, a new analysis of "definiteness spreading" in Semitic CSNs has been proposed. The apparent spreading of definiteness has been argued to be "spreading" of the complex functional structure needed to check genitive Case. Indefinites, lacking a DP level, do not need to check Case, and as a result they may be embedded in a simpler nominal projection than definites, which do require Case.

The Case system of Hebrew has now been reduced to only two structural Cases:

nominative and genitive. "Inherent Case" is no longer needed, and what was analyzed in chapter 3 as inherent accusative has been shown to be nothing more than theta role assignment. Case can now be seen as a purely structural relation, and the overlap between Case Theory and Theta Theory which is intrinsic to the notion of inherent Case has been eliminated.

Chapter 5: et and Interpretation

1   Introduction

In chapters 3 and 4, I have provided a syntactic account for the distribution of *et*. *et* was analyzed as a structural Case assigner that satisfies the requirement that every DP must check structural Case. Since the distinction between DP and NP is a syntactic distinction, I concluded that the distribution of *et* is not governed by semantic principles.

Yet, it was noted in the previous chapters that there are cases where the presence of *et* seems to affect the interpretation of the DP which follows it or of the entire sentence. I begin this chapter with a detailed overview of the environments where this occurs, some of which have not been described in the literature before as far as I know. From this, a systematic pattern seems to emerge. This pattern bears a strong resemblance to the semantic effects of morphological case that have been discussed by many authors (see for instance Enç 1991 and de Hoop 1992). In section 3, I discuss several previous analyses that might be applied to these cases and conclude that none of them can fully account for the entire range of semantic effects that we find with *et*. I then propose a new analysis which integrates the idea that *et* is semantically a 'functional head' and acts as a type shifter with the syntactic analysis of the previous chapters.

2   Semantic effects of *et*

2.1   Disambiguation of [+def] CSNs

It was already shown that Hebrew CSNs display the phenomenon of "definiteness inheritance". In chapter 4, I proposed that this can be reduced to "DP-ness inheritance". Regardless of the theoretic explanation, it is empirically clear that the use of *et* is required if the object is a CSN whose associate is overtly marked as [+def]:

<div style="margin-left:2em">

(132)   ra'iti   *(et)   batey   ha-kfar .
         saw.1SG   *(et)   houses the-village
         'I saw the houses of the village.'

</div>

When a CSN with a definite associate occurs in any position other than the object position, it is often possible to interpret it either as a definite or as an indefinite – depending to a large extent on context and on lexical properties of the head of the CSN. Nouns having a "membership" or "part-of" meaning are especially productive in giving rise to indefinite readings. Some examples are given below:

<div style="margin-left:2em">

(133) a.   <u>tošav</u>   <u>ha-štaxim</u>   ne'ecar   la-xakira.
           resident   the-territories arrested   to-interrogation
           'A/the resident of the territories was arrested for interrogation.'

      b.   <u>xayal</u>   <u>cva</u>   <u>ha-darom</u> neherag   etmol.
           soldier   army   the-south   killed   yesterday
           'A/the soldier of the army of the south was killed yesterday.'

      c.   <u>tmunat</u>   <u>ha-xašud</u>   pursema   ba-iton.
           picture   the-suspect   published   in-the-newspaper
           'A/the picture of the suspect was published in the newspaper.'

</div>

d. gufata   šel <u>ovedet</u>   <u>šagrirut</u>   <u>Kenya</u> nimce'a   be-
body.3sG of employee embassy   Kenya found   in-
dirata.
apartment.3sG.FEM
'The body of an/the employee of the Kenyan embassy was found in her apartment.'

e. maxar   epageš   im   <u>necig</u>   <u>ha-bank</u>.
tomorrow   meet.FUT.1sG with   representative the-bank
'Tomorrow I'll meet with a/the representative of the bank.'

f. bxirat   ha-va'ada   be- <u>ezrax</u>   <u>medinat</u>   <u>yisra'el</u> la-tafkid
selection the-committee in-citizen state   Israel to-the-job

mešuna.
strange
'The committee's selection of a/the citizen of the state of Israel to the job is strange.'

g. Dan   (hu)   <u>boger</u>   <u>ha-xug</u>   <u>le-balšanut</u>.
Dan   (is)   graduate   the-department to-linguistics
'Dan is a/the graduate of the linguistics department.'

In all these examples, the most natural interpretation of the underlined CSN is that of an indefinite: there is no uniqueness implied, despite the formal definiteness of the CSN, and the CSN need not refer to a familiar discourse entity. (133a-c) illustrate CSNs in subject position; in (133d-f) the CSN is inside a PP; and in (133f), the CSN is used predicatively following an optional copula.

However, when any of the DPs in (133) is used in an environment where *et* is needed, a definite or specific interpretation becomes the only option:

(134) a. ha-mištara acra   et <u>tošav</u>   <u>ha-štaxim</u>.
the-police arrested   et resident the-territories
'The police arrested the resident of the territories.'

    b.   ha-hafgaza   harga et <u>xayal</u> <u>cva</u>   <u>ha-darom</u>.
           the-bombing killed et soldier army   the-south
           'The bombing killed the soldier of the army of the south.'

    c.   yeš   li   et <u>tmunat</u> <u>ha-xašud</u>.
           exist to-me et picture the-suspect
           'I have the picture of the suspect.'

    d.   hikarti   et <u>ovedet</u>   <u>šagrirut</u>   <u>Kenya</u>.
           knew.1SG et employee embassy   Kenya
           'I knew the employee of the Kenyan embassy.'

    e.   maxar   efgoš   et <u>necig</u>   <u>ha-bank</u>.
           tomorrow meet.FUT.1SG et representative the-bank
           'Tomorrow I'll meet the representative of the bank.'

    f.   bxirat   ha-va'ada   et <u>ezrax</u> <u>medinat</u> <u>yisra'el</u> la-tafkid
           selection the-committee et citizen state   Israel to-the-job

           mešuna.
           strange
           'The committee's selection of the citizen of the state of Israel to the
           job is strange.'

    g.   ha-šaxen   šama et <u>boger</u>   <u>ha-xug</u>
           the-neighbor heard et graduate   the-department

           <u>le-balšanut</u>   nixnas.
           to-linguistics entering
           'The neighbor heard the graduate of the linguistics department
           coming in.'

As noted in chapter 4, use of *et* in some of these cases is not entirely obligatory in spoken Hebrew. If *et* is omitted, the indefinite reading surfaces again. The definiteness observed with *et* is thus not related to the object position per se, but only to the position following *et*. Furthermore, note that the difference in interpretation between subject and object CSNs is the opposite of what typical discourse principles would

lead us to expect: in the case of formally [+def] CSNs, an indefinite interpretation is possible only for *subjects*, a position where discourse usually favors using a definite.

Unlike what has often been claimed in the past, I have concluded that formal definiteness on an embedded DP does not entail semantic definiteness of the entire CSN. CSNs are thus similar in some respects to noun phrases in languages with no articles; in such languages, noun phrases are systematically ambiguous between definite and indefinite readings. What needs an explanation is the lack of an indefinite reading following *et*. It seems that *et* has a disambiguating effect, forcing a definite (or specific) reading. Again, this pattern is found in some languages with no articles, such as Turkish and Hindi. In this sense, the traditional view of *et* as an accusative marker does seem to capture a correct similarity between *et* and accusative. The fact that the disambiguating effect of *et* in Hebrew surfaces only in a very limited number of environments, as opposed to the accusative in the above languages, can be directly related to the existence of a definite article in Hebrew.

2.2   CSNs without the [+def] feature

In the discussion of the previous chapters, it was mostly assumed that whether or not *et* is used is deterministically specified by the syntax, with no optionality allowed. One exception that was noted is the optional omission of *et* in examples like (134) above in colloquial speech. There are also cases where colloquial Hebrew allows the opposite: the insertion of *et* in environments where it does not seem to be motivated by the syntax. In contrast to the normative use, which strongly disallows *et* in front of

a syntactically indefinite object, in colloquial speech there are cases where speakers

would optionally insert *et* in front of a DP that is not formally definite. This optionality

seems to be driven by semantic factors. This is illustrated in the following example:

(135) a. <u>xavrey</u> <u>šaloš</u> <u>katot</u> <u>sodiyot</u> <u>še-nexsefu</u> <u>la-axrona</u>
members three sects secret that-exposed recently

servu le-hitra'ayen.
refused to-be.interviewed
'(The) members of three secret sects which were recently exposed
refused to be interviewed.'

b. ha-mištara acra <u>xavrey</u> <u>šaloš</u> <u>katot</u> <u>sodiyot</u>
the-police arrested members three sects secret

<u>še-nexsefu</u> <u>la-axrona</u>.
that-exposed recently
'The police arrested members of three secret sects which were
recently exposed.'

c. ha-mištara acra **et** <u>xavrey</u> <u>šaloš</u> <u>katot</u> <u>sodiyot</u>
the-police arrested et members three sects secret

<u>še-nexsefu</u> <u>la-axrona</u>.
that-exposed recently
'The police arrested the members of three secret sects which were
recently exposed.'

In (135a), the subject is a CSN that is not [+def], as its associate is an indefinite.

The subject can be understood either as an indefinite ('*some* members of three secret

cults that were recently exposed') or as a definite ('*the* members of three secret cults...').

Sentence (135b) illustrates the same phrase in object position; for most speakers, only

the indefinite reading is possible in this case. In order to get a definite reading of the

object, colloquial Hebrew uses *et* as in (135c), in violation of the syntactic rule which

allows *et* only in front of [+def] DPs. A sentence of this sort is usually regarded as 'incorrect' by purists, who would resort to clitic doubling, as in the following sentence:

(136)   ha-mištara acra   et <u>xavrey-hen</u>   <u>šel</u> <u>šaloš</u> <u>katot</u>
        the-police arrested et members.3PL   of three   sects

<u>sodiyot</u>   <u>še-nexsefu</u>   <u>la-axrona</u>.
secret   that-exposed   recently
'The police arrested the members of three secret sects which were recently exposed.'

In this structure, the N+clitic that directly follows *et* (*xavrey-hen*, 'members-their') is formally definite, and thus the use of *et* does not violate the syntactic rule governing the distribution of *et*.

Thus, we have evidence that the system is in a state of change: on the one hand, the normative use of *et* is totally governed by a syntactic rule; on the other hand, colloquial speech allows violations of this syntactic rule in order to achieve a different interpretation, with *et* perhaps being reanalyzed as a semantic marker. That this change is taking place almost unnoticed is not surprising, given that formal definiteness and semantic definiteness almost always coincide. But as these examples show, where the two notions of definiteness do not coincide we find that spoken Hebrew deviates from the rules of the normative language, and the semantic role of *et* surfaces.

2.3   Wh- words: *mi* and *ma*

Unlike the case with most nominals, the presence of *et* in front of the question word *ma* ('what') is optional (cf. Berman 1978: 134). Even though it is not required

syntactically, it is nevertheless allowed:

(137) a. ma   hizmanta?
           what   ordered.2sɢ
           'What did you order?'

       b. et ma hizmanta?

In most contexts, native speakers would prefer (137a) as the unmarked option.

When *et* precedes *ma*, as in (137b), there is an implication that the speaker knows

already what the possible answers could be. If, for instance, the speaker knows that

the listener was trying to make up his mind between two possible orders, (137b)

would be an appropriate question. (137a) on the other hand has no such implication

and can be used even if the set of possible answers is not known in advance.

The difference between the two forms of the question above is reflected in the

semantic properties of the possible answers. A definite DP is a possible answer to

both questions; an indefinite or quantified DP, on the other hand, is an infelicitous

answer to (137b):

(138) a. ma   hizmanta?
           what   ordered.2sɢ
           'What did you order?'

       b. et ha-marak / šney salatim/   šum   davar
           et the-soup   / two   salads /   no   thing
           'The soup / two salads / nothing.'

(139) a. **et** ma hizmanta?

       b. et ha-marak /   #šney salatim/   #šum davar

The pattern is thus that the presence of *et* with *ma* is optional syntactically, but

has an influence on the way the sentence is interpreted.

As opposed to the optional use of *et* in front of *ma*, the question word *mi*, 'who', requires the presence of *et* when moved out of object position:[91]

(140)   * (et)   mi   ra'ita   ba-xeder?
            et   who   saw.2sg   in-the-room
            'Who did you see in the room?'

The different behavior of *mi* and *ma* doesn't seem to be explained by their semantics. Assuming that wh- words denote variables, the only difference between the two words in question is that the variable denoted by *mi* ('who') can only refer to animate beings. Definiteness is irrelevant to the distinction between these two question words, since no semantic definition of definiteness assumes that animacy is either a necessary or a sufficient condition for being definite. The difference seems to lie in the syntax, where we could assume that *mi*, just like personal pronouns, is a lexical DP. We are then left with the problem of explaining the optionality of *et* in front of *ma*, and the semantic effect that the use of *et* seems to have.

A similar pattern is observed in free relatives headed by the wh words *mi* and *ma*: when a free relative with *mi* is used in object position, *et* is required; free relatives with *ma* allow it optionally:

(141) a.   ani   ohev   ??(et)   mi   še-Dan ohev.
            I   love   et   who   that-Dan-loves
            'I love whoever Dan loves/the person that Dan loves.'

---

[91]According to Berman (1978: 134), *mi* is not totally ungrammatical without *et.* I agree that speakers occasionally ommit *et* in front of *mi*, but for most speakers this sounds rather marginal. Below I will thus ignore the possibility of omitting *et* in front of *mi*.

      b.   ani   ohev   (et)   ma   še-Dan ohev.

          I   love   et   what   that-Dan-loves

          'I love whatever Dan loves/the thing that Dan loves.'

Here too, the optional use of *et* with *ma* correlates with a semantic contrast, illustrated in (142):

    (142) a. ani   oxal   ma   še-Dan   oxel.

             I   eat.FUT what   that-Dan   eats

             'I will eat what Dan eats.'

      b.   ani   oxal   **et** ma   še-dan oxel.

In (142a), the most accessible interpretation is that the speaker will eat the same *kind* of food that Dan eats. (142b), on the other hand, has only the interpretation that is pragmatically less plausible, namely that the speaker will eat the same *concrete object* that Dan is in the process of eating (what he has in his mouth or in his plate). We may refer to the readings of (a) and (b) as the "predicative" and the "referential" readings of the free relative, respectively.

In summary, we can quite easily account for the properties of *mi* if we assume that it is listed in the lexicon as a DP, just like pronouns. The optionality of *et* with *ma* and the semantic consequences that the presence of *et* carries is what still remains to be accounted for.

2.4   Pseudoclefts

Semantic contrasts related to the presence of *et* in pseudoclefts have been discussed by Sharvit (1997) and Heller (1999). The following sentences are taken from Heller (1999:50):

(143) a. ma   še-Dan   mexapes   ze **et** ha-sefer   še-azar
          what that-Dan   looks-for is et the-book   that-helped

          le-Ron   lesayem   et ha-teza.
          to-Ron   finish   et the-thesis
          'What Dan is looking for is the book that helped Ron finish his thesis.'

    b. ma   še-Dan   mexapes   ze   ha-sefer   še-azar

          le-Ron   lesayem   et ha-teza.

As discussed by Heller, sentence (143a), which uses *et* after the copula, has both a de-re reading and a de-dicto reading. On the de-dicto reading, Dan knows, for instance, that there is a magical book which helped Ron finish his thesis, and he is looking for that book, which might turn out to be *Barriers*. On the de-re reading, Dan is looking for *Barriers*, and might not even know that this book helped Ron. (143b), without *et* after the copula, has only the de-re reading.[92]

Semantic effects related to the use of *et* in pseudoclefts are not limited to the de-re/de-dicto ambiguity. The following sentences illustrate a different semantic contrast:

(144) a. ma   še-Dan   ra'a   ze **et** ha-šaxen.
          what that-Dan   saw   is et the-neighbor
          'What Dan saw is the neighbor.'

    b. ? ma   še-Dan   ra'a   ze   ha-šaxen.

(144a) could be used, for instance, in a contrastive context, to distinguish what

---

[92]Heller also discusses the fact that the use of *et* also correlates with differences in the agreement pattern of the copula: the copula can only agree with the postcopular element if *et* is not present. Since I assume that agreement in Hebrew is only possible with a nominative argument, and *et* assgins genitive, this agreement pattern is expected.

Dan saw from what he didn't see. (144b), on the other hand, does not have this contrastive reading (and some speakers would even find it ungrammatical[93]); rather, it can only be paraphrased roughly as "That thing which Dan saw was the neighbor", thus using *ha-šaxen* ('the neighbor') as a predicate that applies to the free relative *ma še-dan ra'a* ('What Dan saw').

These semantic contrasts arise when the only overt difference between the two sentences is the use of *et* in the (a) examples. The difference cannot be attributed to definiteness, since in both cases the DP following *ze* is definite, both formally (because of the use of *ha-*) and semantically. The challenge is to derive the observed contrasts from the syntactic difference alone.

2.5   Non-referential uses of proper names

In chapter 4, we noted that proper names can sometimes be used as objects without *et*. When this happens, the proper name gets a predicative, non-referential interpretation:

(145)   ani makir Sara   axat.
         I   know Sara   one
         'I know one (person named) Sara.'

The syntactic account that was given in chapter 4 is that proper names usually raise to D, where they head a DP which would require Case, but there is also the option of not raising the name to D. If the proper name doesn't raise, no *et* is required.

---

[93]I believe that judgements regarding the de-re/de-dicto examples from Heller (1999) are also not entirely clear, with the sentence that doesn't use *et* being somewhat marginal. Judgements in this case are complicated by the processing difficulty associated with the "heavy" noun phrase and the scope ambiguity.

The semantic generalization that goes along with this syntactic account is that only proper names in D give rise to a referential interpretation (Longobardi 1994). So far, I have not stated was exactly is meant by 'referential interpretation'. One of the goals of the rest of this chapter would be to spell out explicitly what this means, and to extend this approach regarding the syntax-semantics interface to the other semantic effects which have been illustrated above.

3   Previous analyses of similar facts

3.1   DP-internal explanations

In chapter 4, I argued that objects that follow *et* are DPs, while other objects are NPs. This immediately suggests a line of explanation for the semantic differences between objects with *et* and those without *et*. Many authors have argued that the DP level plays an important role in the interpretation of noun phrases. Assuming that in Hebrew an object follows *et* iff it is a DP, then the presence of *et* is expected to correlate with a certain kind of interpretation. I will first review some of the semantic properties that have been proposed to be related to the DP level, and then I will show that some, but not all, of the semantic effects described above can be derived from these general properties of the DP level.

Several authors, such as Zwarts (1989) and Zamparelli (1995), have proposed different versions of the general idea of relating the DP level to a *strong* interpretation (Barwise and Cooper 1981, Keenan 1987). Central to this approach is the idea that

lower parts of the noun phrase are associated with weak determiners, while higher parts (and the DP level in particular) host strong determiners. But a simple association of the DP level with strong determiners would not work in the case of Hebrew for two reasons:

- There are strong noun phrases, such as *kol sefer* 'every book' that are syntactically indefinite and hence, according to my analysis, NPs.

- Indefinites can have both strong (quantificational or "referential") and weak (predicative) interpretations. If strong interpretations of indefinites are the result of a DP level being projected, we would incorrectly predict Hebrew indefinites to optionally follow *et*, which would correlate with the strong interpretations.

Similar problems can be pointed out with other analyses based on the DP/NP distinction. Heycock and Zamparelli (1999) and Winter (1999) assume that different syntactic projections are mapped into different semantic types. Using a system that distinguishes between quantificational (+Q) and predicational (-Q) noun phrases, Winter's proposal is the following:

- The NP level is purely predicational (-Q).

- DPs with a filled specifier position are purely quantificational (+Q).

- DPs with an empty specifier are flexible in their interpretation (±Q).

The idea that the [spec, DP] position plays a special role in limiting the kind of interpretation that the DP can get is also shared by Dobrovie-Sorin's (2000, 2001)

analysis, which was discussed in the previous chapter. In this analysis, a DP specifier triggers an interpretation of the head as function from individuals to individuals (i.e. as type <e,e>), and as a result a DP with a filled specifier must have a denotation at type e. In the lack of a specifier, the noun phrase can be interpreted as a generalized quantifier (if, for instance, it has an overt determiner), or as a predicate (in the case of NPs that lack a determiner and a DP level). Since Dobrovie-Sorin assumes that CSNs with a definite associate have the associate in [spec, DP], this means that [+def] CSNs will always have a type e denotation.

A different approach to this syntax-semantics interface issue, which addresses problems specific to Hebrew CSNs, is suggested in Engelhardt (2000). Although Engelhardt does not attempt to develop a full-fledged *semantic* analysis, she makes the following proposal regarding the syntax-semantic interface: Argument-taking nominals in Hebrew can either project a DP or not. If a DP is projected, there is a definiteness feature associated with the DP, resulting in a definite interpretation. If, on the other hand, no DP level is projected, the nominal is "non-definite", meaning that it lacks a definiteness specification. As such, it can be interpreted as an indefinite. Two properties of this analysis seem especially attractive for the problem that we are trying to account for: it is based on a difference in syntactic structure between definites and non-definites – which is strikingly similar to what I proposed in chapter 4; and it relies on an explicit asymmetry between definiteness, which is specified, and indefiniteness, which is the lack of specification. Since my analysis in chapter 4 is

based on the hypothesis that N to D movement in Hebrew is driven by the [+def] feature, I conclude with Engelhardt that a nominal in Hebrew is a DP if and only if it is [+def], and that this correlates with the use of *et*. One question is whether this is enough for explaining all the semantic effects of *et*. Another question is whether [+def] is always interpreted.

The common property of all these analyses is that they derive variations in interpretations of noun phrases from the presence or absence of DP-internal material. For our purposes, this means that they may be able to account for semantic differences between DPs and NPs, but not for different interpretations that a given DP gets in different positions. Recall that we have the following semantic effects of *et*:

(146) a.　[+def] CSNs that can only be interpreted as indefinite as long as they don't follow *et*

　　　 b.　indefinite CSNs that optionally allow *et*, giving rise to a definite or specific reading

　　　 c.　*ma* 'what', which optionally allows *et* if the expected answer is definite or an item out of a known set

　　　 d.　pseudoclefts, where a definite postcopular phrase get a predicative interpretation without *et* and a referential interpretation with *et*

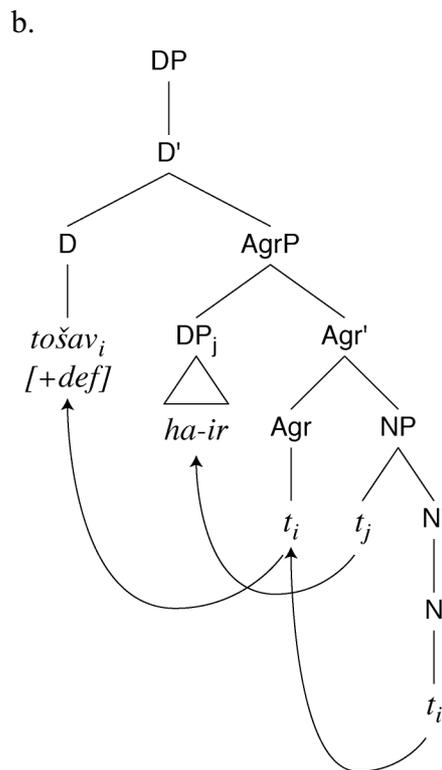　　　 e.　proper names, which are interpreted non-referentially when *et* is missing

Consider for instance an approach along the lines of Winter (1999): let us assume that DPs can only get a "strong" denotation as generalized quantifiers or as

individuals (i.e., as types <<e,t>,t> or e; or, in Winter's system, as +Q)[94], while NPs can only get a predicative (<e,t>) interpretation. The availability of 'weak', or predicative, readings when *et* is absent in (146b-c) and (146e) could follow from this approach, where lack of *et* implies lack of a DP level.

Yet, despite the success of this approach in accounting for most of the patterns in (146), there are two semantic phenomena that it cannot explain: the restricted interpretation of [+def] CSNs following *et*, in (146a), and the restriction to a predicative reading of a definite in pseudoclefts without *et*, in (146d). If we assume that [+def] CSNs are always DPs, as in example (147) below, nothing so far can explain why their interpretation is more restricted after *et*.

(147) a.   tošav   ha-ir
           resident   the-city

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[94]I put aside for the moment the distinction in Winter (1999) between DPs with a filled specifier, which are 'rigid' in their +Q interpretation, and those that lack a specifier, which are flexible (±Q).

b.

```
                    DP
                    │
                    D'
                  /    \
                 D      AgrP
                 │      /    \
             tošav_i  DP_j    Agr'
             [+def]    △      /    \
                            Agr    NP
                     ha-ir        /    \
                            t_i  t_j   N'
                                        │
                                        N
                                        │
                                        t_i
```

The only hope of accounting for (146a) within a DP-internal approach is if we drop the assumption that CSNs with an embedded [+def] DP are always DPs. Thus, if we assumed, as in Engelhardt (2000), that a phrase like *tošav ha-ir* in the example above is ambiguous between a DP and an NP (or, as assumed in Engelhardt's analysis, between DP and NumP; a NumP is structurally equivalent to the AgrP in the structure that I assume), and if we further assumed that only *et* and no other structural Case assigner forces the projection of a DP, then we might be able to explain the facts in (147a). But this would be incompatible with the assumptions underlying the syntactic analysis of chapter 4: I assume that checking of genitive Case happens in AgrP, to which N raises *only* if it has a [+def] feature that it needs to check in D. Assuming that raising to AgrP is 'free' would render the proposed analysis of 'definiteness

inheritance' as 'DP inheritance' no longer valid, since free raising to Agr would imply that genitive Case can always be checked (even without raising to D). I will thus not adopt this approach, and conclude that while the DP/NP distinction may account for most of the facts in (146), it cannot account for the one pattern that is dependent on the syntactic position of the noun phrase. Similarly, the different interpretation when *et* is omitted in pseudoclefts with a definite postcopular nominal cannot be explained by the DP/NP distinction, since a definite is always a DP. We must therefore take into account the role of the immediate environment in which a DP occurs.

3.2   DP-external explanations

Several authors, most notably Belletti (1988) and de Hoop (1992), have argued that objective Case has a direct influence on the interpretation of the noun phrase. According to Belletti (1988), objective Case is either Partitive or Accusative; abstract Partitive is compatible only with indefinite objects (or with special 'list readings' of definites), and therefore definite objects must be licensed by Accusative Case. De Hoop (1992) argues that objects may get either 'strong' or 'weak' structural Case. Her proposal is then that an object is interpreted as a generalized quantifier if and only if it has strong Case (which is morphologically realized as accusative). Thus, according to de Hoop, an object bearing strong Case is interpreted at type $<<e,t>,t>$ whereas an object with weak Case is interpreted at one of the types $<<e,t>,<e,t>>$ (predicate modifier) or e.

To what extent can one of these analyses account for the semantic effects found

with Hebrew objects? In chapter 3, I have already argued against Belletti's analysis, showing that it does not correctly capture the distribution of *et* in Hebrew. Since some semantically definite objects like *sefer ze* 'this book' and strong noun phrases like *kol sefer* 'every book' are never preceded by *et*, it is clear that neither Belletti's nor de Hoop's analyses, as formulated, are compatible with the Hebrew facts: these objects will get Partitive Case in Belletti's analysis and weak Case in de Hoop's, neither of which would give the correct interpretation. Furthermore, in chapter 4, I have also proposed an alternative to the idea that there are two abstract Cases available to the object position, and therefore these analyses are also syntactically incompatible with the one developed here. Still, it is important to see what facts can be derived from the general approach of attributing semantic content to objective Case.

The facts in (146a), which could not be explained by the DP-internal approach, can immediately be accounted for if we assume that *et* (or accusative in other languages) has an effect on interpretation. This is not surprising, since it is facts similar to those in (146a) which motivated this approach in the first place. In fact, this is precisely one of the weaknesses of Belletti's or de Hoop's analyses: associating accusative Case with a certain kind of interpretation might correctly describe the facts, but it can only be seen as a true explanation if integrated into some broader framework where this kind of interpretation can somehow be predicted.

It should also be noted that the other facts summarized in (146) may also be covered by an association of *et* with a certain kind of interpretation. In particular, in

the previous subsection I concluded that these facts can be derived from attributing different interpretations to DP and to NP. If we assume that *et* forces a more restricted DP interpretation, then anything that can be achieved by a DP-internal analysis can also be achieved by assuming that *et* has semantic content. The problem is then spelling out this semantic content, and showing that it can be motivated on general principles rather than being an ad-hoc stipulation.

In the following section, I will adopt one aspect of de Hoop's approach and will assume that *et* restricts the semantic type of the object. But unlike de Hoop and Belletti, I will not assume that Caseless objects are forced into any particular kind of interpretation by the Case system (i.e. by virtue of having 'weak Case' or Partitive Case); if Caseless objects are restricted in their interpretation, this should simply follow from the lack of a DP level. I will show that the facts in (146) can all be explained by applying the semantics of *et* that I will propose, together with the consequences of the syntactic analysis developed in chapter 4. The semantic analysis that I propose can thus be seen as a synthesis of the DP-internal and the DP-external approaches.

After proposing an explicit semantics for *et*, I will discuss the general issue of motivating this proposal and will argue that it is nothing more than an instantiation of the general semantic properties of prepositions.

4   *et* and the argument/predicate distinction

The facts described in (146) make it quite clear that the presence of *et* correlates

with the availability of certain interpretations and the lack of others. To this, one should add the basic fact that *et* is usually used with noun phrases that are interpreted as definites and not with indefinites; even though the general distribution of *et* has been shown to be governed by syntactic factors, one cannot dismiss the correlation that does exist with semantic definiteness as accidental. On the other hand, it should be clear by now that *et* is not simply a marker of definiteness. In this section I will discuss two factors which contribute to the semantics associated with *et*: the relationship between Case and argumenthood, and the general semantic properties of prepositions. Combining these two factors within the syntactic framework developed in the previous chapters, I will argue that *et* has semantic content which is subtle enough to make it nearly unnoticeable in all but a few special situations, yet sufficient to allows us to derive the observed semantic effects.

4.1   Arguments, predicates, and Case

In both semantic and syntactic theories, noun phrases have often been assumed to fall into at least two classes, arguments and predicates (see for instance Chierchia 1998). Following Partee & Rooth (1983) and Partee (1987), a standard assumption in truth-conditional semantics is that noun phrases can have interpretations in at least three semantic types:

- Type e: individuals or entities

- Type $\langle e,t\rangle$: (extensional) properties, predicates or sets of entities

- Type $\langle\langle e,t\rangle,t\rangle$: generalized quantifiers (GQs)

According to Partee (1987), most noun phrases have interpretations at more than one type. Types e and <<e,t>,t> are often taken to be argument types, while <e,t> is the type of predicates.

The extent to which all semantic types are actually used has been a topic of much debate. In what follows, I will assume a version of the more restricted theory of Winter (1998, 1999). In Winter's system, only two types (or categories, in his terms) are used: predicates and generalized quantifiers (to which he refers as -Q and +Q, respectively, a notation that I will adopt here). The lower type, e, is not used in Winter's system and is systematically mapped to the type of generalized quantifiers. The following two category-shifting operations are defined:

- From +Q to -Q: the minimum operator.

- From -Q to +Q: choice function application.

An important element of Winter's theory is that category shifting using these two operators is not always possible. He distinguishes between *flexible* noun phrases, that can be shifted between the two types, and *rigid* ones, that are fixed as either +Q or -Q. Rigid quantificational DPs, according to Winter, are those with a filled specifier position. The NP level, according to him, is rigidly predicational.

I will adopt the general semantic aspects of Winter's system, but will propose a modification to the way it interact with the syntactic level. It has often been observed that the presence of abstract Case distinguishes between arguments and non-arguments (see for instance Jones 1988). The general observation is that noun phrases in what

appear to be Caseless positions are interpreted as predicates or as modifiers. This includes, for instance, nominal predicates of small clauses, as in (148a), adverbial noun phrases, as in (148b), and cognate objects, as in (148c). The following examples are from Jones (1988):

(148) a. John considers Bill **a fool**.

b. Mary dances **this way**.

c. John died **a gruesome death**.

The formulation of the Case Filter as a Visibility Condition (Chomsky 1986) relates Case to theta role assignment: a Caseless NP cannot have a theta role. In chapter 4, I have argued against this view, showing that indefinite objects in Hebrew are Caseless even though they do have a theta role. As an alternative, which links the intuition behind the Visibility Condition with Winter's semantic analysis, I propose the following principle:

(149)   A Caseless noun phrase can only be predicational[95] (-Q).

This means that Case makes a noun phrase visible as an argument in the semantic sense. Only a DP which has Case can be interpreted as +Q.

In the following section, I discuss an additional restriction on DP interpretation which is imposed by the presence of *et*.

4.2   The semantics of functional prepositions

In chapter 3, I concluded that *et* is a preposition. Before discussing the semantic

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[95]In order to account for adverbial noun phrases, the class of predicational noun phrases should probably be extended to include the type of modifiers ($<<e,t>,<e,t>>$), which is not discussed in Winter (1999). This does not seem to be a problematic assumption, and I will not elaborate on it here.

content of *et* itself, it is helpful to consider the semantics of other functional or 'dummy' prepositions, such as English *of* or its Hebrew counterparts, *šel* and partitive *me.*

A word like English *of* (in its non-partitive use) or Hebrew *šel* typically combines with a noun phrase and turns it into a noun modifier. Semantically, then, *of* is not vacuous. The simplest idea is that *of* has the semantics of a type shifter, mapping a nominal denotation of type $<<e,t>,t>$ (a GQ) to the type of a noun modifier, $<<e,t>,<e,t>>$. This gives the correct semantic type for combining with a noun denotation. An account along these lines could provide an immediate explanation for the fact that *of* appears only in the context of [+N] heads, as discussed for instance in Chomsky (1986).

Partitive prepositions can also be seen as a special kind of type shifter. Following the analysis of partitives in Barwise and Cooper (1981), Ladusaw (1982) and Winter (2000), I assume that in a phrase like *three of the boys*, *of the boys* has the same denotation as *boys*: both denote the set of all pluralities that stand in the part-of relation to the denotation of the definite *the boys*. This means that partitive *of* maps an individual (or, equivalently, a principal ultrafilter) into the set of all individuals that stand in the part-of relation to it; it maps a +Q denotation into a particular -Q denotation. Partitive prepositions thus also have a sort of functional semantics, which falls into the same category as the proposal made above for *šel*.

If these two 'dummy' prepositions actually turn out not to be semantically vacuous,

the question arises whether any other preposition is totally vacuous [96]. We already saw that the presence of *et* imposes a subtle restriction on the interpretation of the DP it precedes. If functional prepositions are characterized by type-shifting semantics, the semantic content of *et* might be nothing more than the simplest type-shifting of all: the identity operator. My hypothesis is the following:

(150)   *et* is the identity operator on GQs:

[[et]]: $\lambda T_{\langle\langle e,t\rangle,t\rangle}.T$

This implies that *et* can only precede a DP which has a +Q interpretation[97]. If this is correct, then an ambiguous or flexible DP will be disambiguated as a result of appearing after *et*. The semantics in (150) is the most minimal semantic content that a preposition may have, which goes along with the intuition that *et* is almost semantically vacuous. Since *et* combines most often with definites, this proposed semantics of *et* would have no noticeable effect in most cases. Definites are flexible between a +Q and -Q interpretation (Winter 1999), and applying identity at the type of GQs will simply select the argument (+Q) interpretation, leading to no truth conditional effect. The interesting case is thus when *et* combines with ambiguous objects or with objects having a basic denotation other than that of a definite. In the next section I will show that the semantic effects summarized in (146) can now be derived from the proposal

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[96]Furthermore, if it turns out that most Case assigners in Hebrew have semantic content, an interesting question is whether we can argue that nominative is the only Case which is indeed without any semantic content. If so, then the view of nominative as lack of Case (Falk 1991, Neeleman and Weerman 1999) is at least semantically motivated, although the issue of syntactic licensing may be independent of these semantic considerations.

[97]For a slightly different interpretation of this idea, see Danon (2002).

in (150) together with the syntactic analysis proposed in chapter 4.

If this approach is correct, then *et* has semantic content which manifests just one instantiation of a more general paradigm, and is not an idiosyncratic property of one particular item. We therefore avoid the problem that Belletti's (1988) and de Hoop's (1992) analyses of objective Case suffer from: unlike these analyses, which stipulate that one particular Case is associated with a seemingly arbitrary interpretation, in my analysis 'objective' Case (which in Hebrew is actually genitive Case assigned by a preposition) is not unique in having semantic content.

Further support for the claim that all prepositions have semantic content comes from the interpretation of PP conjunctions. Consider the interpretation of the following two sentences:

(151) a. John always smiles at Mary and at Bill.

b. John always smiles at Mary and Bill.

(151a) has only a distributive reading, and would be true if John always smiles at Mary and John also always smiles at Bill; (151b) has only a collective reading, and would be true only if John smiles at Mary and Bill *together*, even if he never smiles at Bill when he's not with Mary. If John smiles at them *only* when they are together, (151a) would be judged false and (151b) true. Thus, the preposition *at* is obviously not vacuous in its interpretation.

The important fact is that the same distributive/collective contrast is observed with *all* prepositions. Furthermore, as already mentioned in chapter 3, in Hebrew the

same pattern is found with *et*. When a conjoined DP is used as an object, *et* precedes

the entire conjunct; in addition, it is optionally duplicated in front of each conjunct.

This is illustrated below:

> (152) a.   kaniti   et ha-xulca   ve   **et** ha-mixnasayim.
>   bought.1SG   et the-shirt   and   et the-pants
>   *'I bought the shirt and the pants.'*
>
>   b.   kaniti   et ha-xulca   ve   ha-mixnasayim.

As observed by Winter (1999), who attributes the original observation to Dorit

Ben-Shalom and Ziva Wijler, speakers assign semantic significance to the choice

whether or not *et* is repeated. When *et* is repeated, a distributive interpretation of the

object is the only available interpretation; when *et* appears only once, a collective

reading is usually more natural. This is illustrated in the following example:

> (153) a.   xitanti   et Dan   ve   **et** Sara.
>   caused-marry.1SG   et Dan   and   et Sara
>   *'I made Dan and Sara marry.'*
>
>   b.   xitanti   et Dan   ve   Sara.

In (153a), where *et* is repeated in front of each conjunct, the preferred reading is

that the speaker was somehow responsible both for Dan's marriage and for Sara's, but

these might be two different marriages. In (153b), with only one *et*, it is implied that

Dan married Sara, and the speaker was responsible for this single wedding. Thus, a

distributive reading of the object is favored in (153a), and a collective reading in

(153b).

Winter (1999) shows that the presence of *et* in conjoined objects can lead to

truth conditional differences. He gives the following example:

(154) a. Dilan avar   be-mispar ha-širim še-katav et Simon
         Dylan exceeded in-number the-songs that-wrote et Simon

         ve   Garfunkel.
         and   Garfunkel
         'Dylan wrote more songs than Simon and Garfunkel.'

     b. Dilan avar   be-mispar ha-širim še-katav et Simon
         Dylan exceeded in-number the-songs that-wrote et Simon

         ve   et Garfunkel.
         and   et Garfunkel
         'Dylan wrote more songs than both Simon and Garfunkel.'

(154a) is true if and only if Dylan wrote more songs than Simon and Garfunkel wrote *together*, as a pair; (154b) is true iff Dylan wrote more songs than Simon and more songs than Garfunkel. The sentences are thus truth-conditionally distinct.

The facts therefore make it clear that even prepositions that appear to be semantically null affect the compositional interpretation of the sentences where they appear. Winter (1999) argues that the observed distributivity when *et* is repeated can be derived from the assumption that conjunctions of quantificational phrases can only be interpreted distributively. Putting it another way, in order to get a collective reading, we must have a conjunction of two predicational noun phrases. The view that no preposition is truly vacuous and that functional prepositions act as type shifters fits naturally into this pattern. We therefore get further support for the analysis of *et* as a P with only minimal semantic content.

To summarize, my central claim is that *et* is the identity operator on +Q denotations.

So far, this has been justified by the observation that *et*, like other prepositions that seem at first to have no semantic content, is in fact semantically significant. In the next section, I show that this hypothesis can be used to derive the various semantic effect associated with *et*.

5 Deriving the semantic effects of *et*

5.1 Disambiguation of [+def] CSNs

Even though CSNs with definite associates are usually interpreted as definites, they also allow an indefinite interpretation. Nevertheless, syntactically they are always DPs and always have a [+def] feature. This follows from the analysis in chapter 4: The associate is a DP, which needs Case, and as a result the head of the CSN must raise to Agr, where genitive Case is checked. Movement of N is driven by the [+def] feature. Therefore, a CSN with a definite associate always has the structure in (147), whether or not it is interpreted as a definite.

It seems empirically correct to assume that the definiteness feature on the head of a CSN is not always interpreted. Vergnaud & Zubizarreta (1992) and Longobardi (1994) have argued that in some languages, definite articles may be used as expletives which do not affect interpretation; the use of expletive articles is driven by morphosyntactic reasons. The same could be proposed for some occurrences of the [+def] feature in Hebrew. When a noun carries this feature, it is not always for semantic reasons: it can also be used as an 'expletive feature', which makes N raising

to D possible. When this is the case, [+def] is not interpreted and the CSN is semantically equivalent to an indefinite. This accounts for the ambiguity of a [+def] CSN like the subject in (155a) between a definite and an indefinite reading:

(155) a. <u>tošav</u>   <u>ha-štaxim</u>   ne'ecar   la-xakira.
           resident   the-territories arrested   to-interrogation
           'A/the resident of the territories was arrested for interrogation.'

       b. ha-mištara acra   et <u>tošav</u>   <u>ha-štaxim</u>.
           the-police arrested   et resident   the-territories
           'The police arrested the resident of the territories.'

When the same CSN serves as an object, as in (155b), being a DP it must combine with *et* for Case. Assuming that *et* denotes the identity operator on generalized quantifiers, it can easily combine with the definite construal of the CSN: every definite has an interpretation as a GQ. Application of *et* to this GQ can be seen as a vacuous type shifting, and it has no effect on interpretation.

What happens if *et* combines with the CSN in its indefinite reading? The basic interpretation of an indefinite is predicative, and hence the only way of applying *et* to an indefinite without leading to a type mismatch would be by shifting the indefinite to a GQ first. But if *et* is itself a vacuous type shifter, there might be some general principle which blocks two consecutive applications of type shifting operators. Within the framework of Winter (1999), it is possible to claim that the output of a type shifting (or category shifting) operation is always rigid and cannot be shifted again, not even vacuously. Alternatively, the 'expletive definiteness feature', while not interpreted, might still fix the category of the CSN, making it a *rigid* -Q. As a result,

et turns out to be incompatible with the indefinite interpretation of the CSN, and we get a disambiguating effect that leaves us only with the definite interpretation.

The discussion above can be generalized by the following hypothesis:

(156) *et* can only apply to a DP that has a basic interpretation as +Q.

This allows us to account for the following contrast:

(157) a.　Dan　kara　et　axad　ha-sfarim.
　　　　　　Dan　read　et　one　the-books
　　　　　　'Dan read one of the books.'

　　　b. * Dan　kara　et　sefer　exad.
　　　　　　Dan　read　et　one　book
　　　　　　'Dan read one books.'

In (157a), the object is interpreted as a partitive (structurally, it is a CSN, which accounts for its being [+def]); in (157b), the object is a simple indefinite. Apart from the syntactic reasons for not allowing *et* in (157b), we now also have a semantic reason: the basic interpretation of a simple indefinite NP is only predicative, hence it cannot combine with *et*. Partitives, on the other hand, have also a 'strong' interpretation as generalized quantifiers. Following the discussion above, we predict that partitives will pose no semantic problem when combined with *et*. Since in (157a) there is no syntactic problem either (since the partitive is a [+def] CSN), the sentence is grammatical.

5.2　Forced definiteness in indefinite CSNs

As we saw, CSNs with an indefinite associate can occasionally be used with *et*. Having only a basic -Q denotation, it seems that all indefinites should be impossible after *et*, since they are not ambiguous like the [+def] CSNs discussed above. But this

prediction is not correct. How could the fact that CSNs with indefinite associates *can* sometimes be used after *et*, where they get a definite interpretation, be derived?

Consider example (135c), repeated below as (158):

(158)   ha-mištara   acra   et <u>xavrey</u>   <u>šaloš</u>   <u>katot</u>   <u>sodiyot</u>
            the-police   arrested et members three   sects   secret

            <u>še</u>-nexsefu   <u>la</u>-axrona.
            that-exposed recently
            'The police arrested the members of three secret sects which were recently exposed.'

The source of the definite interpretation is the correlation between the presence of a [+def] feature and the projection a DP level. From the fact that *et* is used in (158), it follows that a DP level is projected in the object. I assume that common nouns raise to D only when they have a [+def] feature to check. On nouns with CS morphology, there is no phonological indication whether this feature is present; only the use of *et* provides indirect evidence for the existence of [+def] on a head of a CSN. Therefore, I conclude that the head *xavrey* 'members' in (158) is [+def].

Is this use of the definiteness feature interpreted? Following Longobardi (1994:654), I assume that expletive definite articles that do not spell out any morphological features can only be used as a last resort. This is obviously not the case in (158), where the use of *et* and the presence of a [+def] feature are not required by the grammar. The definiteness feature here is therefore not an expletive, and it must be interpreted. In that case, the definite interpretation of the CSN falls out immediately, without having to rely on the semantic contribution of *et* itself: the CSN is interpreted

as a definite because it *is* a definite, bearing a non-expletive [+def] feature.

According to this analysis, a [+def] feature is optional on heads of CSNs even if the associate is indefinite. One problem with this is that the use of *et* with such CSNs is extremely limited, and allowed mainly when the associate is specific. Compare (158), where the indefinite associate can easily get a specific reading, with (159a), where such a reading is somewhat harder to get, and with (159b), where a specific reading is more or less impossible:

(159) a. ?? ha-mištara   acra   et xavrey   kat   axat.
           the-police   arrested   et members sect one
           'The police arrested the members of some sect.'

      b. * ha-mištara   acra   et xavrey   kat.
           the-police   arrested   et members sect

Furthermore, using a [+def] head with an indefinite associate is allowed mostly when the head is a membership noun. Recall that membership nouns are exactly those which also allow for indefinite readings when heading a [+def] CSN, as illustrated in §2.1. For some reason, these nouns seem to be much more 'resistant' to semantic definiteness spreading than most other nouns. This works in both directions: membership nouns can easily get an indefinite reading with a definite associate (using an expletive [+def] feature), and they can sometimes be [+def] even when their associate is indefinite. Still, even with membership nouns, the split between definiteness of the associate and definiteness of the head is not complete; as seen from (159), in order for the head to be definite, the associate must at least be a specific indefinite. I believe that this restriction might follow from the fact that raised heads of CSNs tend to be interpreted

as functions that apply to individuals, as proposed in Dobrovie-Sorin (2000, 2001)[98],

and therefore N-to-D raising when the associate is indefinite is only possible if the

associate can denote an individual. At this point, I leave the exact semantics of CSNs

as a topic for further research. I conclude that the (limited) possibility of using *et* in

front of CSNs with indefinite associates is evidence for the optional existence of a

[+def] feature on heads of such CSNs, and that the definite interpretation in this case

is triggered not by *et* itself but by the abstract definiteness feature.

5.3 Wh- words: *ma*

Based on the discussion above and the assumption that N raises to D in Hebrew

only in order to check a [+def] feature, we have an extremely simple explanation for

the different interpretations that *ma* ('what') gets with and without *et*. Recall that when

it follows *et*, *ma* requires a definite noun phrase as an answer. I take the optionality of

et in front of *ma* as an indication that *ma* can optionally project a DP, like a common

noun. This optionality could be attributed to an optional [+def] feature, which, when

present, triggers movement of *ma* from N, where it is generated, to D. Like proper

names, *ma* never appears with an overt definite article (*ha-ma). There is no overt

realization of the [+def] feature on *ma*, and the only evidence for its existence is the

use of *et*, triggered by the projection of a DP level.

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[98]According to Dobrovie-Sorin, this kind of interpretation is triggered by the presence of a specifier. Since she uses a bare phrase structure analysis in which the NP-DP distinction is somewhat blurred, my proposal that this interpretation is triggered by the head of the CSN being in D turns out to be nearly equivalent to her proposal that it is the presence of a specifier which triggers the functional interpretation.

When *ma* is [+def], the definiteness feature is 'indirectly' interpreted: a wh-word, denoting a variable, cannot itself be definite. However, the feature specification on the question word serves as a restriction on the range of possible answers. In this case, a [+def] feature on *ma* forces the answer to also be [+def]. This contrasts with *ma* that doesn't project a DP (and is not preceded by *et*); in this case, there is no feature specification on *ma*, and thus a possible answer can then be any nominal. The fact that a definite is possible as an answer to 'indefinite' *ma* provides further evidence for the claim presented in chapter 2, that there is no [-def] feature: an NP-*ma* is simply unspecified with respect to definiteness, and as a result it is compatible with both definite and indefinite answers.

The different interpretations that free relatives headed by *ma* get with and without *et* also follow from our assumptions. Recall that without *et*, such free relatives get a predicative reading, while *et* forces a referential reading, as was shown in (142). This can follow now from several reasons. The existence of a predicative interpretation of an NP free relative is expected under the assumption that NPs rigidly denote predicates (-Q). The lack of this interpretation when *et* precedes the free relative is also expected: First, the type restriction that *et* imposes blocks a predicate interpretation, forcing a quantificational interpretation; second, assuming that the projection of a DP is triggered by a non-expletive [+def] feature, the interpretation of this feature means that the supremum operator is applied to the set denoted by the NP. Applying the supremum operator results in the maximal entity included in the denotation of the predicate,

which is either the unique entity in the predicate denotation, in case of a singular, or the sum of entities in a plural predicate denotation. The fact that the type restriction imposed by *et* is redundant in this case is not surprising, just as the semantic content of *et* has no effect in the case of simple definites. It is this redundancy which gives the impression that *et* is semantically vacuous, and only rarely do we see evidence that *et* is not entirely vacuous.

5.4   Pseudoclefts

The different interpretation that pseudoclefts receive with and without *et* do not immediately follow from the semantic content of *et* or the [+def] feature. Consider (144), repeated below:

(144) a. ma   še-Dan   ra'a   ze **et** ha-šaxen.
        what   that-Dan   saw   is et the-neighbor
        'What Dan saw is the neighbor.'

    b. ? ma   še-Dan   ra'a   ze   ha-šaxen.

In the presence of *et*, the postcopular noun phrase in (144a), which is a DP bearing the [+def] specification, gets the straightforward interpretation of a definite. The restriction to +Q imposed by *et* fixes the DP denotation to an argument denotation, blocking a predicational reading. This gives us the expected referential interpretation.

The interesting case is (144b). Without *et*, the postcopular nominal seems to be in a Caseless position. This may explain the marginal status of this sentence; yet it is not entirely ungrammatical, even though the Caseless nominal is a DP (as a result of being [+def]). As proposed in section 4.1, Case is needed in order to license a +Q

interpretation. A Caseless DP, if at all allowed, must be rigidly interpreted as -Q. As discussed in van der Does & de Hoop (1998), a definite can be seen as a 'restricted indefinite', denoting a *singleton* set. Thus, the interpretation of the Caseless definite *ha-šaxen* 'the neighbor' in (159b) is as the predicate which holds only of one element, the neighbor. This gives rise to the observed predicational interpretation.

I therefore conclude that the presence or absence of *et* in pseudoclefts distinguishes between the two kinds of interpretations for the pseudocleft, equation and predication, by means of the revised visibility condition. A topic for further research is whether the de-re/de-dicto contrast observed in pseudoclefts, as discussed in Heller (1999) and illustrated in (143) above, can also be reduced to the ±Q distinction, itself derived from the combination of the visibility condition and the semantic content of *et*.[99]

6   Generalization to other languages

A welcome consequence of the proposed analysis of *et* is that it allows us to finally account for the intuition that *et* is 'objective' and related to the accusative found in languages with case morphology. Recall that accusative case in a language like Turkish triggers a definite or specific interpretation on the object, in a manner similar to the semantics triggered by *et* in Hebrew. If accusative case morphology in Turkish has the same semantic content as *et* in Hebrew, then there is a sense in which *et* is indeed equivalent to morphological accusative. It is well known that prepositions in languages without case morphology are often used where no preposition would appear

[99]See also the discussion in Longobardi (1994, fn. 21) regarding the availability of transparent readings in intensional contexts in bare NPs versus full DPs.

in a language that has case morphology (Blake 2001:175-178), as seen for instance by comparing the following examples from English and Turkish:

(160) a.   John walked from home to school.

b.   Ali   ev-den   okul-a   yürüdü.   (Turkish)
     Ali   home-ABL   school-DAT   walked
     'Ali walked from home to school.'

Apart from the syntactic issues, it is clear that case morphology in the Turkish example (160b) is semantically equivalent to the prepositions *from* and *to* in the English sentence (160a). For many adjunct nominals, the idea that morphological case is equivalent in meaning to a semantically-significant preposition is more or less uncontroversial. My analysis suggests that the same is true in some languages of the morphological realizations of structural Cases. Unlike the assumption in the Minimalist Program (Chomsky 1995, 1998, 1999), it seems that even accusative morphology may have semantic content, although perhaps not in all languages; the same abstract entity which is realized in Hebrew as the preposition *et* can also be realized as case morphology. This has far-reaching implications for Case theory in the Minimalist Program, where uninterpretability of Case features is assumed to be the driving force behind syntactic processes, as uninterpretability requires these features to be eliminated[100]. An interesting synthesis of the view of abstract Case as uninterpretable with the conclusion that morphological case is often relevant to interpretation would be to assume that the interpretability of Case is a matter of parametrization: in some

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[100]But see Haeberli (2001) for a different view.

languages, such as English, Case is probably uninterpretable, while in other languages, such as Turkish, it is interpretable. The question whether such an approach can account for the familiar correlation between rich case morphology and free word order (Weerman 1997, Haeberli 2001) is left as a topic for further research.

7   Summary

I have shown that in a variety of configurations, presence of *et* has an effect on the interpretation of the DP that it precedes. I argued that approaches that try to derive effects such as this only from the presence of a DP level will fail to account for some of the facts observed in Hebrew; similarly, approaches that relate a certain kind of Case to "strong" interpretations will not cover the full range of facts observed with *et*, while also being relatively stipulative and unexplanatory. Instead, I proposed an analysis which integrates elements from both of these approaches with the syntactic framework developed in chapters 2-4. Using Winter's (1999) distinction between quantificational (+Q) and predicative (-Q) interpretations, I proposed that:

- Case is needed in order to licenses a +Q interpretation of a DP

- *et* is the identity function on +Q denotations

The first of these assumption is basically a reformulation of the intuition behind the Visibility Condition (Chomsky 1986); the second assumption captures the intuition that *et* manifests, in the most basic way, the generalization that even 'dummy' prepositions play a role in interpretation. From these assumptions on the syntax-semantics interface, together with syntactic considerations that follow from the analysis in the previous

chapters, the observed semantic effects of *et* can be derived. Finally, I proposed that in languages where accusative case morphology triggers semantic definiteness, accusative morphology is the realization of the same abstract operator which is realized in Hebrew as *et*. This makes clear the sense in which *et* is related to morphological accusative, and also implies that the interpretability of Case features might be subject to parametrization.

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