THE POSITION OF MORPHOLOGICAL CASE IN THE DERIVATION:

A STUDY ON THE SYNTAX-MORPHOLOGY INTERFACE

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Anthony Kroch, Supervisor of Dissertation

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For my family

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I owe most of what I am and what I have to my family. Without the love and

ABSTRACT

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The main thesis of this dissertation is that morphological case is a purely morphological phenomenon, determined exclusively within the post-Spell-out portion of the derivation on the branch leading to PF. As such, case will depend in large part on the output of the pre-Spell-out narrow syntax, but the narrow syntax will not be able to make reference to or depend in any way on morphological case. I motivate this thesis by presenting extensive evidence that, contrary to what has been assumed since the late 1970s, morphological case is completely independent of the principles of positional DP-licensing that have been called syntactic or abstract Case. I then examine a series of syntactic phenomena which have been argued to depend crucially on morphological case. Specifically, I demonstrate that the interpretation and syntactic behavior of DPs marked with semantic and inherent cases is not due to their special case-marking. Rather, these DPs are distinguished from others by the syntactic structures in which they appear, and it is these structures that are responsible for both their special case-marking and their special syntactico-semantic behavior. I also present a series of empirical and theoretical arguments against making the syntactic processes that derive word-order freedom directly dependent within the synchronic grammar on rich morphological case-marking. I then develop a theory of morphological case-assignment, and show that the treatment of the actual morphology need make no reference to operations that are proper to the narrow syntax, either for the determination of which cases will appear or for the placement of the case-markers

themselves. Finally, I reconsider syntactic Case in the light of the other results of the dissertation and explore the possibility that it could be eliminated from the theory, showing that, even for the regulation of subject positions in embedded clauses, where it is supposed to play its most important role, it offers no real insight into the distribution of DPs. At best it is largely stipulative, and at worst it makes the wrong empirical predictions.

Contents

Chapter 1

Introduction

In this dissertation, I will examine some of the basic questions surrounding case. How does case fit into the grammar as a whole? In terms of both its determination and its effects, to what extent is it morphological, syntactic and semantic? What is the relationship between case markers and adpositions? What do 'structural', 'semantic' and 'lexical' case have in common, and what makes them different? These are old and rather broad questions for linguistic theory, which have received considerable attention over the years. One thus might rightfully wonder why they should be tackled again, and what reason I have to think that I can make additional progress and offer improvement over previous treatments in such a well-studied area. My response to these concerns is related to the fact that case, as it has been discussed in linguistic theory, is a confused tangle of semantic, syntactic and morphological notions.

GB theory introduced a certain amount of clarity by separating out the semantic roles of nominal elements and giving them the non-case-related label 'θ-role', and by distinguishing syntactic Case (with a capital C) at least in part from morphological case. However, the relationship between the latter two has rarely been made fully

explicit, and a close reading of the standard literature reveals strikingly different views on the subject, even among researchers who seem at first glance to be in agreement. It is clear that a link between the two is seen to be crucial, as the theory of syntactic Case has been developed and modified to include structural, inherent and quirky Case, largely in order to derive the correct surface morphological forms. In spite of the occasional cautionary note against directly equating morphological and syntactic case, an overarching concept of case has persisted, with syntactic and morphological sides interacting in complex and often mysterious ways. Attempts have been made within the GB system and its Minimalist successors to answer some of the questions raised above, but they have remained unsatisfactory in many respects, as I will show in the course of the dissertation.

I would argue that the confusion surrounding case results in large part from the incomplete way in which morphology and its basic interaction with syntax have been understood. Over the greater part of the history of generative linguistics, morphology was largely neglected beside syntax, phonology and semantics. The morphological work that was done was frequently ignored, misunderstood or not properly integrated with syntactic theory. However, the past twenty years or so have seen considerable advances in our understanding of morphological phenomena, and – what is especially relevant here – the development of explicit theories of the syntax-morphology interface that draw on those advances. The best known such theory, and the one I will be adopting here, is Distributed Morphology (DM) (see e.g. Halle, 1990, 1997, Halle and Marantz, 1993, 1994, Marantz, 1995, 1997, Harley and Noyer, 1999, Embick and Noyer, 2001, Embick and Halle, in preparation). The new clarity afforded by these theoretical developments puts us in a better position than ever to examine phenomena like case, which straddle the syntax-morphology divide. In this dissertation, I will show that a careful delineation of what about case is syntactic and what about it is

morphological not only allows a better understanding of its role in the grammar, but also leads to improved accounts of several phenomena where case has been assumed to be syntactically relevant. In this introductory chapter, I will summarize briefly the development of Case theory, give a short description of the relevant features of DM, and then develop a hypothesis for how to think of case that can avoid the confusion of syntax and morphology characteristic of earlier views.

1.1   A brief history of Case theory

Current ideas on case go back to the early Government and Binding era, when it was argued that the morphology that shows up on nominal elements in certain languages is just the language-specific surface manifestation of a deeper universal syntactic notion (for early versions see Chomsky, 1980, 1981). It was reasoned that this abstract syntactic Case is required for each DP in order to connect it syntactically to the rest of the clause. A number of proposals were made as to how this connection should be formalized, often related to the θ-Criterion. The Visibility Condition, e.g., holds that abstract Case makes a DP chain **visible** for θ-role assignment. Now, this notion of syntactic Case was largely inspired by morphological case, and indeed it was argued (or assumed) that the latter is a realization of the former. However, syntactic Case has always been in the first place a syntactic licensing condition on nominal elements in the clause, with its morphological reflexes being a secondary issue: syntactic Case is universal, while morphological case is language-specific.

A typical GB-era formulation of the requirement for Case is the following, from Haegeman (1994):

(1)   **Case Filter**

Every overt NP must be assigned abstract case.

The power of this principle comes not from its ability to rule out sentences with extra DPs – say an intransitive verb occurring with both subject and object – because these are also covered by the θ-criterion. Rather, it is the idea that only one position in a DP chain need get Case (expressed in the version above by the limitation to overt NPs) which allows the Case Filter to drive NP-movement. For example, given the assumption that only finite verbs can assign Case to their subjects, subject-to-subject raising and the lack of overt subjects in control infinitives, as in 2a and 2b respectively, can be explained in terms of such a Case filter:

(2) a. John$_i$ seems to t$_i$ be sick.

  b. John$_i$ tried PRO$_i$/*Frank to fix his computer.

With the additional assumption that the Case-assigning status of certain syntactic categories is parameterized, the Case Filter can also derive the requirement for dummy prepositions on the complements of adjectives and nouns in languages like English versus the lack of such a requirement in languages like German, as shown by the difference between 3a and 3b:[1]

(3) a. That's new to me.

  b. Das ist mir   neu.
    that is me:D new
    'That's new to me.'

Additional coverage is made possible by Burzio's Generalization (BG):[2]

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[1]The following abbreviations will be used in the glosses throughout the dissertation: N(ominative), A(ccusative), G(enitive), D(ative), ERG(ative), ABS(olutive), ADE(ssive), INE(ssive), PAR(titive), ILL(ative), INS(trumental), ADE(ssive), TRA(nslative), ELA(tive), ALL(ative), ABL(ative), SG (singular), PL (plural), MASC(uline), FEM(inine), NT (neuter), DEF(inite), PERF(ect), PTC (participle), INF(infinitive), PASS(ive), 1, 2, 3 (first, second, third person), Px (possessive suffix), REFL(exive), AGR(eement), CL(itic), Q(uestion particle), PTCL (particle), COMP(lementizer)

[2]See Burzio (1986, p. 178-9) for the original formulation of the generalization as a two-way implication. I have taken the more compact one-way version here from Haegeman (1994), ignoring the second half because it is not relevant to present purposes and is less commonly assumed due to difficulties it raises, especially in the analysis of unergative verbs.

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(4) **Burzio's Generalization**

A verb which lacks an external argument fails to assign ACCUSATIVE case.

This is intended to account for the behavior of the subjects of unaccusative verbs, given an analysis where their sole arguments are underlying objects which must raise to subject position in order to get Case, as in 5. Similarly, if the effect of passivization is to delete the verb's external θ-role, then by BG it will also block the assignment of accusative Case to the underlying object. The raising of the object to subject position, as in 6, is thus again explained as movement for Case.

(5)   John$_i$ arrived t$_i$ yesterday.

(6)   John$_i$ was arrested t$_i$ yesterday.

In these core examples, a reasonable connection can be maintained between syntactic Case and overt morphology, at least in the familiar nominative-accusative languages. It is assumed that verbs assign structural accusative Case to their objects, while finite Infl or T assigns structural nominative Case to its subject, and that morphological case, when present in a language, generally realizes syntactic Case. A quote from Haider (1985, p.70) is illustrative of this view: "Let us assume that morphological case is the morphological spelling out of a syntactic case index."

Departures from this norm are handled by the notion of inherent Case, which is determined lexically rather than structurally. This was originally proposed to handle case-assignment to the complements of Ns, Ps and As, which unlike normal verbal arguments are independent of the properties of the clause and do not participate alternations like accusative to nominative in the passive and nominative to accusative in ECM. More relevant to our concerns here is the use of inherent Case to handle objects that receive non-accusative cases from the verb in languages like German. These, too are unaffected by things like passivization. E.g., while the object of the

normal transitive verb *schieben* 'push' can become the nominative subject in the passive, the object of *helfen* 'help', which assigns lexical dative case, cannot:

(7) a. Hans schiebt seinen Bruder.
        Hans pushes his   brother:A
        'Hans pushes his brother.'

    b. Mein Bruder   ist geschoben worden.
        my   brother:N is pushed   become
        'My brother was pushed.'

(8) a. Hans hilft seinem Bruder.
        Hans helps his   brother:D
        'Hans helps his brother.'

    b. Meinem Bruder   ist geholfen worden.
        my   brother:D is helped   become
        'My brother was helped.'

    c. * Mein Bruder   ist geholfen worden.
        my   brother:N is helped   become
        intended 'My brother was helped.'

The idea is that inherent Case, being lexical rather than structural, is not subject to BG. Thus it is still assigned even when the external θ-role has been absorbed by passivization, and the object has no need to raise to subject position. A third type of Case is postulated for languages like Icelandic, where lexically case-marked DPs **can** become subjects. This so-called quirky Case is treated as an exceptional dissociation of morphological and syntactic Case: a single DP receives structural syntactic Case, but lexical morphological case.

In more recent work, within the Minimalist Program, the basic role of abstract Case has remained essentially the same, but as the formal properties of the syntactic derivation have been rethought, so has the formal implementation of Case. Thus the specific instances in which it is called on to drive or constrain the derivation are somewhat different than in GB theory. Case has been recast as a feature on DPs that

must be checked in a particular configuration with an appropriate functional head, rather than being assigned by such a head. Constraints like the Case Filter, which applied at a single level of structure, have been abandoned in favor of restrictions on the individual steps of the derivation, based largely on locality and economy. The Case features on DPs and functional heads are recast as diacritics which trigger and constrain movement.

Of equal importance, the idea that all movement is feature-driven has led to a significant expansion in the role of the Extended Projection Principle in the theory. Reformulated as an uninterpretable feature that requires the specifier of a given functional head to be filled, the EPP is used to account for expletive insertion, cyclic raising and other phenomena. As has been frequently noted, this enlarged role for the EPP implies a great deal of redundancy between it and Case in driving movement. In fact, the expansion of the EPP into what had been the territory of Case has continued throughout the development of the Minimalist Program. In early versions of the theory (Chomsky, 1993), subjects and objects raised to the specifiers of their respective Agr nodes in order to check off their Case features, with the timing of the movement dependent on the 'strength' of these Case features. However, this view has been revised by Chomsky (2000, 2001). The Agr heads have been eliminated, and all A-movement is now driven by EPP features – on T for subjects and on ν for objects. Case no longer forces movement, but rather allows it, in the sense that a DP is only visible for attraction by an EPP feature if its Case feature has not yet been checked off. Once it has, the DP is rendered 'inactive', frozen in place. As a result, the main work of syntactic Case is now to account for the ungrammaticality of sentences like 9, where *John* has raised to the matrix subject position even though its Case feature has already been checked off in the finite subordinate clause:

(9)   * John$_i$ seems t$_i$ is sick.

There has also been significant development over the past decade in the relationship posited between syntactic Case and morphological case. Early Minimalist work, including Chomsky (1993, 1995b), adopted a strong version of the Lexicalist Hypothesis, according to which all words enter the syntactic derivation fully formed and inflected from the lexicon. Indeed, it was argued that it is the morphological features of the words involved that drive the syntactic derivation.[3] Thus a given DP would be inserted into the structure bearing a Case feature related to its morphological form, forcing the derivation to get it to a position where that Case could be checked off. For instance, a nominative DP would have to move to Spec-AgrS, while an accusative would have to move to Spec-AgrO. In a language like English, where overt case-marking is almost completely lacking, it was assumed that abstract Case features would still be present, as in GB.

In more recent work (e.g. Chomsky, 2001), Chomsky has abandoned this strong Lexicalist position and adopted certain basic ideas of Distributed Morphology, including Late Insertion of functional material like morphological case. The idea now is that the uninterpretability of a Case feature amounts to its value being unspecified. Feature checking is thus not deletion, but specification, and an unchecked Case feature is just a placeholder for a yet-to-be-determined Case value. When the DP moves into the relevant configuration with a functional head, the Case features is specified with the appropriate value, which will then determine the surface form of the case ending at Spell-out. While the details have undergone non-trivial changes, the basic idea remains that morphological case, in languages that have it, is directly related to syntactic Case. This is an important point, because Chomsky's revision of checking theory is a response to a problem that only arises if we insist that morphological

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[3]'Morphological' in this sense was used to refer not just to features associated with actual overt morphology, but also to abstract features like Case in English with purely syntactic consequences. Current usage seems to favor the less misleading term 'formal features'.

case spells out syntactic Case features. If one adopts the idea that morphological material is not inserted until Spell-out (DM's Late Insertion), then one cannot continue to assume that the checking of uninterpretable features like Case amounts to their deletion. That combination of assumptions would imply that at the point in the derivation when case-endings are supposed to be inserted, there would be no Case features present to steer the insertion. One is thus forced to the idea of feature checking as feature specification.

1.2   The hypothesis

In this dissertation I will argue for a very different view on the relationship morphological case bears to the syntax. We can begin by asking to what extent the DP-licensing condition known as syntactic Case is related to morphological case-marking. I submit that there are essentially three possible answers:

1. Morphological case is the direct spell-out of syntactic Case features.

2. Morphological case is related to syntactic Case features but can also be affected by other factors.

3. Morphological case is determined without reference to syntactic 'Case'.

Hypothesis 1 corresponds to certain early GB conceptions of Case theory, but it is made untenable by the existence of quirky Case-marked DPs. Because their morphological behavior is completely disconnected from their syntactic behavior, any serious attempt to cover them in the theory requires a loosening of the connection between syntactic Case and morphological case. The result is Hypothesis 2, which seems to have been the orthodox view since the quirky facts of Icelandic came to be well known. It amounts to saying that m-case spells out syntactic Case in the default

instance, but that things like lexically specified case-marking can take precedence in certain instances. In other words, the two notions are directly related, but logically independent. They are not, say, two aspects of the same feature or category.

Hypothesis 3 postulates a radical separation between syntactic Case and morphological case, and it may at first blush seem undesirable for this reason. After all, a theory that can relate the two types of Case to one another would seem to be preferable to one that has to postulate them as independent primitives. However, this objection is based on a confusion of syntactic and morphological phenomena and does not go through. For one thing, while such reasoning could constitute an argument in favor of Hypothesis 1, which treats syntactic and morphological case as two realizations of a single underlying category, it does not actually distinguish between Hypothesis 2 and Hypothesis 3. The former posits two distinct types of (C/c)ase and a relationship between them, while the latter simply posits two notions without asserting a connection. Thus Hypothesis 2 does **not** a priori yield a simpler theory of grammar than Hypothesis 3. In order to decide between the two, we must consider what the additional relationship posited by Hypothesis 2 gets us. If it allows a a simplification of or insight into the mechanisms that determine the two types of (C/c)ase, then it is justified. If it does not, then it is to be rejected.

In this dissertation I will adopt Hypothesis 3, arguing that it more accurately reflects the facts and leads to better analyses of a number of syntactic phenomena than Hypothesis 2. Whatever syntactic Case/DP-licensing is, it has no empirical connection to case morphology. Note crucially that this hypothesis does **not** imply that case morphology is not intimately connected to the syntax. On the contrary, I will argue that morphological case is largely determined by the structure that the syntax passes on to the morphological component. The claim is rather that there is no single syntactic feature (complex) which is responsible for both DP-licensing and

the determination of morphological case. The implication is that syntactic 'Case' is a misnomer. True case is a phenomenon of the post-Spell-out PF branch of the derivation, and in order to understand its real role in language, we must keep it separate from whatever handles DP-licensing within the pre-Spell-out narrow syntax.

1.3 The theoretical background of the hypothesis

The position I am taking here is by no means original. Several proposals have been made in the past, differing greatly on non-trivial issues, but agreeing that morphological case should be divorced partially or entirely from syntactic DP-licensing (e.g. Yip, Maling, and Jackendoff, 1987, Marantz, 1991, Sigurðsson, 1991, 2001, Harley, 1995b,a, Bittner and Hale, 1996, Schütze, 1997). While a great deal of progress has been made in this work, much of it still suffers from a lack of precision and clarity on the relationship between syntax and morphology. In order to help overcome this difficulty, I adopt the framework of Distributed Morphology (Halle and Marantz, 1993, 1994), which is fully explicit about this interface. The view of the grammar argued for by Halle and Marantz can be visualized as in the model given below:

Figure 1: A model of the grammar
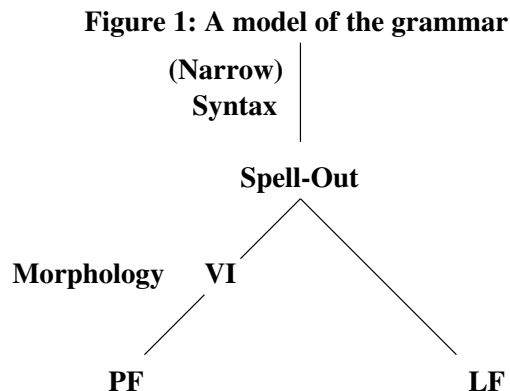
This model reflects two of the main ideas of DM. First, the introduction of actual morpho-phonological material into the structure, called Vocabulary Insertion (VI),

occurs after Spell-out, on the PF branch, i.e. after the narrow syntactic portion of the derivation and the PF-LF split. This means that morpho-phonological material cannot affect the narrow syntax, but rather is determined by it. Second, there is no independent Lexicon where words are assembled for insertion into the structure. Morphology in the traditional sense of word formation and inflection is distributed over the course of both the pre- and post-Spell-out portions of the derivation, and thus is no longer definable as a term of the theory. Motivation for this move comes from the well-known problems with finding a single definition for the word that works for the syntax, phonology and semantics simultaneously (see especially Marantz, 1997). In such a theory we can instead define the Morphology as that portion of the derivation that follows Spell-Out on the PF branch, while the narrow syntax is the part which precedes (following e.g. Marantz, 1991, Embick and Noyer, 2001). As we will see below, there are clear differences between what occurs before Spell-Out and what occurs after, and 'syntax' and 'morphology' are convenient labels to refer to the two stages. In what follows, I will use (narrow) syntactic to mean pre-Spell-Out and morphological to mean post-Spell-Out in these precisely defined terms, and not necessarily in the ways that might be expected based on more traditional definitions of the two.

We must ask, then, where exactly morphological case should appear in a derivation conceived in this way. Being in effect an overt morphological category, case obviously must have a presence in the morphological portion of the derivation. If it is divorced from DP-licensing (i.e. syntactic Case), as I will argue, then we are presented with two main options. We can either continue to assume that it additionally has a pre-Spell-out syntactic presence, or we can hypothesize that it is purely morphological, in the sense that it is not determined or active in any sense before Spell-out. I will argue in this dissertation for the adoption of the latter option because it is the null

hypothesis and allows for a more restrictive grammar. If we do not need to invoke the features related to m-case to explain DP-licensing, then we would need strong empirical justification to allow them a reality within the narrow syntax where they have no independent motivation. Since the morphology follows the narrow syntax, morphological case will very well be affected by and inserted on the basis of syntactic features, but the inverse – case features affecting the syntax – should be impossible.

1.4   Structure of the dissertation

Dissociating morphological case from DP-licensing and removing it from the syntax has a series of important implications, and the body of this dissertation will be dedicated to their investigation. In Chapter 2 I will present the argumentation to justify the adoption of the main hypothesis. An important part of this discussion will be Burzio's Generalization, which, as described above, implies a direct connection between morphological case and syntactic Case. I will rely largely on material that has previously been reported by other scholars, but I will present a new synthesis, showing that the mismatches between DP-licensing and case-marking are not exceptional or limited to certain languages or phenomena, but fundamental and systematic. I will additionally argue in somewhat more detail for a specific interpretation of this material – namely my hypothesis that case is not just independent of DP-licensing but also purely morphological. The remaining chapters will then primarily be devoted to examining phenomena that potentially challenge this hypothesis, where Case morphology has been taken to be involved in syntactic processes.

Chapter 3 deals with issues raised by the fact that, in the DM view of the grammar, the morphology does not feed LF. This, taken with my hypothesis, implies that case cannot play a role in the LF interpretation. The main challenge for this prediction are

the so-called semantic or adverbial cases, which give information about the semantic roles of the DPs they mark which is not recoverable from the broader clausal context. I will show that the potential problems for my hypothesis do not arise under an analysis of the relevant DPs proposed for independent reasons by Emonds (1987) and Nikanne (1993). Along the way I will attempt to clear up some of the long-standing questions and confusions surrounding the relationship between case-markers and adpositions.

In Chapter 4, I will tackle the interesting issues raised by inherent Case, where the lexically-determined case-marking seems to block syntactic raising to subject. If this were so, it would obviously contradict my hypothesis. However, concentrating on the dative in German, I will show that DPs with inherent Case are not just direct objects with special case-marking but rather appear in distinct argument-structures. Specifically, I will argue that they are structurally like indirect objects, as is indicated by a series of syntactic and semantic diagnostics. I will propose specific analyses for the inherent datives that can capture the relevant facts without assuming a syntactic role for case-marking, and will argue that the existence of something like inherent Case is actually predicted by the analysis adopted in Chapter 3 for semantic case.

A less technical consequence of the elimination of case from the narrow syntax is that it should not be able affect the derivation of word order, not just in the form of Case-driven DP raising, but generally. However, it is well known that there is a cross-linguistic correlation between rich overt case-marking and certain types of word-order freedom. Indeed, a number of researchers have recently proposed that this correlation should have formal expression in the synchronic grammar. In chapter 5 I will consider the relevant facts and show that such a formalization runs into a series of serious theoretical problems, and furthermore that it makes empirical predictions which are clearly incorrect. I argue that a more traditional explanation of the correlation in terms of functional pressures on language use, acquisition and change can avoid the

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theoretical problems and account for the relevant facts.

Having argued that the narrow syntax does not need to make reference to morphological case, I devote two chapters to showing that case-marking itself can be handled within the morphology, without recourse to narrow syntactic processes. To begin with, chapter 6 explores the issues of formalizing the assignment of case within the morphology. Concentrating on the systems of German and Icelandic, I discuss the notion of dependent case around which structural case systems are built and show how it can be implemented in a maximally local fashion. This will additionally allow a much simpler treatment of case-assignment in clauses with expletive subjects than is possible in theories that relate morphological case to syntactic licensing. Bringing the non-structural case types into consideration, I then develop a theory of the individual features of which the various case categories are composed and show how they can be assigned on the basis of the structures output by the syntax. The feature specifications thus arrived at will also allow us to accommodate the patterns of case syncretism observed in these languages.

Chapter 7 then explores how movement processes can affect case-markers themselves, testing another prediction made by my hypothesis. If actual case markers are not inserted into the structure until the morphological portion of the derivation, then they should not be able to participate in movement operations peculiar to the narrow syntax. To this end I consider the model of morphological reordering processes proposed in Embick and Noyer (2001), according to which raising is just such a process. I examine phenomena from two Finno-Ugric languages, Mordvin and Mari, where we can clearly observe reordering operations involving case-markers. I argue that the data can be neatly captured by Embick and Noyer's theory, and that the relevant reorderings can be shown, by means of structural diagnostics, not to be syntactic raising. The result is thus consistent with my hypothesis, and the discus-

sion involved is instructive on several issues related not just to case, but also to the syntax-morphology interface in general.

Finally, Chapter 8 reconsiders the question of what grammatical principles are necessary to account for the facts of positional DP-licensing. It will have been noted that a recurrent theme throughout this dissertation is the demonstration that case is not necessary to account for some syntactic fact or other. Indeed, the role of syntactic Case in the sense of a single feature complex responsible for DP-licensing turns out to be greatly reduced, not just in the work here, but also, as noted above, as part of a general trend within the Minimalist framework. Indeed, nearly all of the coverage of the old Case filter is now duplicated by some other principle, most frequently the EPP. A series of recent works have responded to this redundancy by attempting to do without the EPP, but I will argue, drawing heavily on the other results of this dissertation, that the arguments against the EPP can in fact be turned more strongly against a principle of syntactic Case. I show that the EPP has better empirical motivation than syntactic Case, and thus is to be preferred. The possibility is then explored that syntactic Case could be entirely eliminated from the theory, now that its primary theoretical and conceptual motivations have been eliminated. In particular, I consider the empirical arena where syntactic Case continues to do real work in the theory – the appearance and behavior of subjects in embedded clauses – and show that the assumption of a syntactic Case requirement affords us no real explanatory insight. At best it is stipulative, and at worst it is simply wrong.

Chapter 2

The independence of morphological case and DP-licensing

In this chapter I will consider in detail the purported relationship between morphological case and syntactic Case in the sense of DP-licensing. I will develop the main thesis of this dissertation, that the two should be separated, and morphological case should be kept in the morphological portion of the derivation. For purposes of discussion I will assume a standard view of what syntactic Case is and what it does, with one terminological exception. Following Schütze (1997), I will use the term DP-licensing instead of syntactic Case wherever possible in order to avoid confusion with morphological case.[1]

2.1   The basis for the postulation of DP-licensing

In order to understand its potential relationship to morphological case, we must first consider DP-licensing in some detail and discuss a series problems raised by its

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[1]When use of the term syntactic Case is unavoidable, it will be consistently distinguished from morphological case by capitalization and use of the modifiers 'abstract' and 'syntactic'.

theoretical treatment. The central questions are, in what sense does syntactic Case license DPs, and why do they need to be licensed in the first place?

One popular idea from the GB era was the visibility condition, which proposed that syntactic Case makes DPs 'visible' for θ-role assignment. Note, however, that while something like θ-theory is necessary to handle the integration of DPs into the interpretation, it is far from clear why an intermediary to facilitate θ-role assignment should be needed as well. As Chomsky himself has pointed out on numerous occasions, the interpretation of predicate-argument structures works just fine in formal languages and predicate logics without anything like syntactic Case.

More recently, within Minimalism, the necessity for DP-licensing has been cast as just one instance of a general licensing requirements on all syntactic elements. DP-licensing takes the form of uninterpretable features (initially in matched sets on the DPs and the functional heads, more recently on the DPs alone) which have the sole purpose of establishing Agree relationships between DPs and the relevant functional heads, potentially inducing movement of the DPs. Again, there is no a priori reason to assume that syntactic elements should require formal licensing beyond what is needed to allow their proper interpretation. Both the visibility condition and the uninterpretable feature mechanism must be understood as attempts to formalize the role of DP-licensing in the grammar once it has been assumed, not as justifications or legitimate conceptual arguments in its favor.

In the end, the real motivation for the assumption that DPs require licensing is that it gives us a means to handle the phenomenon of movement or displacement. This is not inherently bad. The displacement property of language is a fact that must be accounted for, and we cannot assume that every aspect of the formal system will receive a clear conceptual or semantic explanation. The point is simply that DP-licensing – and its connection to morphological case – can only be evaluated in

terms of its ability to account for the mismatches between the positions where θ-roles are assigned and those were DPs actually surface.[2]

The first problem that arises if we think in these terms is the notable concentration of such mismatches around the subject position. The basic data which Case theory was originally built to explain – raising to subject in passives and unaccusatives and the treatment of ECM, raising and control – all crucially deal with subject positions. Objects, on the other hand, are only involved when they are forced to raise to subject position by the lack of a thematic subject. Note, crucially, that they are never forced to be non-overt the way subjects are in control infinitives. Of course, it has been argued that object shift (OS) in languages like Icelandic, where an object moves past negation and certain adverbs to a VP-external position (see 10), is parallel to subject raising, and is therefore driven by Case (Chomsky, 1993, Collins and Thráinsson, 1996).

(10) Jón las bækurnar ekki t_i.
       John read books-the not
       'John didn't read the books.'

However, the parallel with raising to subject simply does not hold up. First, while raising to subject is obligatory in Icelandic, object shift is not. Rather, it depends on the definiteness and specificity of the object, and is apparently optional under certain circumstances (as shown in 11, see Collins and Thráinsson, 1996, fn. 4) and is blocked from occurring entirely in clauses where the main verb does not raise out of the VP due to the presence of an auxiliary. This latter fact, demonstrated in 12 is referred to as Holmberg's Generalization (see e.g. Holmberg and Platzack, 1995, Holmberg, 1999).

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[2]See Haeberli (2001) p. 282 f. for similar discussion to that in the preceding paragraphs.

(11)   Jón las ekki bækurnar.
         John read not books-the
         'John didn't read the books.'

(12) a. * Jón   hefur hana ekki séð.
            John has   her   not seen
            intended: 'John has not seen her.'

      b.   Jón   hefur ekki séð hana.
           John has   not seen her
           'John has not seen her.'

Furthermore, many languages, like English, have obligatory subject raising, but do
not allow overt OS at all. This sort of variation – and above all the Holmberg's
Generalization facts – show that whatever drives OS, it is not a licensing requirement.
If *bækurnar* is forced to shift past *ekki* to be licensed in 10, then how is it licensed in 11
where it does not shift? For these and other reasons, more recent accounts attribute
overt OS to other factors, with DP-licensing handled independently. Lasnik (2001),
e.g., has OS driven by an optional EPP feature. Whatever the proper account, OS
seems to be more comparable to certain types of scrambling than to subject raising.
The claim thus stands that objects undergo movement for DP-licensing purposes only
in those instance where there is no thematic subject.

   Other types of DPs, like objects of prepositions and the bare-DP adjunct *last
night* in 13 have their positioning affected by DP-licensing even less than objects do.

(13)   Francine and Stosh met for the first time last night.

In most languages, such DPs never undergo any movement that could be seen to be
driven by licensing needs. Some languages, like English, do allow prepositional objects
to raise to subject position under certain circumstances, which can be analyzed as
DP-licensing-driven, but even this is limited like the raising verbal objects to instances
where there is no external subject in the clause.

Now, this is not to say that the behavior of these non-subject DPs militates against the idea of a DP-licensing requirement or presents insurmountable difficulties for the formulation of a theory thereof. The point is simply that DP-licensing does no work to determine their positioning. All of them – including objects in active transitive clauses – have their positional distribution determined by θ-theory (and whatever semantico-pragmatic factors drive OS). The theory of DP-licensing can be (and has been) constructed to allow these DPs to remain in situ, but such data do not constitute evidence in its favor. Again, the data that **do** constitute evidence of in favor of assuming a DP-licensing requirement are restricted to the displacement of subjects and certain objects. As it turns out, it is precisely these DPs for which mismatches between the facts about positional licensing and morphological case show the deepest mismatches.

2.2   But Case isn't case

In this section I turn to the relationship between DP-licensing and overt morphological case. The details of this relationship vary from analysis to analysis – even within the standard tradition – and are frequently left implicit. Still, we can take as a fairly representative example the formulation of Chomsky (2001) in order to frame our discussion. He argues that the EPP feature of a functional head T or ν establishes an Agree relationship with the closest DP that has an unchecked Case-feature. Depending on the strength of the EPP feature, this relationship may also be coupled with pied-piping, i.e. raising of the DP to the specifier of the functional head. The main effect of Agree, however is to check the uninterpretable EPP feature on the functional head and the Case feature on the DP. Adopting the hypothesis of Late Insertion of functional material from Distributed Morphology, Chomsky assumes that

syntactic Case features must survive to PF in order to trigger the insertion of overt case-markers, so this checking cannot be simple feature deletion. Rather, he suggests that it consists in the specification of a value for the Case feature corresponding to the category of the functional head, so that uninterpretable features are really those whose values have not yet been specified. In a normal transitive sentence, the subject will thus get the Case feature $+$T, while the object will get the Case feature $+\nu$. At or after Spell-out, these Case features will then trigger the insertion of the correct morphological case forms. Although Chomsky (2001) is not explicit on the matter, one can assume that inherent case-assignment will interfere with this default state of affairs in roughly the same way it did in Government and Binding theory.

The problem with the above view, and indeed with any theory that posits a direct connection between DP-licensing and morphological case, is the series of mismatches between the two that have been reported by a host of researchers, including Yip et al. (1987), Marantz (1991), Sigurðsson (1991, 2001), Falk (1991), Harley (1995a), Bittner and Hale (1996) and Schütze (1997). Now, mismatches in and of themselves are not unexpected. As was discussed in Chapter 1, it is not generally assumed that DP-licensing and morphological case are the same thing. Rather, the assumption is that the two pattern together in such a way that, all other things being equal, one can be reliably derived from the other. What argues against even this mediated connection is the pervasive and systematic nature of the mismatches. These are not merely aberrations from some norm of correspondence between the two phenomena, but rather show an internal regularity that cannot be handled by deriving morphological case from syntactic licensing features or vice-versa. The dissimilation is manifested in the following three ways, which I will discuss in order below:

1. The relationship between structural positions and particular morphological cases is not one-to-one or one-to-many, but many-to-many.

2. Morphological case can be assigned to a structural position where no overt DP is licensed.

3. DPs can be structurally licensed in positions where they are not properly assigned morphological case.

The first aspect of the mismatch arises primarily in the context of lexically-determined case-marking and has received the most attention in the form of Icelandic 'quirky' Case. Like most languages with rich case-marking, Icelandic has a number of verbs which mark one or more of their arguments with an idiosyncratic oblique case. Unlike in languages like German, such lexically case-marked DPs behave syntactically like normal structural arguments. For example, they can become subjects when no external argument is present in the clause, as in passives and unaccusatives. Zaenen, Maling, and Thráinsson (1985), following Andrews (1976, 1982) and Thráinsson (1979), show on the basis of subject raising, reflexive binding, word order and several other facts that the pre-verbal argument in sentences like 14a is indeed the subject, in spite of the dative morphological case-marking.

(14)   a. Henni hefur alltaf þótt   Ólafur leiðinlegur.
           her:D has   always thought Olaf:N boring
           'She has always found Olaf boring.'

       b. Ég tel   henni hafa   alltaf þótt   Ólafur leiðinlegur.
           I   believe her:D to:have always thought Olaf:N boring
           'I believe always to have found Olaf boring.'

Example 14b, for instance, shows that this argument can appear in the subject position of an ECM construction. Similarly, the dative argument of *batna* 'recover' has moved into the subject position of a matrix raising clause in 15b, taken from Yip et al. (1987). Perhaps most impressively, 15c from Sigurðsson (1991) shows the dative argument slot of the same verb realized as non-overt PRO in a control infinitive

clause:

(15)   a.   Barninu   batnaði   veikin.
             child-the:D recovered disease-the:N

             'The child recovered from the disease.'

      b.   Barninu   virtist batna   veikin.
             child-the:D seemed to:recover disease-the:N

             'The child seemed to recover from the disease.'

      c.   Að PRO   batna veikin   einum   er erfitt.
             to   PRO:D recover the-disease alone:D.MASC is difficult

             'To recover from the disease alone is difficult.

Crucially, oblique subject phenomena of this type are not a quirk of Icelandic, but are found in a number of typologically diverse languages including Hindi (Mahajan, 2000), Georgian (Harris, 1984), Japanese and Korean (Ura, 1999), Latvian (Berg-Olsen, 2001) and Russian (Moore and Perlmutter, 2000). For example, Hindi has a construction known as the 'active passive' which is like the normal passive in its verb form and in marking the underlying subject with an oblique postposition, but differs in that this subject is obligatory and continues to show subject properties despite its oblique marking. For example, non-reflexive pronouns cannot be co-referent with it, as shown in 17:[3]

(16)   Siitaa   dwaara vah ghar   khariidaa   gayaa.
       Sita:FEM by   that house:MASC buy:PERF.MASC go:PERF.MASC

       'By Siitaa was bought that house.'

(17)   Salmaa$_i$ dwaara uske$_{*i/j}$ ghar kaa   niriikshan
       Salma   by   house   G   examination do:PERF.MASC

       kiyaa   gayaa
       go:PERF.MASC

       'Her$_{*i/j}$ house was examined by Salma$_i$.'

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[3]Mahajan simply gives *i as the index for *uske* in 17, but I have added the j to clarify what is implied by his discussion, i.e. that the pronoun is not ungrammatical, but is obligatorily interpreted as non-coreferent with the subject.

Note that in all of these examples the structural direct object is marked nominative. That this nominative case is structural and not lexically determined is indicated by the fact that it is completely regular. In the Hindi construction, e.g., it does not depend on the identity of the verb, but is always assigned in the active passive. In Icelandic the nominative on objects participates in the regular alternations with the accusative. E.g., a normal ditransitive clause with nominative subject, dative indirect object and accusative direct object, when passivized, yields a construction just like that in 14a, with the underlying indirect object still dative, but raised to subject position. The underlying direct object remains in object position, but its marking shifts to nominative, as shown by the sentences in 18 (from Zaenen et al., 1985).

(18)   a. Ég syndi   henni bílinn.
          I:N showed her:D car-the:A
          'I showed her the car.'

       b. Henni var syndur bíllinn.
          her:D was shown car-the:N
          'She was shown the car.'

Furthermore, nominative objects trigger verbal agreement, as was demonstrated in 16 and 17 and again in 19 (again from Zaenen et al., 1985):

(19)   Konunginum   voru   gefnar   ambáttir.
       king:D:SG:MASC were:PL given:PL:FEM slaves:PL:FEM
       'The king was given maidservants.'

The dative subject *konunginum* is singular, yet the finite verb *voru* is in an unambiguously plural form, agreeing with the plural *ambáttir*.

The standard analysis of these facts has been to assume that oblique subjects receive structural nominative Case on top of their quirky dative (or accusative, genitive...) morphological case (see e.g. Freidin and Sprouse, 1991, Chomsky, 2000). The morphological case is assigned on the basis of the thematic position in which these

DPs are first merged, but it is not sufficient to license them, thus they are forced to move to the subject position in Spec-TP. I.e. the mechanism that handles morphological case is independent of the one that handles DP-licensing. Obviously this represents a departure from the idea that case and licensing are linked and requires a response if that link is to be maintained. What is normally claimed – as implied by the label – is that quirky Case is an exceptional state of affairs, an aberration from the norm. Its existence implies that DP-licensing and morphological case are not two sides of the same coin (say the LF and PF sides respectively of a single feature complex), but it does not necessarily mean that a direct relationship between the two must be abandoned. Rather, one could assume that the insertion of morphological case-markers is determined in the default instance by the value of a DP's licensing feature, but that this can be superseded by the morphological requirements of specific lexical items.

Such an analysis amounts to saying that the morphology associated with quirky subjects is outside the normal Case system of a given language. Taken simply, this predicts that the quirkiness of a given DP should have no affect on how other DPs in the clause are treated. Syntactically, this is correct, in that quirky DPs are just like other subjects in allowing lower arguments to remain in syntactic object position. Morphologically, since such lower arguments are clearly licensed in object position, their licensing feature should be specified as $[+\nu]$, triggering morphological accusative case-marking. However, while this is correct for Faroese, it is contradicted by the majority of languages which allow oblique subjects. As shown above for Icelandic and Hindi, when the subject is quirky, the object gets structural nominative case. If non-quirky morphological case is determined by the DP's syntactic licensing feature, then the licensing feature of these nominative objects would have to be $[+T]$. We thus have another mismatch between syntactic licensing and morphological case, but

here we cannot take recourse to lexical determination of the case-marking because the nominative appearing here is structural.

The heart of the problem is that this theory ties structural nominative case to licensing by T. In clauses with quirky subjects, Spec-TP is occupied, and the EPP feature on T is checked off, so there is no way for the object to enter into an Agree relationship with T and get the [+T] licensing feature that would lead to nominative morphological case. Of course, technical means can be devised to allow multiple DPs to Agree with T – in this instance both the quirky subject and the nominative object. However, this amounts to little more than stipulation, because there is no syntactic evidence for a relationship between the object and T, let alone for an abstract high position for the object. After all, the whole point was that it is the dative argument that shows the syntactic properties of a subject. Simply claiming that the nominative case-marking is indicative of a relationship with T is circular, since the relationship between m-case and syntactic position is what is at issue here.

The only other potential evidence for a relationship between nominative objects and T comes from the agreement facts. Note, however, that agreement is itself a morphological phenomenon. It may well be the reflex of a narrow syntactic operation as is standardly thought, but this is a theoretical issue, not an empirical one. We must be careful here to distinguish expectations rooted in the history of the theory from the facts that we are actually trying to account for. In fact, the development of the treatment of agreement within Minimalism can be interpreted as a move from a syntactic account to a morphological one. At an early stage (Chomsky, 1993), agreement was an operation requiring movement of a DP into the specifier of the relevant functional head, either in the overt pre-Spell-out syntax, or at LF. However, in more recent treatments (Chomsky, 2000, 2001), Agree is simply a relationship established between two local elements, without even movement of formal features.

This change was motivated by the need to avoid precisely those aspects of the earlier version that were unambiguously syntactic, i.e. displacement and potential effects on LF interpretation. The latter version is indeed framed as a syntactic relationship, but if its only real effect is to get the morphology to come out right, then it can just as easily be stated as a post-Spell-out morphological operation. Again, claiming that we need agreement to be determined in the syntax so that nominative objects can be licensed by T is not a valid argument. The fact of the matter is that they behave syntactically like objects, not like elements associated with T, so it is far simpler to say that their licensing is handled by ν.[4]

Insisting that morphological agreement and nominative case depend on syntactic licensing by T forces us to an unnecessarily complicated theory of licensing that is at odds with the syntactic facts. If we abandon the idea that specific morphological cases are tied to specific syntactic licensing positions, we can have much simpler accounts of both licensing and case-assignment.

Indeed, rather than being associated with particular structural positions, it appears that the 'structural' cases nominative and accusative in Icelandic are assigned according to a dependency relationship. That is, ignoring DPs that receive an oblique case (i.e. anything but nominative and accusative), the highest argument in the clause will be assigned nominative, regardless of whether it is in subject or object position. Any lower argument(s) will be assigned accusative. That is, assignment of accusative is dependent on the presence of a higher structural argument. This is generalization is well known, and a considerable amount of work has been dedicated to its proper theoretical treatment (see e.g. Zaenen et al., 1985, Yip et al., 1987, Marantz, 1991, Bittner and Hale, 1996, Smith, 1996). Crucially, this dependency between the

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[4]See Alexiadou (2003) for additional argumentation against nominative objects being licensed in T.

structural cases is not a property of Icelandic, but, apparently, of all languages with full-fledged systems of morphological case, including both nominative-accusative and ergative-absolutive patterns. When two arguments in a clause require structural case-marking, both cases will appear. One of the two shows a type of default behavior, being the one that shows up when only one argument in the clause requires structural case-marking, either because the verb is intransitive, because it is a passivized transitive, or because it assigns a lexically-determined case to one or more of its arguments. This default case is the one that shows up on lone structural arguments without regard to either their underlying or their surface position. The difference between nominative-accusative and ergative-absolutive systems is which argument receives the default structural case when two structural arguments are present, as in transitive clauses without lexical case-marking. On this view, the fact that nominative case is generally assigned to surface subjects, while accusative is generally assigned to surface objects, is just the result of the frequent alignment of case-marking and subject selection, which are strictly speaking independent, but are both driven in large part by the relative hierarchical position of arguments.

This actually allows us a better understanding of the differences between German and Icelandic. It is well known that the two differ in the syntactic behavior of lexically case-marked arguments, which cannot become subjects in German. As demonstrated by 20a, *helfen* 'help' takes a dative object. Unlike in Icelandic, however, such datives cannot be elided in nonfinite clauses, as shown by 20b intended as a parallel to 15c:

(20) a.   Sie hat ihm   geholfen.
              she has him:D helped
              'She helped him.'

      b. * PRO   geholfen zu werden ist schwer.
             PRO:D helped   to become is difficult
             intended: 'To be helped is difficult.'

In spite of this, German and Icelandic are essentially identical in terms of how they assign the structural cases, even in the presence of lexical case-marking. Consider e.g. a comparison of the passive versions of double object verbs:

(21)   a. Ulrike schenkte dem Sepp   einen Tirolerhut.
            Ulrike gave   the Sepp:D a   Tyrolean-hat:A
            'Ulrike gave Sepp a Tyrolean hat.'

        b. Dem Sepp   ist ein Tirolerhut   geschenkt worden.
            the Sepp:D is a   Tyrolean hat given   become
            'Sepp was given a Tyrolean hat.'

(22)   Konunginum voru gefnar ambáttir.
        king:D   were given slaves:N
        'The king was given maidservants.'

In both languages, the dative case is retained on the underlying indirect object, while the underlying direct object has come to be marked nominative. This is readily understood if nominative is always assigned to the highest argument that does not have a lexically-specified case, as discussed above. Such a state of affairs is unexpected if case-marking is tied to DP-licensing and subject selection, since these are **not** handled the same in 21b and 22. Note that this argumentation also constitutes a rather good response to the common criticism that attempts to motivate a dissociation of case and licensing are based solely on the facts of quirky Case. Quirky case phenomena do give us an uncommonly good window into the interaction between the two, but the understanding of structural case-assignment that they provide can be applied generally.

It is crucial that, as noted above, this understanding of structural case-assignment generalizes to ergative-absolutive patterns as well. Languages displaying such patterns have always been problematic for the standard versions of Case-theory that assume a link between licensing positions and structural morphological cases. Even

ignoring instances of potential lexical case-assignment, structural subjects do not receive a unified case in these languages, being marked ergative in transitive clauses, but absolutive in intransitives. (Bobaljik, 1992, Chomsky, 1993) have attempted to maintain the case/licensing connection by arguing that, structurally speaking, ergative corresponds to nominative while absolutive corresponds to accusative, the former assigned to arguments licensed by Agr_S, the latter to those licensed by Agr_O (in the terms of Chomsky, 2001, this would correspond to T and ν). On this view, the difference between ergative and accusative languages is which Agr projection is active when there is only one structural argument. In nominative-accusative languages it is Agr_S, while in ergative-absolutive languages it is Agr_O. However, such an approach complicates the determination of subjecthood considerably, since in ergative languages some subjects will obligatorily be in Spec-Agr_S, while others will obligatorily be in Spec-Agr_O. It also makes the dubious prediction that ergative subjects will uniformly be higher in the structure than absolutive subjects. Finally, it fails to recognize the parallels between nominative and absolutive on the one hand, and ergative and accusative on the other. Nominative and absolutive are not just unmarked in the sense that they appear without restriction on structural arguments, but also in the morphological sense that, in many languages, they quite literally represent zero marking, while accusative and ergative are marked overtly. This can be captured under the view that accusative and ergative are assigned dependent in some sense on nominative and absolutive, but is surprising if they are tied to structural licensing positions.

There is thus a systematic mismatch in the mapping between syntactic DP-licensing positions and morphological cases. But the dissociation of case and licensing goes deeper, beyond a misalignment of particular values to instances where the two systems disagree on whether a particular DP can be handled at all. The best-known

manifestation of this is the assignment of morphological case to positions where no overt DP is licensed. This phenomenon has been reported for Latin and Ancient Greek (vanden Wyngaerd, 1994) as well as Russian (Moore and Perlmutter, 1999), but the classic treatment is Sigurðsson (1991), again based on data from Icelandic:

(23)   a. Barninu   batnaði veikin   einu.
           the-child:D recovered the-disease:N alone:D.NT
           'The child recovered from the disease alone.'

        b. Að PRO   batna veikin   einum   er erfitt.
           to PRO:D recover the-disease alone:D.MASC is difficult
           'To recover from the disease alone is difficult.

The adjective *einu* in 23a straightforwardly agrees with the quirky dative subject *barninu* of which it is predicated. Interestingly enough, *einum* in 23b is dative as well,[5] even though there is no overt DP in the subject position. Sigurðsson argues that the adjective is agreeing with PRO, the non-overt DP assumed to be present in the subject position of nonfinite clauses. Of course, if the dative adjective is agreeing with PRO, then PRO itself must have been assigned dative case. The problem is that it was argued in GB theory that, while overt DPs require Case-licensing, PRO does not. Indeed, the lack of overt subjects in nonfinite clauses was one of the core phenomena that Case theory was meant to cover. Thus we apparently have case without licensing.

It has been argued more recently that PRO does require a type of DP-licensing, termed 'null Case' by Chomsky and Lasnik (1993), in part because it is unexpected that PRO should be exempt from the general licensing requirement just because it is non-overt. Nonetheless, the postulation of null Case does not resolve the mismatch here between case and licensing. Whether the subject of *batna* 'recover' receives normal syntactic Case, null syntactic Case or no syntactic Case at all, it always receives

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[5]The difference in the forms of the endings reflects a difference in gender, not case.

dative morphological case. One might argue that this is just another idiosyncrasy associated with quirky Case, e.g. that, since quirky case is normally assigned independent of licensing, we should expect it to persist even when no overt DP is licensed. The strategy would be to preserve the general connection between DP-licensing and morphological case by gathering all mismatches into one well-defined and restricted area where the connection is dissolved. But again, the strategy fails because the mismatches do not allow themselves to be so constrained. In particular, when PRO is the subject of a verb that does not assign a lexically-determined quirky case to its subject, the agreeing predicate shows that PRO has received the nominative case expected for structural subjects:

(24)   a. Strákarnir komust allir   í skóla.
              boys-the:N got   all:N.PL to school
              'The boys all managed to get to school.'

         b. Strákarnir vonuðust til að PRO komast allir   í veisluna.
              boys-the:N hoped   for to PRO get   all:N.PL to party-the
              'The boys hoped to all get to the party.'

         c. Strákana   langaði til að komast allir   í veisluna.
              boys-the:A wanted for to get   all:N.PL to party-the
              'The boys wanted to all get to the party.'

Sentence 24a shows that the verb *komast* 'manage to get somewhere' normally takes a nominative subject. In 24b we see that this nominative continues to be assigned even when the subject is PRO, just as was the case with the quirky dative. Of course, one might assume that the the predicate adjective here is actually agreeing with the nominative subject in the higher clause – quite plausible since that DP is co-referent with PRO. However, as 24c shows, the nominative on the adjective in the embedded clause remains even if we choose as matrix predicate a verb that assigns a quirky accusative to its subject. In such an instance, there can be no question

of the nominative coming from the matrix clause. Apparently, then, while subjects are not licensed in these nonfinite clauses, they do still get nominative case. The case/licensing mismatch thus includes structural nominative and cannot be set aside as another reflex of the exceptional nature of quirky subjects. Rather, the separation is deep and general.

Just as case can be assigned to positions where no overt DP is licensed, there is evidence that DPs can be licensed in positions where they are not assigned morphological case by the normal mechanisms. This situation arises, as argued by Schütze (1997, 2001), when morphological case is supplied by a default rule. This should not come as a surprise if case really is a morphological property, since the morphology is characterized by the appearance of default forms. For example, most languages with verbal agreement have a default form (usually the one that shows up in the 3rd person singular) which shows up in impersonal constructions, as in the German example in 25:

(25) Mich hungert.
      me:A hungers:3SG
      'I am hungry.'

Both traditional and structuralist theories of case-assignment relied heavily on the notion of a default case which was assigned where no other case was justified because this greatly simplified description.[6] A structural default is indicated when one of a set of complementary rules applies under circumstances that do not form a natural class. In such instances, the simplest characterization of the system is to delineate the circumstances where the other rules in the set apply, then to allow the rule with the ill-defined conditions to apply elsewhere. Note crucially that such default behavior has no place within a system like syntactic DP-licensing. The whole point of such a

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[6]The idea goes back at least to the Sanskrit grammarian Pāṇini and is nicely exemplified in Jakobson (1936).

system is that licensing of a particular DP fails when none of the potential licensing mechanisms can apply. If there were an elsewhere licenser which applied whenever the conditions other licensers were not met, then, in principle, no DP could ever fail to be licensed. For example, Case theory could no longer predict ungrammaticality for sentences like *It would be a travesty Seppo to be fired.

It is clear, however, that morphological case systems do make use of this kind of structural default. The argument for this conclusion can be made in two closely related ways. On the one hand, there is the standard method just mentioned, which seeks to show that a series of environments where a given case appears can best be characterized as those where no other case could properly be assigned. On the other, there is the negative approach of demonstrating that certain DPs have no plausible case-assigner, yet nonetheless show up with morphological case-marking. The two strategies fit together nicely if one can collect a series of arguments of the latter type in order to constitute the disparate set of environments necessary to make the former type of argument.

This is precisely what Schütze (1997, 2001) does. He presents data from a series of construction types in a series of languages where nothing standardly considered to be a case-assigner is present, yet a DP shows up case-marked just like any other. Crucially, in each language, it is a single morphological case that shows up across the various environments. These include (with some language-specific variation) coordinated subjects, appositives, ellipsis contexts, bare DP replies to questions, gapping contexts and modified pronouns.[7] The best examples, however, are left-dislocated

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[7]English examples of each of these are, in the order mentioned in the text, *Us and them are gonna rumble tonight*; *The best athlete – her – should win*; A: *I don't like this.* B: *Me neither*; A: *Who wants to try this game?* B: *Me!*; *We can't eat caviar and him eat beans*; *The real me is finally emerging.* See Schütze (2001) for discussion of the variation in acceptability found with some of these examples, as well as for discussion of the cross-linguistic variation on which of these environments involve the emergence of default case-marking. It turns out that the way a particular language will be behave depends in large part on the make-up and complexity of its case-system.

DPs. They most consistently show default case cross-linguistically, and they actually have a normal case-assignment mechanism available to them which, however, is prone to failure that we can directly observe. That is, left-dislocated DPs typically show concord with the case of the DP they are associated with, but under circumstances that differ from language to language, this concord is optionally or obligatorily blocked. When this happens, the same case appears on the left-dislocated DP as appears in the other contexts listed above. We know that it is not assigned by normal rules of case-assignment because it is explicitly different from what would be expected under concord. Consider the following examples Schütze (2001) gives from English – which has accusative as its default case – and German, Russian, Arabic and Icelandic – which have nominative as theirs:

(26) Me, I like beans.

(27) Der/*Dem Hans, mit dem   spreche ich nicht mehr.
      the:N/*D Hans with him:D speak   I   not   more
      'Hans, I don't speak with him anymore.'

(28) Vanja/?Vanju, ego   ja ne   ljublju.
      John:N/?A   him:A I don't like
      'John, I don't like him.'

(29) al-kitaab-u qaraʔt-u-hu.
      the-book-N read-1SG-it
      'The book, I read it.'

(30) Strákarnir, við þá hafði   aldrei verið talað.
      boys-the:N with   them:A had   never been spoken
      'The boys, they had never been spoken with.'

There is nothing in the left-dislocation construction that could be assigning these cases. Given such data, we can either stipulate a series of abstract case-assigners for the various environments, each of which happens to assign the same case, or we can accept the idea that, just like other morphological systems, the case-marking system

has a default which is supplied when no other case-value is specified.

This takes care of the morphology, but it leaves us with a syntactic problem. Specifically, how are these DPs licensed? Given the discussion above it is clear that it cannot be directly by the case morphology. A feature which can have its value supplied by a default rule cannot be involved in licensing if that licensing is to be non-vacuous. This is thus one more demonstration that DP-licensing $\neq$ morphological case, but the real question is what this means for theories, like that of Chomsky (2001), which admit that the two are distinct but directly connected. With the left-dislocation data above, the problem is that, just as there is no clear case-assigner present in these environments, there is also no clear DP-licenser present, i.e. no verbal, prepositional or functional head. The obvious source of licensing for left-dislocated DPs is again some sort of association with their clause-internal associates. While this will allow us to maintain the case/licensing connection in instances where the case-marking on the left-dislocated element matches its associate, it is at a loss to handle the instances where the default appears. Recall that morphological case is, in the general instance, argued to be inserted on the basis of the categorial specification of the licensing Case feature. For a DP to be licensed in this system means that this feature has been specified, whether by Agree with a functional head or, by hypothesis, via a concord operation with an associated DP. Any DP that has had its licensing feature checked should thus have the featural basis to trigger normal insertion of a case-marker.

There is, of course, a more attractive alternative. We can accept the other arguments given in this section and abandon the explicit connection between DP-licensing and morphological case. It is then unproblematic that licensing of a dislocated DP can succeed when case-assignment by concord fails, and we can adopt the default-based analysis of the morphological side of the phenomenon above without compunction. Indeed, default behavior fits in extremely well with the way that the structural cases

are assigned as described above, where the assignment of the unmarked structural case (nominative in nominative-accusative and absolutive in ergative-absolutive languages) can be characterized as a (local) default. It is not an accident that the default case in languages with full morphological case-marking systems seems to generally be just this unmarked structural case (i.e. the nominative in German, Russian and Arabic).

The standard idea that DP-licensing and morphological case are explicitly connected within the grammar is thus disconfirmed by a series of systematic mismatches in the behavior of the two systems. These go beyond the phenomenon of quirky case and force a more radical separation of the two than has been postulated on the basis of that phenomenon. Specifically, it is not just that the mapping between licensing features and morphological case can be disturbed by lexical case-assignment, but that structural case-assignment proceeds according to an independent system that makes no reference to DP-licensing. This is especially clear in environments that involve lexical case, but the effects are observable elsewhere. Indeed, as one might expect from two unrelated systems, the dissociation between the two goes beyond disagreement on what value particular DPs are assigned to **whether** particular DPs are assigned a value at all.

2.3   Whither case?

The previous section argued that morphological case should be divorced from syntactic DP-licensing, but it did not deal in much detail with how morphological case should be handled in the theory. In particular, it left unclear at what stage(s) of the derivation it is determined and active. If case is tied to DP-licensing, then it will be determined at least in part during the narrow syntax, since this is where licensing is

assumed to be handled. However, if case and licensing are independent as I am argu-
ing, then there is no basis for such an assumption. In fact, the null hypothesis should
be just the opposite, i.e. that morphological case is not relevant until after Spell-out.
We know that it has a morphological presence, but positing a syntactic presence for
it would require some justification. Once case is separated from DP-licensing, and we
adopt a DM-style model of the grammar where the morphological component inter-
prets the narrow syntax, such justification seems to be lacking. While the structural
position of a DP may affect that DP's role and behavior in the syntax, there is no
reason to assume that marking which reflects that position should do so as well. I
will therefore adopt the following hypothesis:

(31)   Morphological case is determined after Spell-out on the PF branch and thus
        is not present in the narrow syntax or on the LF branch.

The relative simplicity and restrictiveness of the hypothesis in 31 can be under-
stood if we consider a theory that is similar in many points to the one being developed
here, but posits a syntactic reality for morphological case. Schütze (1997) divorces m-
case from DP-licensing but claims that case-assignment occurs, at least in part, within
the narrow syntax.[8] This move introduces complexity into the grammar because, as
Schütze himself argues at length (see especially Schütze, 2001), at least some case-
assignment **must** take place in the morphology – specifically that of default case. In
other words, we need two independent cycles of case-assignment, one before Spell-out
and another after.[9] Note also that allowing case to be active in the syntax without
strong empirical motivation compromises the restrictiveness of the grammar, in that
it makes it possible, in principle, for syntactic rules to refer to case for which no

[8]Schütze's motivation for putting case-assignment in the syntax is the desire to keep it closely
tied to agreement. However, as discussed briefly above, there is reason to doubt the standard view
that agreement is the reflex of a syntactic operation.

[9]Schütze (2001) himself points out that his main arguments would be essentially unaffected if
case were assigned solely within the morphology.

such connection is motivated. This allows superficially easy (and incorrect) answers to complicated questions, obscuring the real facts and hindering progress in the understanding of certain phenomena. One might think that this is a concern only in principle and not in practice, but in much generative syntactic work, (C/c)ase has been used as a panacea, invoked to explain syntactic and semantic facts with only the most tenuous of connections to the morphology. Examples of this will be encountered throughout this dissertation. I hope to show that, once we eliminate the crutch of using case in the syntax, we are forced to look more closely at the phenomena in question, and in so doing we gain a deeper understanding of their properties.

Of course, in addition to being simple and restrictive, our theory must also make the right empirical predictions. The hypothesis that morphological case is not active until after Spell-out implies that it cannot affect processes in the narrow syntax or the branch leading to LF. If it turns out that case does have effects at those levels, then this hypothesis must be modified or abandoned. It must however be made clear just what sort of evidence would be required to justify such a conclusion. Demonstrating that some syntactic phenomenon correlates with some particular type of case-marking would not be sufficient unless it could be shown that there is a causal relationship, which goes from the case-marking to the syntactic phenomenon. These conditions would be met if e.g. an operation were blocked in a class of instances that could **only** be identified on the basis of a certain type of case-marking. If the instances where blocking occurs could also be picked out on the basis of some other purely syntactic criterion, then the pattern would prove nothing, because both the case-marking and the restriction could be explained on the basis on the syntactic criterion. We will see an example of this sort in my treatment of inherent Case in Chapter 4.

2.4 Reformulating Burzio's Generalization

Perhaps the most direct challenge to a separation of morphological case and DP-licensing is Burzio's Generalization (BG):

(32) A verb can assign accusative Case if and only if it assigns an external θ-role.

BG has been used to explain the behavior of unaccusatives, as in 33a and 33b, and permits the attractive account of the passive that became standard in GB days:

(33) a. * Arrived John.

  b. John$_i$ arrived t$_i$.

(34) a. Frank stole the Datsun.

  b. * Was stolen the Datsun (by Frank).

  c. [The Datsun]$_i$ was stolen t$_i$ (by Frank).

We have good reason to think that the sole argument of unaccusative verbs is generated in object position, yet it cannot generally surface there in English, as shown by 33a. Rather, it must move to the subject position as in 33b. According to BG, an unaccusative like *arrive* cannot assign (or check) structural accusative Case since it assigns no external θ-role. Conveniently enough, the lack of an external θ-role also means that there is no other DP to get in the way by moving to Spec-TP first. Therefore, the underlying object can raise to subject position for Case, and all is well. Similarly, if we assume that passivization deletes the external θ-role of a transitive verb, then we derive an intermediate structure something like 34b corresponding to the active 34a. According to BG, this would again be ungrammatical for Case reasons, because deletion of the external θ-role implies deletion of internal Case assignment. In fact the derived structure is essentially an unaccusative, so once again, the deep object raises to subject position, and we get the acceptable sentence in 34c.

BG is a powerful device which has been brought to bear on a wide array of syntactic data relating to subject positions. For the most part, it also makes the right predictions about the occurrence of morphological cases, at least for nominative-accusative languages. Of course, this is directly relevant to the concerns of this chapter, because as BG is typically formulated, it depends on a tight connection between case and licensing. Without the assumption of that connection we cannot use it to explain the distribution of the structural morphological cases, and we lose a potential explanatory link between three different grammatical phenomena: θ-role assignment, DP-licensing and case-marking. Thus if my hypothesis that the latter two must be divorced is to be taken seriously, I must provide an alternate account of the relevant facts which covers them as well as or better than BG.

In fact, this may not be as difficult a task as one might think. It has become clear for independent reasons that BG cannot stand as traditionally formulated. As Haider (2000a) points out:

> BG as a primitive principle of grammar would contradict a basic assumption of the modular organization [of the grammar -TM]: A sub-rule of one module (i.e. θ-marking of subject) cannot directly interfere with a sub-rule of another system (i.e. case assignment by V^o) [p. 33].

Note, further, the summarizing quote by Eric Reuland from the introduction to the volume on BG in which Haider's paper and several others to be discussed here appeared (Reuland, 2000):

> . . . the following important questions arise in connection with Burzio's Generalization: 1. Can there be a direct relation between the absorption of a θ-role and the absorption of accusative Case? . . . All contributions give a negative answer to the first question, thus, either implicitly or explicitly agreeing with Luigi Burzio's statement (in Chapter 8) that Burzio's Generalization is an epiphenomenon [p. 4f.].

That is, BG is theoretically dubious because it constitutes a dependency relationship between two grammatical sub-systems which are not explicitly connected in any

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way that could support such a dependency. Of course, the modules of the grammar must interact to some extent, and it would not be implausible to postulate a dependency between the θ-role of a given DP and its own (C/c)ase. But the dependency asserted in BG is between the θ-role of one DP and the (C/c)ase of another DP, a state of affairs which is conceptually quite odd and suggests that something is being missed here. Burzio himself notes the following:

> The reason why the account of movement to subject as the need for Case fails is that it presupposes BG (1), which, however, is not a principle of grammar. Rather, (1) is essentially a restatement of movement in so far as it refers to the two positions: subject, object, that movement implicates (Burzio, 2000, p. 196).

In other words, BG is and always was a descriptive generalization that summarizes the effects on the case-marking and position of the internal argument that result when a verb does not take an external argument. It is not an explanation of those effects.

However, BG is suspicious even as a descriptive generalization, because its characterization of the phenomenon it is meant to cover is unnecessarily complicated and seems to have things backwards. What is going on, at least on a basic syntactic level, is that object DPs move to subject position when that position is not already filled. The basic restriction underlying this is that two syntactic elements cannot occupy the same position, so an object can't raise to derived subject position when a subject is already present. When there is no other subject, and that position is empty, the object can move there. What we have to explain is why the object should **have** to move there. The problem with BG is that it takes the angle that the opening in subject position leads to a deficiency on the object – a failure of DP-licensing. It thus comes out looking like a fortuitous accident that the object is able to resolve this deficiency by moving into just the empty space that supposedly caused it. Again, in Burzio's words:

the Move-to-get-Case hypothesis presupposes BG, but the latter is uninterpretable except as a recapitulation of movement, which will reduce the latter hypothesis to the unenlightening statement that if movement is possible, then it is (Burzio, 2000, p. 196).

A simpler assessment of these data is to suppose that the problem in sentences like 33a and 34b lies not with the object, but with the subject gap itself. That is, rather than assuming that an object is only happy in object position if there is a subject above it, we assume that there is a general requirement that the clausal subject position be filled. Relativized Minimality or Closest Attract will then ensure that the highest available DP will be attracted to fill the position, whether it is an external subject, an expletive or an internal object. Of course, just such a requirement has been assumed for quite some time, in the form of the Extended Projection Principle (EPP), and it has been used as described here to account for the syntactic effects of BG, e.g. by Marantz (1991) and Burzio (2000).

Such an account has a number of immediate advantages over the traditional version of BG, beyond its avoidance of the modularity problem. One issue is related to sentences where there is no thematic subject yet the object remains low, as in the following English, Italian and French examples:

(35) a. There arrived four accomplished linguists.

      b. There were stolen ten datsuns in the past month.

(36) Sarò   licenzato io.
      be:1SG.FUT fired   I
      'I will be fired.'

(37) a. Il a   manqué trois enfants.
          it has:3SG missed   three children
          'Three children are missing.'

      b. * Il ont   manqué trois enfants.
            it have:3PL missed   three children

c.   Trois enfants ont   manqué.
     three children have:3PL missed

If the lack of a thematic subject is a problem for the licensing of objects in their base position, it is not clear why they should be able to remain there just because an expletive is inserted, as in 35. The standard explanation has been that the object DP gets into a relationship with the expletive – by raising at LF, feature movement or some other operation that has no affect on surface string order – and that the associate is licensed by T in this mediated way. But this is an unnecessarily complicated analysis which serves the sole purposes of saving the similarly complicated and troublesome formulation of BG. The only evidence that the object DP enters into a relationship with the subject position is again that it can control verbal agreement, as in 35b and 36, and that it is marked nominative in languages with overt case-marking.

However, we have seen that case-marking and agreement on their own are not reliable indicators of syntactic licensing relationships. Arguments that are clearly in object position can be marked nominative and trigger agreement in Icelandic in instances where we can be quite sure that they are **not** in an abstract relationship with the subject position, because a thematic non-expletive argument already occupies that position. It is one thing to claim that a DP raises covertly to adjoin to an expletive with which it is associated, but it is another thing entirely to claim that an object DP raises to adjoin to a distinct thematic subject DP – which is what one would have to say to maintain a parallel account of the case and agreement facts. Additionally, agreement with such DPs in object position is by no means universal, as demonstrated by 37, where the verb obligatorily shows 3rd singular agreement. In English, it is well known that agreement with a post-verbal expletive associate as in 35b, unlike agreement with pre-verbal subjects, is not obligatory, and is in fact dispreferred in many contexts. The need for licensing is presumably universal, so if

morphological agreement is a reflex of that licensing, then it, too, should be universal.

Indeed, there is well-known evidence from scope interpretation and binding that the associates of expletives do not raise to the position of the expletive at LF, but remain in the object position they occupy on the surface. The data have been reported in a number of works, going back at least as far as Chomsky (1991) and den Dikken (1995). I take the following examples from Lasnik (2002), who offers extensive discussion of the relevant issues:

(38)   a.   Many linguistics students aren't here.

        b.   There aren't many linguistics students here.

(39)   a.   Some linguists seem to each other to have been given good job offers.

        b.   * There seem to each other to have been some linguists given good job offers.

(40)   a.   No good linguistic theories seem to any philosophers to have been formulated.

        b.   * There seem to any philosophers to have been no good linguistic theories formulated.

(41)   a.   Some defendant$_i$ seems to his$_i$ lawyer to have been at the scene.

        b.   * There seems to his$_i$ lawyer to have been some defendant$_i$ at the scene.

Each pair of sentences above demonstrates that DPs associated with expletives do **not** behave like DPs which have overtly raised to subject position. The contrast in 38b shows that the quantified DP *many linguistics students* can take scope over negation when it raises overtly to subject position, but not when it is associated with a subject expletive and stays low. In 39, 40 and 41, an expletive-associated low DP fails to properly bind a reciprocal pronoun, an NPI, and a variable, respectively, all of which **are** properly bound by an overtly raised DP.

Much theoretical attention has been devoted to these facts, attempting to formalize the notion that the DP in object position should be related to the subject position without showing any semantic or syntactic evidence of being there. The two candidates currently vying for acceptance are feature-movement and Agree at a distance, as discussed by Lasnik (2002). Of course, this is just the same situation discussed above with nominative objects below quirky subjects. As there, I would argue instead that it is much simpler to admit that these low nominative DPs simply do not move to subject position in any way, since they show **no** syntactic evidence of being there. The only reason to assume that they do is to save the standard formulation of BG, which we have seen is unattractive for independent reasons. All we need say is that DPs move to subject position to satisfy the EPP. When some other element is present to satisfy that requirement – whether it be a thematic subject or an expletive – such movement is not forced and the object is licensed to remain in object position.

Of course, there is a morphological side to BG as well, which we cannot ignore. In nominative-accusative languages, when a thematic subject is lacking, underlying objects do indeed receive nominative rather than accusative case. However, it was incorrect to relate this to the syntactic side of BG since, as has just been discussed, this nominative is assigned to such objects independently of whether they actually raise to subject position or remain low due to the presence of an expletive subject.

Moreover, there are a number of counterexamples to the purported dependency of structural accusative on external θ-role assignment. Certain languages allow accusative assignment to objects in what can only be regarded as impersonal constructions:

(42) Es gibt keinen Linguisten, der mich davon überzeugen könnte.
      it gives no   linguist:A who me   thereof convince   could
      'There is no linguist who could convince me of that.'

(43) a. Cerkvu   bulo   zbudovano   v 1640 roc'i.
            church:FEM.A was:NT build:PTC.NT in 1640 year.
            'The church was built in 1640.'

      b. *Cerkva   bulo   zbudovano   v 1640 roc'i.
            church:FEM.N was:NT build:PTC:NT in 1640 year.

      c. Cerkva   bula   zbudovana   v 1640 roc'i.
            church:FEM.N was:FEM build:PTC.FEM in 1640 year.
            'The church was built in 1640.'

The German existential construction in 42 has the pronoun *es* 'it' in the subject position of the verb *geben* 'give', with the DP asserted to exist (or in this case to not exist) showing up in object position. The element *es* is clearly assigned no θ-role, yet the DP in object position is assigned morphological accusative case. The so-called *-no/to-* construction of Ukrainian in 43a, analyzed by Sobin (1985), has passive morphology, but contrasts in an interesting way with the normal passive shown in 43c. While in the latter the underlying object has clearly been promoted to subject, is in the nominative case and controls agreement on the auxiliary and the participle, in the *-no/to-* construction the object keeps its accusative case-marking, and fails to trigger agreement (the default neuter agreement form appears instead). This is so in spite of the fact that the underlying subject θ-role has been suppressed. Thus again, we have accusative assigned by a verb that does not assign an external θ-role. One might attempt to analyze this construction as an active impersonal construction with a null, arbitrary thematic subject (e.g. PRO), which has developed historically from a passive, but there are reasons to doubt such an analysis. Precisely this has been proposed for the cognate construction in Polish and for a similar innovation in Icelandic by Maling and Sigurjónsdóttir (2002), based on evidence that a thematic subject is present. Specifically, the Icelandic impersonal passive and the Polish *-no/to* construction allow subject-bound anaphors, subject control of secondary predicates,

can involve unaccusative verbs, and do not allow agentive *by*-phrases. Crucially, as Maling and Sigurjónsdóttir (2002) show, the Ukrainian *-no/to* construction goes the other way on all of these diagnostics. It has not thematic subject, thus the most likely explanation is that the subject position is filled by an empty expletive. If this is correct, then the construction is parallel to the German existential and constitutes a further counterexample to BG as standardly formulated.

The most general class of counterexamples to BG, however, is constituted by the ergative-absolutive languages, as in the following examples:

(44) Inuit (from Bobaljik, 1992)

    a. Jaani-up   natsiq   kapi-jana.
       Jaani-ERG seal:ABS stab-trans
       'Jaani stabbed a seal.'

    b. Inuk   tiki-tuq.
       person:ABS arrived
       'The person arrived.'

    c. Iliniaqtitsiji uqaq-tuq
       teacher:ABS spoke
       'The teacher spoke.'

(45) Hindi (from Mahajan, 1990)

    a. Raam   ne   roTii   khaayii thii.
       Raam:MASC ERG bread:FEM eat:FEM be:PAST.FEM
       'Raam ate the bread.'

    b. Siita   (*ne)   aayii.
       Sita:FEM (*ERG) arrived:FEM
       'Sita arrived.'

    c. Kutte   bhoNke.
       dogs:MASC.PL barked:MASC.PL
       'Dogs barked.'

    d. KuttoN ne   bhoNkaa.
       Dogs:PL ERG barked:MASC.SG

'Dogs barked.'

(46) Basque (from Marantz, 1984b)

    a. Nik   libura   ekarri dut.
       I:ERG book:ABS bought have:1SG
       'I bought a book.'

    b. Ni   etorri naiz.
       I:ABS come be:1SG
       'I came.'

    c. Nik   lan egin dut.
       I:ERG work do   have:1SG
       'I worked.'

Of course, it is not obvious how we should interpret accusative for the purposes of BG in reference to an ergative language, but as discussed above, Bobaljik (1992) proposed that it corresponds to the absolutive, while the nominative corresponds to the ergative. This is perhaps the most natural interpretation since BG is about the Case of the object. However, this clearly will not work, since absolutive is assigned completely independent of the presence of an external θ-role, e.g. in 44b, 45b and 46b.

To be fair, BG was not formulated with ergative-absolutive languages in mind, and it has always been known that something different would have to be said in order to handle them. Nonetheless, it would be preferable to develop a single principle accounting for the morphological side to BG that can apply to both nominative-accusative and ergative-absolutive languages. Indeed, the idea developed in Section 2.2 that the structural cases are determined according to a dependency relationship can do just this. Given a case-marking system with two structural cases, one will be able to occur independently (the nominative or the absolutive), while the occurrence of the other (the accusative or the ergative) is dependent on the presence of an additional argu-

ment.[10] Crucially, this dependency is not sensitive to the assignment of a θ-role to the additional argument, but rather to the presence of a formal element of the right type in the relevant structural position. This will allow us to account for the the problematic German and Ukrainian data where non-thematic elements are sufficient to license dependent case on another DP.[11]

In summary then, the descriptive content of BG can be derived from the operation of two formally independent principles, the EPP and the notion of dependent case assignment. Because both principles make crucial reference to the presence of an argument in subject position, their effects are easily confused, but they are properly independent. While detailed discussion of these two principles must wait for later chapters, the discussion here was in the main directed at countering the claim that BG implicates a connection between morphological case and DP-licensing. Having shown that the syntactic and morphological effects of BG are independent of one another, I have furthered the general claim of this chapter and the thesis of my dissertation, that morphological case is independent of DP-licensing and is active only in the post-Spell-out morphological portion of the derivation.

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[10]Note that there is variation in ergative-absolutive languages as to the marking of unergative subjects. In Inuit they are marked absolutive like the subjects of unaccusatives, while in Hindi they are optionally and in Basque obligatorily marked ergative. Marantz (1991) adopts the common proposal (see e.g. Hale and Keyser, 2002) that unergatives are transitives at some level of representation, with the underlying object incorporated into the verb, and argues that the variation is in whether the incorporated object counts for licensing ergative case-assignment to the subject position. This is a not implausible parameter of variation given the fact that languages with overt object incorporation differ in the extent to which incorporated objects 'absorb' the case-assignment potential of a verb and affect transitivity tests (see Baker, 1988). Note in support of such an analysis that Basque, with its obligatory ergative marking on unergative subjects, derives most of its unergative verbs transparently from a noun plus a light verb, as *work*[noun] + *do* yielding *work*[verb] in 46c.

[11]These issues will be discussed in more detail in Chapter 6.

Chapter 3

Semantic case and the adposition/case-marker constellation

3.1 Introduction

In each of the next three chapters I will consider a prediction made by my hypothesis that case is only active in the morphological portion of the derivation, examine data that at first glance seem to contradict the prediction and show that, once these data are analyzed correctly, the contradiction goes away. This chapter takes as its starting point the issues raised by so-called semantic case-marking and goes on to develop analyses of two additional related phenomena: the relationship between case-marking and adpositions and the treatment of nominal complements of N and A.

The prediction to be addressed here follows straightforwardly from my hypothesis in the context of the inverted Y model of the grammar. If morphological case is not active until after Spell-out on the PF branch of the derivation, it will not be visible to LF and thus should not affect the (LF) semantic interpretation. Note that alternations like that between 47a and 47b do not constitute counter-evidence to this

claim:

(47) a. Der   Hund beißt den   Mann.
The:N dog   bites the:A man
'The dog bites the man.'

b. Den   Hund beißt der   Mann.
The:A dog   bites the:N man
'The man bites the dog.'

These two sentences do not just differ in their case-marking, but also in terms of their syntactic structure. In standard terms, the DP occupying the pre-verbal V2 topic position in 47a has a copy in Spec-νP, while that in 47b has one in Comp-V. It is of course this syntactic structure that determines the LF interpretation. The case-marking that appears on the DPs may aid the hearer in correctly gleaning this structure from the surface string, but there is no cause to assume that it feeds LF. On the view being presented here, both morphological case-marking and LF interpret the structures constructed by the narrow syntax.

A non-trivial challenge to the prediction that case cannot affect semantic interpretation comes from case-marked DPs that occur in adjunct or adverbial roles. Consider the following sentences from German and Finnish:

(48) a. Er ist den   ganzen   Tag zu Hause geblieben.
he is then:A whole:A day to house stayed
'He stayed at home the whole day.'

b. Er hat einen Monat lang nur   Pizza gegessen.
he has a:A   month long only pizza eaten
'For a whole month he only ate pizza.'

(49) a. Jussi   syö keito-n lusika-lla.
Jussi-N eats soup-A spoon-ADE
'Jussi eats soup with a spoon.'

b. Talo   sijaitsee   Toukala-n kylä-ssä.
house is:located Toukola-G village-INE

'The house is in Toukola village.'

In German, a bare DP bearing accusative case can appear freely in a clause to indicate the span of time in which some verbal action takes place, as in 48. In languages with a more extensive case system, this phenomenon is much more widespread. Finnish, for example, has in the neighborhood of 15 distinct cases, of which most are used primarily or solely to mark nouns used adverbially, e.g. as instruments like in 49a, or locations as in 49b.[1]

This sort of case-marking does more than just indicate the surface grammatical function of the DP. The DPs in question are not arguments of the main verbal predicate, so semantic case must connect them with the verb and provide them with a θ-role. That is, the adessive ending in 49a must indicate that there is a predicate with a meaning like 'x is an instrument in the performance of y', and that the DP it is attached to is x while the main verbal predicate $syö$ (or perhaps the entire VP) is y. This is obviously a job for a syntactic entity that can encode the semantic information to be passed on to LF, but the hypothesis being pursued here is that morphological case is **not** syntactic.

3.2   The structure of semantic case

The correct strategy for approaching the problem presented by semantic case is the same one that was used to deal with the trivial issues raised by examples 47a and 47b. If case-marking is in a parallel relationship with semantics rather than a serial one, then we must seek an explanation for the special properties of semantic case-marked DPs in the syntactic structure that feeds both.

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[1]Thanks to Elsi Kaiser for providing 49a. Sentence 49b is from Nikanne (1993).

3.2.1 The basic evidence for a PP analysis

The question then is, what is the structure of a semantically case-marked DP? I will argue that semantic case-marked DPs are underlyingly PPs, where it is the P head that connects the DP syntactically and semantically to the rest of the clause. Within the generative tradition this has been argued for by at least Bresnan and Grimshaw (1978), Emonds (1985, 1987), Nikanne (1993), and discussions of the clear syntactic and semantic affinity between adpositions and this kind of case-marker can be found in all traditions of linguistic research. The immediate justification for this analysis is that adpositions generally serve precisely the same function as semantic case, that of connecting DPs in an adverbial or adjunct role to the rest of the clause. Indeed, semantically case-marked DPs occur in precisely the same environments, with the same adjunct adverbial roles, as PPs, not just cross-linguistically (note the English translations of 48b, 49a and 49b) but also within individual languages. Consider the following sentence pairs given by Nikanne (1993):

(50)   a. Elina käveli kohti   koti-a.
              Elina walked toward home-PAR
              'Elina walked toward home.'

        b. Elina käveli   koti-in.
              Elina walked home-ILL
              'Elina walked (to) home.'

(51)   a. Nuopari   suuteli liki Toukala-n kylä-ä.
              young:couple kissed near Toukala-G village-PAR
              'The young couple kissed near Toukala village.'

        b. Nuopari   suuteli Toukala-n kylä-ssä.
              young:couple kissed Toukala-G village-INE
               'The young couple kissed in Toukala village.'

Consider again in this light the work that semantic case-markers must do. They must not only link a DP to a θ-role or something similar, they must actually supply the

full predicate signifying the relationship between that DP and the clause. This is not just a semantic predicate, but a syntactic one. Even if we set aside the hypothesis that case is purely morphological, this is not the sort of thing that case features, as normally understood within generative grammar, can do. Case is usually conceived of as a feature that is assigned to a DP by some head that it is in a relationship with, and features are not generally assumed to constitute syntactic predicates. Rather, this is the work for a syntactic head. Now, there are theories that assume a head status for case-markers, usually labeled K, but the best justification for this assumption seems to be the behavior of semantic case as described here. There does not seem to be any motivation for assuming syntactic head status for, say, the structural cases.[2] For the semantic cases, their positing of a syntactic head K is not substantively different from my assumption of a head P. Indeed, the label we give to the head is not terribly important, as long as something is there in the syntactic structure beyond just a bare DP. P is simply the most obvious choice because of the distributional and semantic qualities of DPs bearing semantic case. By the same token, since the DPs in question behave quite differently from DPs in argument positions, it would be difficult to maintain that the intervening head is just a case head that is present on all DPs.

3.2.2 Possible structural evidence for a PP

Of course, one would like to see evidence for the additional structure of the PP being posited here. It must, however, be noted that the interpretation of such evidence will be made difficult by two factors. In the first place, the DPs which I am asserting to be embedded in PPs are also, crucially, adjuncts. We must thus be carefully that tests distinguishing these elements from argument DPs are actually sensitive to the

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[2]See Chapter 5 for discussion of (and arguments against) theories of this type proposed by Lamontagne and Travis (1987) and Neeleman and Weerman (1999).

presence of additional structure, and not just the argument/adjunct distinction. In the second place, the most straightforward tests we have for extra structure are tests for c-command. However, it is well known that PPs often do not affect command relations the way one might expect them to. That is, certain clear overt PPs seem to be invisible for phenomena like binding and secondary predication, while others are not (see Jackendoff, 1990, Ferguson, 1994, Pesetsky, 1995, for examples and possible analyses). If tests for c-command do not treat clear overt PPs uniformly, then we cannot depend on them as diagnostics for covert PPs, at least until these matters are better understood.

These concerns notwithstanding, the tests for structure are at least suggestive that the analysis being developed here is on the right track. Nikanne (1993) has shown that semantic case-marked DPs cannot serve as antecedents for Finnish possessive suffixes:

(52) a. Talo$_i$-ssa   voi nähdä   piipu-nsa$_{*i}$
          house-INE can see-INF pipe-Px3

          * 'In the house$_i$ one can see its$_i$ chimney.'

          ok 'In the house one can see one's chimney.

      b. Käs-i$_i$-n   voi laskea   sorme-nsa$_{*i}$
          hand-PL-INS can count-INF finger-PL-Px3
          * 'With hands$_i$ one can count their$_i$ fingers.'

          ok 'With hands one can count one's fingers.'

More potential evidence comes from certain word-order facts in German. In that language the verb cluster appears in strictly final position in subordinate clauses, with all verbal complements and adjuncts appearing before it. This pre-verbal position is obligatory for normal objects, as shown by the ungrammaticality of 53b but PPs can somewhat marginally be extraposed as in 53c. Crucially, extraposition of a semantic case-marked DP as in 53d is also marginally possible.

(53) a. dass er im März seinen Bruder   besucht hat.
          that he in March his:A   brother:A visited   has.
          'that he visited his brother in March.'

      b. * dass er im März besucht hat seinen Bruder.

      c. ? dass er seinen Bruder besucht hat im März.

      d. ? dass er seinen Bruder   besucht hat letzten Sonntag.
          that he his:A   brother:A visited   has last:A Sunday:A
          'that he visited his brother last Sunday.'

One way to control for interference from the argument/adjunct distinction is to investigate whether there are semantic case-marked DPs which are verbal arguments and, if so, to see how they behave. Note, then, that there are overt PPs that function as verbal arguments:

(54) Franky loaded hay onto the wagon/into the silo/between the grain and the fertilizer.

(55) Duncan put the groceries in the cabinet/on the counter/on top of the fridge.

If semantic case-marked DPs are also PPs underlyingly, then some of them should be arguments of the verb as well. In fact, argument DPs bearing what look like semantic cases can be found in Finnish, and their behavior suggests that they are indeed underlyingly PPs. Specifically, as reported by Nikanne (1993), structurally case-marked arguments can control secondary predication, whereas semantic case-marked arguments cannot:[3]

(56) a. Ville lastasi vaunut   sora-lla   täyde-ksi.
         Ville loaded wagon-A sand-ADE full-TRA
         'Ville loaded the wagon up to the top with sand.'

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[3]I have changed Nikanne's gloss here, because the one he gives is ungrammatical in English. It is clear from the surrounding discussion that what he intends to show is that sentence 56b cannot receive the interpretation where the wagon ends up full of sand. Rather, "the only interpretation is the - pragmatically strange - idea that the sand becomes full" [p. 77].

b. Ville lastasi sora-n vaunu-un   täyde-ksi.
   Ville loaded sand-A wagon-ILL full-TRA

'Ville loaded the sand onto the wagon (until the sand was full/*until the wagon was full).'

That is, 'wagon' can control the secondary predicate 'full' when it appears as the normal accusative object in 56a, but not when it is marked with a semantic case, as in 56b, though we would still probably want to analyze it as an argument. While the correct analysis of secondary predication remains controversial (see Williams, 1981, Carrier and Randall, 1992, Levin and Rappaport Hovav, 1995, Haider, 1997a, among many others), English sentences of this type show the same predication restriction and, crucially, have an overt PP for the argument that cannot control the predicate:

(57)   a. Franky loaded the wagon$_i$ with hay$_j$ wet$_{i/?*j}$.

       b. Franky loaded the hay$_i$ onto the wagon$_j$ wet$_{i/?*j}$.

The strongly preferred (perhaps the only possible) interpretation of each sentence is where the non-prepositional object is wet at the time of loading. Thus in 57a the wagon is wet (perhaps with a new coat of paint), while nothing is asserted about the wetness of the hay, but in 57b it is the hay that is wet. If it is the presence of PP structure that blocks control of secondary predication in these English examples, then an analysis that posits PPs in the same positions in the Finnish examples is strongly supported. And crucially, here, it cannot be the argument/adjunct distinction that is getting in the way.

3.2.3 English and the argument against alternative accounts

An indication that morphological case is not what is directly responsible for the licensing and θ-role assignment of adjunct DPs comes from English. As Emonds

(1987) argues, such adjunct DPs are possible in English, even though the language has no trace of nominal case-marking that could possibly take care of licensing or identification. Some of Emonds's examples are given in 58:

(58)   a.   I saw John that day.

          b.   Max pronounced my name every way imaginable.

          c.   John was headed that way.

          d.   John arrived the previous April.

          e.   You have lived few places that I cared for.

(59)   a.   * I saw John that period of his life.

          b.   * You pronounced my name the prescribed manner.

          c.   * We were headed that course.

          d.   * John arrived that occasion.

          e.   * You have lived some address near here.

For much the same reasons as given here, Emonds argues that the adverbial DPs in the sentences in 58 should be analyzed as PPs with a null P head. An interesting fact to note is that there are strong restrictions on what sort of DPs can appear as bare adverbials in this way, as shown by the ungrammatical examples in 59. Emonds argues that what is at stake here is not so much the licensing of the DP as the licensing of a null P head. To handle this he introduces what he calls the Invisible Category Principle, which is a broad condition on the insertion of null and non-null variants of particular heads in the morphology. Essentially, a null head can be inserted only when its content can be recovered from the information present in other local elements. This is intended to cover phenomena like pro-drop – where distinctive verbal agreement allows the insertion of null pronominal forms in subject position – but it also works here, because the content of the noun phrases is sufficient to

identify the null preposition. The idea would be that nouns like *day, way, April* and *place* are inherently specified as locations in a sense that licenses the insertion of a null preposition. Other nouns that are less conventionalized in adverbial roles, like *period, manner, course, occasion* and *address*, lack such an inherent specification. As a result, the conditions for insertion of null P are not met when such nouns occur in an adverbial PP, and an overt P must be inserted instead.

Now, the fact that bare DP adverbs are possible even in the absence of overt case-marking in languages like English makes it especially difficult to claim that case-marking itself is what takes care of the licensing and θ-role assignment of such DPs. This is thus evidence in favor of something like the PP analysis presented here. It will be useful, especially in the context of the English facts, to consider an alternative account of these facts proposed Larson (1985) and see why it cannot compete with the PP analysis.

Larson (1985) argues that semantic case-marked phrases are simply DPs, with no additional structure involved. This is in response to the original account of adverbial DPs as PPs with an abstract head put forward by Bresnan and Grimshaw (1978), which he argues – more or less correctly – to be ad hoc. They assume that such adverbials in English are generally ill-formed due to a principle disallowing null elements, while the well-formedness with lexical items like *way, month* etc. results from the ability of those items to delete the null P head before that principle applies. Indeed such an account is rather stipulative in the absence of independent support. However, the shortcomings of this particular theory are not necessarily fatal to PP analyses in general. The specific account that I develop here following Emonds deals rather differently with this issue and is not susceptible to Larson's criticism. There is no general ban on empty heads, but rather plausible restrictions on their insertion based on interpretability. Larson goes on to argue that the distribution of bare-DP

adverbials, which mimics that of PPs, should not be taken as an indication of their categorial status, based on a somewhat idiosyncratic interpretation of Government and Binding theory. He suggests that, under that theory, categorial determination of the distribution of syntactic objects can be abandoned in favor of more general statements about distribution in the form of the various modules of Case theory, θ-theory and so forth. While it is true that such modules were intended to regulate the distribution of elements, they cannot completely replace syntactic categories in this sense. The cross-categorial statements that they allow are still defined in terms of category features (e.g. the idea that -V elements are Case-assigners and that Ns require Case and θ-roles, while other categories do not). In fact, as Emonds (1987) points out, Larson's "criticism cannot stand, since syntactic categories have no raison d'être other than distribution, and distribution can only be discussed via categories" (p. 618).

The alternative that Larson presents – according to which bare-DP adverbials are just bare DPs – turns out to be considerably more problematic. The first problem is how to deal with θ-role assignment. Larson assumes that adverbial θ-roles can be assigned freely on the basis of the semantics of the main predicate and/or the clause, thus any DP with semantics appropriate to some imaginable semantic role relative to the semantics of the rest of the clause can be assigned a θ-role without difficulty. But this is an extremely permissive view, and is little more than a claim that adverbial θ-roles need not concern us. In a sense this may be true for pure adverbs, like those ending in -ly in English, because they are explicitly identified, morphologically and semantically, for interpretation in adjunct positions. This is not the case, however, for DPs. It is far from clear why θ-role assignment to DPs appearing adverbially should be automatic up to semantic interpretability, while that to argument DPs is constrained not just by the semantics of a verbal predicate, but

by its lexically specified subcategorizational properties. The important point here, I think, is that Larson seems to be conceiving of adverbial θ-roles as purely semantic entities, a conception that is not in line with careful thinking about argument θ-roles. Indeed, the reason why these have been given the mnemonic θ-role rather being called semantic roles is to make explicit the fact that they are syntactic entities, which crucially aid in or even drive semantic interpretation, but are **not** deeply semantic in nature. They were introduced precisely to account for the fact that DPs do **not** appear freely up to semantic interpretability.

Larson proposes that basically any category can appear as an adverb, as far as θ-role assignment is considered. He explains the general ill-formedness of DPs in such roles as the result of their unique need for Case.[4] Of course, at this point we can wonder why, if all categories are allowed to freely appear semantically, only DPs have an additional requirement for formal licensing. Indeed, one might have thought that the reason why DPs need to be treated specially relative to, say, clauses or PPs, is that they are semantically incomplete by themselves. After all, one of the dominant interpretations of the basis for the Case filter in the GB era, to which Larson explicitly subscribes (p. 610 fn. 11), is the Visibility Principle, which ties a DP's need for Case to its ultimate need for a θ-role. Why, then, would a DP would still need Case in a position where θ-assignment can apply freely? In any case, the point is that Larson's way of accounting for the general unacceptability of bare-DP adverbs – which is supposed to replace a determination of distribution by categories – is at best no more conceptually satisfying, and in the end still relies on the categorial status of what is appearing in adverbial position.

What's more, Larson's reliance on Case to rule out bare-DP adverbs in the general instance leads to serious trouble when he attempts to account for the specific

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[4]Note that Larson must still make some reference to categories in order to determine distribution.

instances where such entities are in fact allowed. That is, if the sentences in 59 are ungrammatical because the bare-DP adverbials don't get Case, we need an explanation for how the bare-DP adverbials in the grammatical sentences in 58 **do** get Case. The solution that Larson proposes is that those N heads which can appear acceptably in bare-DP adverbs (*day, way, month, place,* etc.) bear a special feature [+F] which allows them to assign inherent Case to the DP in which they appear. What this amounts to is the claim that some Ns are simply free of the normal requirements of Case theory. Note to begin with that this is no less ad hoc than saying that certain N heads can identify – and thus license – a null P head above them. Indeed, I would like to argue that it is worse. Whereas the condition on null P heads is a straightforward extension of morphological principles already needed to handle things like pro-drop, the postulation of [+F] implies a serious weakening of Case theory, since it gives us the ability in principle to posit a diacritic on any DP and exclude it from the reach of the Case Filter whenever it gives us trouble.

Even if we set these theoretical and conceptual concerns aside, Larson's proposal of self-licensing DPs runs into empirical problems. As he himself points out, if the N heads that are specially marked with [+F] can assign themselves Case when appearing in adjunct position, we might expect them to be barred from normal argument positions. However, they act just like normal Ns in this respect:

(60)   a. We saw the Empire State Building that day.

        b. We spent that day in New York.

        c. That day$_i$ seemed to t$_i$ last forever.

As 60a shows, *day* is one of the Ns that is allowed to appear in a bare-DP adverb. Yet *day* is perfectly acceptable in object or subject position, as in 60b and 60c. Larson points out that if *that day* has already received some inherent Case from its head N,

we would expect what he refers to as Case clash, at least in one of these sentences. Even if we somehow claimed that multiple Cases could be assigned to a DP as long as they matched, it is hard to imagine that subject, object and inherent Case would all be able to match. If we adopt a more modern view of syntactic Case, whereby, according to Chomsky (2001), it is an unchecked Case feature that makes a DP visible for syntactic operations, we would be at a loss to explain why *that day* is allowed to raise to the subject position in the matrix clause if it has already had its Case checked off by the [+F] feature on its head.

Larson's response is that the assignment of inherent Case by [+F] is optional. Of course, this is just one more stipulation, and it removes any predictive power that his assumption of the self-licensing property of certain N heads might have had. He offers a conceptual motivation for the optionality of the Case-assignment, but it is extremely opaque and based on a series of non-standard assumptions about Case theory. The idea is that the assignment of Case by an element to the phrase that it heads is unlike the two other mechanisms for Case-assignment which are generally available (Case-assignment by structural position in the syntax and Case-assignment within the lexicon which must be checked in the syntax) and claiming on this basis that it is reasonable to expect that it will only apply in the exceptional instance where the other two mechanisms fail. However, if the postulated mode of application of some process is unlike the standardly assumed instances of that process, then we should be suspicious of that postulated mode of application, not claim that it should be optional. More concretely, the stipulation of optionality here makes more incorrect predictions. If the N *day* has an optional inherent Case feature that it can assign to the containing DP when other modes of Case-assignment fail, then it should never run into Case-filter difficulties. I.e. it should be able to appear in positions that where DPs are normally assumed to be illicit for Case reasons, as in 61.

(61)   a.   * Was chosen this day for the celebration.

        b.   * It seemed that day to go on forever.

        c.   * That day to end so well was a pleasant surprise.

The fact that such examples are just as bad as with any other N is further evidence that the self-assigning inherent Case account is on the wrong track.

Now, Larson (1985) is only one possible instantiation of the idea that bare-DP adverbs really are just DPs all the way down, but any theory of this type will run into the same two problems of how a bare DP in adverbial position can receive a θ-role and how it will be Case-licensed. The problems with Larson's theory result almost entirely from the acrobatics he is forced to in order to deal with these questions. On the other hand, if one assumes that bare-DP adverbs are actually embedded in abstract PPs, then these issues are immediately solved, and the fact that these DPs show the distribution of PPs is straightforwardly explained.

3.3   The morpho-syntax of Ps, case-markers and adpositions

The analysis of semantic case-marked DPs and their English bare-DP adverb cousins as underlying PPs raises a series of issues about the interaction between the posited syntactic structure and the overt morphology. The remainder of this chapter will be devoted to their exploration.

3.3.1   What's in P, and where is the case-marker inserted?

The obvious single answer to both questions in the section heading would of course be that the case-marker just **is** the P head, which has been adjoined syntactically

or morphologically to the nominal stem. This would be perfectly analogous to what is normally assumed for the verbal inflectional heads, to which the verb raises and adjoins in the syntax in languages like French, or which lower in the morphology in languages like English. However, as argued by Nikanne (1993), there are a number of reasons to doubt this simple analysis of semantic case, at least for the languages we have been discussing. First of all, languages that have semantic case-markers generally also have a number of clear adpositions and a system of structural case-marking, and the semantic case-markers behave morphologically like the latter, not like the former. Thus in Finnish, case-markers appear after the plural suffix and before the possessive suffixes, regardless of whether they are structural, like the accusative and partitive, or semantic, like the inessive (see 62). Adpositions, on the other hand, occur outside the word boundary, following the possessive suffix and any clitics, as in 63:

(62) a. talo- -j- -**a**- -mme- -han
      house PL PAR 1PL   CL

      b. talo- -i- -**ssa**- -mme- -han
      house PL INE 1PL   CL

(63) talo- -j- -a-   -mme- -han **kohti**
      house PL PAR 1PL   CL   toward

In addition, Finnish adjectives agree with the noun they modify in case and number. Thus, whether the case of the noun is structural or semantic, an agreeing ending will appear on the adjective. Adjectives do not, however, come with agreeing adpositions when they modify a noun that is an object of a P:

(64) a.   suur- -**ta**   talo- -**a**
            big   PAR house PAR

      b.   suure- -**sta** talo- -**sta**
            big   ELA house ELA

(65) * suurta **kohti** taloa **kohti**
        big   toward house toward

67

Similarly, German makes a clear distinction between case-markers of all kinds, which are suffixal and appear on agreeing adjectives and determiners, and adpositions, which are non-affixal, precede all elements of the DP, and do not trigger agreement:

(66) a. Solveig hat d**en** ganz**en** Apfel gegessen.
Solveig has the:A whole:A apple:A eaten
'Solveig ate the whole apple.'

b. Solveig hat d**en** ganz**en** Tag nur Äpfel gegessen.
Solveig has the:A whole:A day:A only apples:A eaten
'Solveig ate nothing but apples the whole day.'

(67) Solveig hat **seit** den (***seit**) letzten (***seit**) olympischen (***seit**)
Solveig has since the:D (*since) last:D (*since) olympic:D (*since)
Spielen nur Äpfel gegessen.
games:D only apples:A eaten
'Solveig has eaten nothing but apples since the last Olympics.'

The accusative on *Apfel* is the structural direct object case in 66a, but it is the semantic accusative of time on *Tag* in 66b. Yet we see the same agreement pattern on the definite article *den* and the adjective *ganzen* with both. In contrast, the preposition *seit* in 67 appears only once, at the very beginning of the DP, with any agreement-like copies later in the DP being strictly out.

Indeed, in most languages, structural and semantic case-markers really are the same in the sense that a given case-marker can function in certain instances as the former and in others as the latter. For example, in Latin the accusative case normally marks direct objects, as in 68a, but it can also mark certain goals of motion, as in 68b:

(68) a. Barbarī Rōmam oppugnāvērunt.
barbarians Rome:A attacked
'The barbarians attacked Rome.'

b. Caesar Rōmam properāvit.
Caesar Rome:A hastened
'Caesar hastened to Rome.'

This is true as well of the German accusative, which primarily marks direct objects, but is also used semantically to mark duration (note the comparison between 66a and 66b above), and of the Finnish allative, which marks both structural indirect objects and semantic goals of motion.

Furthermore, when overt adpositions **do** appear in languages like Finnish, German and Latin, their objects still bear a case-marking suffix. This is shown for Finnish and German in 63 and 67 above, respectively, and for Latin 69 below.

(69) Caesar ad villam properāvit.
      Caesar to villa:A hastened
      'Caesar hastened to the villa.'

We have here a sentence similar to 68b above, but with an overt prepositional phrase in place of the semantic case-marked nominal. The noun *villa* does not, however, show up in a bare form, but rather with the accusative case-marker *-m* in place. Adpositions thus do not replace semantic case-markers – as we should expect if the case-markers were themselves P heads – but occur in addition to them.

Thus I argue, with Nikanne (1993), that semantic case-marked nominals are PPs where the P head is null, with the case-marking that appears being triggered by the features of the null P. In line with Emonds's (1987) Invisible Category Principle, this case-marking is in part responsible for identifying the content of the null P. The idea is thus that, in languages which have constructions of this type, there is a series of different null Ps, each with a different semantic specification, and it is the identity of the null P that determines the shape of the case-marker inserted. So in Finnish there are Ps that assign elative, abessive, allative, illative and so forth to their complements, and have the relevant semantics, yet are themselves phonologically null.

3.3.2 A syntactic distinction and a morphological one

The idea that certain PPs can be realized on the surface in the form of a case-marked DP presupposes a certain relationship between Ps and case-markers, yet claims that they are syntactically distinct entities in languages like Finnish, German and Latin. There is no implication, however, that syntactic Ps can never be affixal in the morphology of other languages. The insight that is embodied in this way of looking at things, and which must be clearly stressed, is that there are two different distinctions at work, one syntactic and the other morphological. On the one hand, we have Ps, which are full-fledged syntactic heads, versus case-markers, which are morphological elements only inserted at or after Spell-out. On the other, we have morpho-phonologically independent adpositions versus affixes. Crucially, the P/case-marker distinction is about the structural status of an element in the narrow syntax, while the adposition/affix distinction is about whether an element is morpho-phonologically dependent on some other, a logically independent issue. A good deal of the confusion about prepositions and case-marking seems to have resulted from the incorrect assumption that there is really just one distinction, with syntactic Ps realized as adpositions on the one side and morphological case realized as affixes on the other. While we can expect the distinctions to pattern together in the default instance, they will not overlap completely. That is, we can guess that morphological case-markers will show up as affixes more often than syntactic Ps will, because they are structurally closer to the head noun, but in a theory of grammar that allows things like head-to-head movement, incorporation and post-syntactic morphological reordering operations, some mismatches are to be expected. That is, some syntactic Ps will appear affixed to their nominal complements, just as some morphological case-markers will appear morpho-phonologically

independent, i.e. in the guise of adpositions.[5] These rather abstract issues can be demonstrated with examples of each type of mismatch between the two distinctions.

The more difficult mismatch to pin down is the variable morphological handling of syntactic Ps. What we are looking for are syntactic Ps adjoined to nominal elements, but in practice these are difficult to distinguish from case-markers whose insertion is triggered by a null P. I have argued for the latter analysis of the semantic cases in Finnish, German and Latin, so we have to look for affixes that show different behavior from the ones in these languages. What we should expect of affixed P heads is a lack of agreement and a greater degree of clear separability from the head noun.

Markers that seem to fit this description can be found in a number of languages, e.g. the Japanese postposition/semantic case-markers -*kara* 'from' and -*de* 'in'. However, here it is still not clear that what we are looking at are direct realizations of P heads, because the clearly structural case-markers like nominative -*ga* and accusative -*o* show the same morphological behavior, and the marker -*ni* shows the same morphological behavior whether it is the grammatical dative marker or the semantic goal marker. That is, clear instances of morphological case in Japanese show a considerable degree of morphological independence and do not trigger agreement, so these characteristics in semantic case-markers indicate nothing about exactly where

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[5]As a parallel to syntactic P heads, consider the cross-linguistic behavior of T. While it is generally thought to be an independent syntactic head, it is morphologically affixed the verb in many languages (either by syntactic raising of the verb to T or morphological lowering of T to the verb) as in the English simple past sentence 1. In other instances, e.g. the Choctaw past tense sentences in 2, T appears morpho-phonologically independent of the verb (taken from Jacob, Nicklas, and Spencer, 1977):

(1)   You walk-ed to town.
(2)   a. Tamaha ish-balili tok.
          town   2SG-run PAST
          'You ran to town.'
      b. Pisa-li   tok.
          see-1SG PAST
          'I saw him/her/it.'

We should expect P to be no different.

they are inserted. What we need is a language where semantic case-markers show a higher degree of morphological independence **and** show clearly different behavior than structural case-markers.

Some possible examples come from the Finno-Ugric family. In two of the member languages, Mordvin and Mari, the case-markers fall into two distinct classes which differ in their ordering relative to determiner-related elements. In Mordvin, e.g., the dative/allative ending follows the singular definite suffix, but the ablative and inessive endings precede it:

(70)　kudo-ńt́-eń,　　　kudo-do-ńt́,　　　kudo-so-ńt́
　　　house-DEF.SG-ALL, house-ABL-DEF.DG, house-INE-DEF.SG
　　　'to the house, from the house, in the house'

Interestingly enough, it would appear that the two classes correspond to the semantic versus the structural cases, thus we might have here an instance where the affixal semantic case-markers really are direct realizations of the P head. Still, even this example is uncertain. For one thing, while the Mordvin dative/allative case-marker is used to mark structural indirect objects, it is also used to mark semantic goals. Yet its morphological behavior is invariant. More disconcerting, however, is the fact that the semantic case-markers actually appear **inside** the position of the structural case-markers rather than outside, the opposite of what we might expect if the latter were morphological markers inserted directly on the DP, while the latter were the direct spell-out of a DP-external syntactic head.

A more likely candidate is Estonian. In most respects Estonian is rather like Finnish. Among other things, adjectives generally show agreement with the nouns they modify in terms of case. However, in the abessive, terminative, comitative and essive – all semantic cases – there is no such agreement, the adjective instead showing up either in the genitive (with nouns in the terminative case) or in the partitive (with

the other three cases), as shown in Table 3.1.[6]

Case	Adjective	Noun	Gloss
Nominative	ilus	tüdruk	beautiful girl
Genitive	ilusa	tüdruku	of a beautiful girl
Partitive	ilusat	tüdrukut	a beautiful girl
Inessive	ilusas	majas	in a beautiful house
Terminative	ilusa	tüdrukuni	up to a beautiful girl
Essive	ilusat	tüdrukuna	as a beautiful girl
Abessive	ilusat	tüdrukuta	without a beautiful girl
Comitative	ilusat	tüdrukuga	with a beautiful girl

Table 3.1: Estonian Adjective Agreement

There are other semantic cases that **do** trigger agreement on modifying adjectives, e.g. the inessive, but there is no reason to expect that behavior must be entirely uniform here. Now, it is clear that these semantic case-markers derive originally from the grammaticalization of cliticized postpositions. A likely account of what is going on in Estonian is that certain original adpositions have been grammaticalized further than others. Initially they are direct realizations of P heads and thus cannot trigger agreement, but at some point, they are reanalyzed as case-markers under a null P. At this point they begin to behave morphologically like other case-markers, including the triggering of agreement. Under such an analysis, the four semantic case-markers being discussed here are still P heads, while the other ones which trigger agreement have already undergone the reanalysis. Of course, this is a special example. In many languages, there is no case-agreement whatsoever, thus in a situation like that in Estonian we would have no clear indication of whether a given affix (or a whole series of affixes) had undergone reanalysis or still realized P.

Examples of morphological case-markers, i.e. elements which have no reality be-

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[6]This behavior is noted by Nikanne (1993) in a footnote, but without citing any forms. I could not find any mention of the phenomenon in the standard reference grammar of Estonian (Tauli, 1973), thus I have taken the forms here from Urmas Sutrop's Estonian Grammar published on-line by the Estonian Institute (http://www.einst.ee/publications/language/).

fore Spell-out, appearing as adpositions are much easier to identify and can be found somewhat closer to home. These are the elements familiar from a number of modern European languages which have been called empty prepositions or case-marking prepositions, e.g. in English the *of* on nominal complements as in 71 and perhaps also the *to* that marks indirect objects in constructions like 72, as well as *de* and *à* with similar functions in French:

(71)   Hank is the mayor **of** Philadelphia.

(72)   The government gave the contract **to** one of Halliburton's competitors.

Even clearer is the *a* that marks certain direct objects in Spanish. While it is often argued that a real syntactic prepositional head introduces the indirect object in sentences like 72, it would be odd for Spanish DOs to be real syntactic PPs. In addition to general concerns about the structure of DOs, what conditions the presence of *a* on such DPs is not a purely syntactic configuration, but rather has to do with animacy and specificity. Interestingly enough, Demonte (1987) shows that the syntactic status of DOs marked with *a* differs from that of arguments marked by a semantically motivated *a*. E.g. the former but not the latter can control secondary predication, as shown by the contrast in 73:

(73)   a.   Juan la   encontró a Maria borracha.
            Juan her found   to Maria drunk
            'Juan found Maria drunk.'

       b.   *Juan le   habló a Maria borracha.
            Juan her spoke to Maria drunk
            'Juan spoke to Maria drunk.'

This is precisely what we expect if *a* is just a case-marker inserted on the DP in the morphology in 73a, but a full-fledged syntactic P in 73b.

3.3.3 Complements of N and A

The separation of adposition-hood from P-hood adopted here allows an especially attractive analysis of the cross-linguistic variation in the complements of adjectives and nouns. Early versions of Case theory argued that the categories V and P (the [-N] categories) are Case assigners, while N and A (the [+N] categories) are not. The justification for this was that in languages like English and French, the complements of the former can appear in bare form, as in 74 while those of the latter cannot, as in 75a and 76a:

(74) a. Hank [$_{VP}$ knows Philadelphia.]

     b. Hank is [$_{PP}$ from Philadelphia.]

(75) a. * Philadelphia is [$_{AP}$ familiar Hank].

     b. Philadelphia is [$_{AP}$ familiar **to** Hank].

(76) a. * Hank is [$_{NP}$ mayor Philadelphia].

     b. Hank is [$_{NP}$ mayor **of** Philadelphia].

In order to be grammatical, a DP complement of an N or an A must be preceded by a preposition (indicated in bold in examples 75b and 76b), which does not contribute any semantic information. The analysis of such facts was that such prepositions are inserted in order to assign Case to such DPs, thereby avoiding a Case Filter violation.

However, there are problems with such an analysis. In the first place, an operation that inserts a syntactic head in the middle of the derivation in order to satisfy a formal constraint would seem to violate familiar formulations of the Projection Principle, strict cyclicity or equivalent UG constraints. We have no basis to assume the presence of such prepositions at D-structure or its equivalent, because they contribute nothing to the semantic interpretation and are not selected by the lexical properties of anything in the clause, thus we would have to assume that they are inserted some-

where along the way to Spell-out. Furthermore, if the operation occurs specifically in order to repair Case Filter violations, it is unclear why it should not be able to save other ungrammatical sentences like the following:

(77) a. * There was beaten of/to the man.

     b. * It seems of/to the man to have been beaten.

     c. * It is my belief of/to John to be sick.

Additional concerns arise when we turn to other languages like German, where bare DP complements of N and A are indeed possible:

(78) a. ein Feind des Verteidigungsministers
         an enemy the defense-minister:G
         'an enemy of the defense minister'

     b. dem Präsidenten unbekannt
         the   president:D unknown
         'unknown to the president'

Van Riemsdijk (1983) considers this problem and proposes certain modifications to Case theory in order to allow N and A to be Case-assigners in certain languages. The paper contains several important insights, but as van Riemsdijk himself notes, it fails to offer a principled answer to an important question which may at first glance seem to be vacuous, namely "why does there appear to be a correlation between the existence in a language of a morphological case system and the possibility for adjectives to assign case?" (p. 223). The obvious and trivial answer would be that adjectives can directly license DP in German because they assign morphological case to their complements. However, as I am arguing in this dissertation, and as van Riemsdijk himself carefully points out, syntactic Case and morphological case are **not** the same thing:

> The theory of abstract case, as elaborated in the references cited above, is by and large a partial theory about the distribution of noun phrases, as opposed for example to prepositional phrases. In this sense this theory says very little about what cases these noun phrases may have (p. 224).

In fact, a correlation between the ability to assign Case and the ability to directly license a DP is actually suspicious within the standard theory. Syntactic Case is supposed to be a universal abstract property of human languages, whether they have overt case-marking or not. If languages that allow N and A complements to appear without an additional licensing preposition are just those with overt case-marking, then it begins to look suspiciously as though there is a fundamental difference between these two language types as far as Case is concerned. Furthermore, in spite of the approach taken by van Riemsdijk to justify the difference between English and German in independent terms, parameterization of licensers weakens the predictive power of Case theory. We are left to wonder, e.g., why only N and A are parameterized and dependent on morphological case in this way. Why are there not languages where one or both of V and P fail to directly license DPs?

The alternative that I will suggest here postulates no insertion of semantically empty syntactic heads in the middle of the derivation, avoids the stipulation of a Case-theoretic difference between English and German and allows us to claim that the **only** difference in their behavior is the uncontroversial surface morphological difference, roughly along the lines of what was proposed by Chomsky (1986b). Specifically, in order to deal with some of the problems discussed above, Chomsky argues that *of* is the realization of an inherent genitive Case in English. The theoretical context in which I introduced the analysis here is, however, rather different, and allows for a more satisfying formulation, especially on the morphological end. To begin with, let us assume that nouns and adjectives license complements solely on the basis of their argument structure. That is, certain adjectives and nouns are specified by their

lexical properties to (be able to) appear in particular structural configurations that contain argument slots for DPs. Nothing further need be said about the licensing of such DPs, beyond the observation that, for the most part, complements of A and N are always licensed in situ, i.e. they never have to raise to clausal subject position to be licensed. Thus abstractly, German and English have the same structure at Spell-out for adjectives with DP complements (modulo the headedness parameter):[7]

(79)   a. German   b. English

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              AP                            AP
            /    \                        /    \
          DP      A                      A      DP
         /\       |                      |       /\
   d- Präsident- unbekannt          unknown   the president
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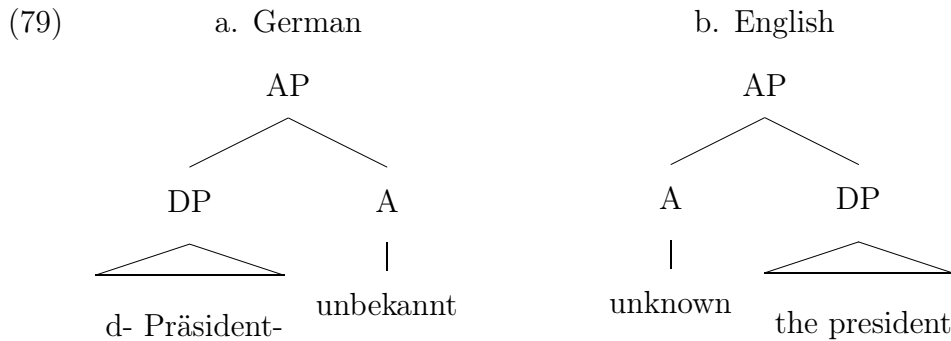
The difference between German and English, then, is what happens to these structures after Spell-out. In German, the DP argument of the A is assigned dative case, which surfaces in the form of suffixes on the determiner as well as (in this instance) on the head noun. In English, we could also say that the DP is assigned dative case (the choice of terms has little meaning), but English has no affixal realization of that particular case, rather it appears in the form of a morphologically independent adposition.

3.3.4 The diachrony of case and P

The view defended in this chapter concerning the relationship between syntactic P heads and non-syntactic case-markers on the one hand, and adpositions and affixes on the other, provides us with an appropriate framework for handling the historical and

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[7]The structures here are simplified to the bare minimum necessary. The explicitly endingless forms are intended to show that morphological material has not yet been inserted.

cross-linguistic relationships between Ps and case-markers as well as the well-known cline from full-fledged prototypical prepositions to prototypical case-markers. Crucially, we will be able to do so without abandoning the idea that syntactic categories are discrete with clearly defined membership. Specifically, we can claim that the syntactically defined categories P and case[8] are indeed discrete and well-defined, and that in every instance it should be possible to analyze a given element as completely the one or completely the other. In contrast to this, the morpho-phonologically defined categories of adposition and affix may well not be reliably separable in any meaningful sense, because there are varying degrees of morpho-phonological dependence. Since these two distinctions are orthogonal, we will get, as noted, syntactic Ps which are affixes and case-markers which are adpositional. However, affixality and adpositionality have nothing in principle to do with P-hood, so it will not be necessary to claim that there are intermediate or fuzzy syntactic categories or to invoke the notion of prototypes as a primitive, because phenomena like phonological reduction and stress-dependence simply are not diagnostics of syntactic properties.

As far as the diachrony of these elements is concerned, there are two issues, both of which are well handled under the view just described. First of all, the elements that seem to be intermediate between prototypical Ps and case-markers frequently **are** intermediate elements in grammaticalization in progress. The theory developed here can thus handle the gradual nature of grammaticalization in the way described above without making any undesirable assumptions for the syntax. Second, the analysis of semantic case-marked DPs in languages like Finnish as involving a case-marked DP embedded in a PP with a null P head allows a straightforward explanation of why adpositions serve so frequently as the historical source for case-markers in the

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[8]Case is syntactically defined in the sense that it has no reality within the narrow syntax, but is rather restricted to the PF branch of the derivation.

first place.(see e.g. Hopper and Traugott, 1993, Blake, 2001) We can imagine the process roughly as follows. A language lacks morphological case-marking, but has a series of postpositions (syntactic Ps) expressing local and other adverbial relations, which are not independently stressed unless they are contrastively focused. (This is more or less English with postpositions instead of prepositions.) In such a de-stressed position all of the postpositions become phonologically reduced, with the most common ones going especially far in this. Morpho-phonologically speaking, they come to be dependent on the head noun they follow. The less common postpositions retain their phonological independence, as do other adpositions which have been more recently created out of things like relational nouns and adverbs. Initially, the reduced postpositions continue to have the same syntactic status as their non-reduced brethren, differing only in how the morphology and phonology treat them. This different treatment will likely become especially clear if it becomes possible for the reduced postpositions to cross over other elements like adjectives and determiners in order to cliticize on the N head. As the phonological reduction and morphological oddity of these old Ps progresses, it becomes necessary to postulate a more and more complicated morphological derivation in order to maintain the syntactic parallel between them and the independent Ps which surface more or less where the syntax leaves them. At a certain point, such a grammar becomes too opaque to acquire, and the learner simplifies the morphology by postulating an empty P and the reduced form of the adpositions inserted in the morphological component in the position where they surface affixed to the N, rather than having them start in P and then lower in the morphology. That is, children learning the language perform a reanalysis of the structures involved and postulate real, honest-to-goodness case-markers where their parents had syntactic Ps with funny morphology. Of course, the children will still learn that a syntactic P is present in such structures because it is forced by

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the syntactic and semantic behavior of the relevant phrases, but they will learn it as phonologically null. There is thus no real change in the syntactic portion of the grammar, just in the morphology. In fact, it seems that a great deal of what has been regarded as syntactic change can be regarded as morphological in this sense. Under this view, then, the grammaticalization of a P to a case-marker is entirely natural and predictable. It results from the interaction of language acquisition with the havoc wreaked on the PLD by the increased phonological reduction and dependency of common, de-stressed, functional elements.

Chapter 4

Inherent Case and argument structure

4.1 Introduction to inherent Case and the standard account

Perhaps the strongest challenge to the hypothesis that morphological case is not active in the derivation until after Spell-out is presented by the phenomenon known as inherent Case.[1] It seems to be a general characteristic of languages with overt morphological case-marking that, while the majority of two-place verbs assign an unmarked structural case (accusative or absolutive, depending on the language type) to their object, certain verbs are specified to mark their object with an oblique case like the dative or genitive. This in itself presents no particular difficulty to my hypothesis (or to any serious theory of morphological case) because it is expected for post-Spell-

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[1]Much of the material in this chapter was presented as McFadden (2003) at the joint FGLS/SGL conference and as McFadden (2004) in a workshop on the dative at the DGfS annual meeting. Thanks are due to the audiences at those conferences and to my co-participants in the DGfS dative workshop, especially Andrew McIntyre and Phillippa Cook.

out insertion of case-markers to be sensitive to the lexical identity of the verb.

The difficulty arises when we look at the syntactic behavior of DPs marked with such lexically-specified cases. As is well known, in languages like German, objects that receive lexical case, in contrast to normal accusative DOs, are banned from becoming subjects in the passive. The standard analysis of these facts is that it is the way in which such DPs receive their case-marking that explains their inability to become subjects. Now, subject selection, whether it takes the form of raising to a designated subject position or some other mechanism, is clearly something that must take place in the domain of the narrow syntax, because it is related to both PF issues like word-order and case-marking and LF issues like interpretation of anaphoric elements. Thus if the standard account is right, and subject selection really is sensitive to case-assignment facts, then the central thesis of this dissertation cannot be correct. Case-marking would have to be determined (at least in part) and be active before Spell-out in the narrow syntax. In this chapter, however, I will show that the standard analysis of inherent Case cannot be correct and argue that an alternative is possible which better accounts for the facts and is consistent with my main hypothesis. I will concentrate for the most part on German, because the theory of inherent Case was developed specifically to account for it and because it is still the language for which the phenomenon is best understood, but I will also bring up significant data from other languages and offer some discussion of the cross-linguistic extension of the account developed.

Let us begin then by reviewing the basic facts of German inherent Case. Most two-place verbs in German take an accusative direct object, like *schieben* 'push' in 80a. However, a considerable number mark their sole object dative, like *helfen* 'help' in 80b, while a few others mark their object genitive, like *gedenken* 'remember' in 80c:[2]

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[2]From here on I will restrict my attention to the dative, because it is alive and well in the modern

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(80)   a. Hans schiebt seinen Bruder.
          Hans pushes his   brother:A
          'Hans pushes his brother.'

       b. Hans hilft seinem Bruder.
          Hans helps his   brother:D
          'Hans helps his brother.'

       c. Gedenken wir des Finnen!
          remember we the Finn:G
          'Let us remember the Finn!'

The important fact is that, in the normal passive, an accusative direct object will become the nominative subject, as in 81, but the dative object of verbs like *helfen* must remain dative and fails to trigger agreement, as shown in 82. 83 shows that ungrammaticality results if we try to make that argument nominative with agreement:

(81)   Meine Brüder   sind   geschoben worden.
       my   brothers:N are:PL pushed   become
       'My brothers were pushed.'

(82)   Meinen Brüdern   ist   geholfen worden.
       my   brothers:D is:SG helped   become
       'My brothers were helped.

(83)   * Meine Brüder   sind   geholfen worden.
         my   brothers:N are:PL helped   become
         intended: 'My brothers were helped.'

We will see further below that, unlike in Icelandic, clause-initial dative DPs like *meinen Brüdern* in 82 also fail syntactic subjecthood tests in addition to these morphological ones, and are thus best analyzed as fronted (V2) topics.

The standard analysis of inherent Case developed in the GB era (see e.g. Haider, 1985, Chomsky, 1986a) is based on the assumption that there are (at least) two distinct mechanisms for the assignment of abstract syntactic Case. Structural ac-

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spoken language, while the genitive is moribund.

cusative Case, as with *schieben*, is assigned to an object based not on the properties of the verb, but on the structure in which it appears. Thus, according to Burzio's Generalization, an object gets this Case if a thematic subject role is assigned. Inherent Case, on the other hand, is assigned directly by a morphological feature in the verb's lexical entry and is thus independent of structural considerations like BG. Now, since passivization is standardly assumed, one way or another, to prevent a verb from assigning its external θ-role, this difference has important consequences. By BG, structural accusative will not be assigned in a passive, leaving the underlying object without syntactic Case, but since inherent Case is not subject to BG, it remains unaffected. The object of *schieben* will thus be forced to raise to subject position to get Case in the passive, while that of *helfen* will still have its needs satisfied by the inherent dative, and thus can remain in object position. This account gets the m-case/subject-ineligibility connection with minimal assumptions: inherent objects differ from accusative DOs only in how they receive (C/c)ase. Of course, here it is abstract Case that is meant, but an account of this type depends on drawing a tight connection between this abstract Case and m-case. The correlation is, after all, between overt m-case and subject ineligibility. Haider (1985), e.g., writes "Let us assume that morphological case is the morphological spelling out of a syntactic case index" (p. 70). As noted above, this is clearly inconsistent with the hypothesis that case is only relevant within the post-Spell-out morphological portion of the derivation. Thus if the traditional analysis stands, my hypothesis cannot.

4.2 Problems for the standard account

However, the standard account turns out to be a bit **too** minimal. In this section I will present some of the problems that it runs into before moving on to propose a new

analysis that can overcome them. The first problem, which is very well known and has received extensive attention in the literature, is that this theory of German inherent Case does not generalize to all languages with lexically-determined case-marking. Icelandic also has a group of verbs (containing cognates or semantic equivalents of many of the relevant German verbs) which take two arguments, one nominative and one dative. The difference is that the dative objects in Icelandic **do** become subjects in the passive (Icelandic data are from Zaenen et al., 1985, unless otherwise noted):

(84)   Ég hjálpaði honum.
         I   helped   him:D
         'I helped him.'

(85)   a.   Honum var hjálpað.
            him:D was helped
            'He was helped.'

       b.   Ihm   wurde geholfen.
            him:D was   helped
            'He was helped.'

(86)   a.   Ég vonast til að PRO verða hjálpað.
            I hope   for to PRO be   helped
            'I hope to be helped.'

       b.   *Ich hoffe PRO geholfen zu werden.
            I   hope PRO helped   to be
            intended: 'I hope to be helped.'

To understand the data here we need to be more careful about the term 'subject' than we have been to this point. At first glance, the Icelandic passive sentence in 85a looks no different than the German translation in 85b. In both, the argument that was the dative object in the active remains dative and is fronted. However, it has been amply demonstrated (going back at least as far as Andrews, 1976, 1982, Thráinsson, 1979) that such fronted datives in Icelandic pass a series of syntactic subjecthood tests in spite of their morphology, whereas in German they do not. One of the dozen or so

diagnostics that show this is the fact that the fronted dative can be realized as PRO in nonfinite clauses in Icelandic, but not in German, as the contrast between 86a and 86b shows (see e.g. Zaenen et al., 1985, for additional tests). Now, if it were really the special assignment of exceptional dative case that blocked raising to subject, then we would expect Icelandic to be like German. The fact that a language like Icelandic can exist, where m-case and subjecthood are clearly independent, suggests that the standard account is missing something important.

The response to this situation since the mid-1980s, when the facts first became well-known, has been to claim that Icelandic lexical case is somehow different from German, as reflected by the label 'quirky' given to it. No consensus has been reached on the precise mechanics of this quirky case, but the idea is essentially that it constitutes an exceptional separation of m-case from syntactic Case. That is, the special morphological case is assigned to a DP on the basis of its appearance as the object of the right lexical verb (in GB terms this would be early at D-structure), but unlike in German this is not tied to the assignment or checking of syntactic Case. Thus in the passive such an object will still be able to raise to subject position. So the standard account of inherent Case loses a bit of its power in that we cannot claim it is universal, but must be supplemented by a theory of quirky Case for languages like Icelandic. But the problem goes deeper than that, because the concessions that must be made to handle Icelandic actually undermine the basis of the explanation for German. As I have argued in previous chapters, the existence of quirky Case constitutes a serious weakening of the connection between m-case and syntactic Case, because it forces us to give up on any idea that they are the same thing. If languages can vary parametrically on whether or not they tie syntactic Case to morphological case, then it is impossible to claim that the two are, say, two sides of the same feature complex. But the standard inherent Case story depends on the notion that it is in fact the

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special assignment of morphological case that gets in the way of raising to subject. It is not terribly attractive or enlightening to claim that German and Icelandic differ in that m-case is syntactic in the former but not in the latter, because, as argued in Chapter 2, there is no relevant morphological difference between the two languages with which this could be correlated. It amounts to nothing more than a stipulation, a restatement in theoretical terms of the descriptive fact that Icelandic allows a dissociation of subjecthood and case-marking while German does not. Calling Icelandic case 'quirky' is not an analysis of this difference, but an admission that the difference is ill-understood and problematic for standard theories of lexical case.

A second problem that this leads to is related to the fact that German has not only dative, but also genitive and, crucially, accusative inherent objects (Wegener, 1991, Abraham, 1995). Inherent accusatives are rarer than inherent datives, but they do exist. The clearest examples are the sole arguments of certain verbs of bodily states as in 87 and the experiencers of certain verbs of mental states as in 88. As 89 shows, even though these DPs are marked accusative, they are ineligible to become subjects in the passive:[3]

(87)   a.   Mich friert.
            me:A freezes
            'I'm freezing.'

       b.   Mich hungert.
            me:A hungers
            'I'm hungry.'

(88)   a.   Mich ärgern solche Leute.
            me:A annoy such   people
            'People like that annoy me.'

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[3] The ungrammaticality of 89a could result from the fact that verbs which do not assign an external θ-role are generally unable to form passives in German. However, we would still need an explanation for how the sole argument of a verb like *frieren* is assigned accusative in the grammatical active examples since, by BG, verbs which do not assign an external θ-role cannot assign structural accusative.

b. Sowas interessiert mich nicht.
so-what interests me:A not

'I'm not interested in that sort of thing.'

(89) a. * Ich werde gefroren.
I:N become frozen

intended: 'I get frozen.'

b. * Ich werde von solchen Leuten geärgert.
I:N become by such people annoyed

intended: 'I'm annoyed by people like that.'

c. * Ich werde von sowas nicht interessiert.'
I become from so-what not interested

intended: 'I'm not interested by that sort of thing.'

This means that a particular instance of case-marking cannot be identified as inherent based on which morphological case is involved. Rather, the only way to identify the Case assigned to a given object as inherent is by determining whether the object can become subject. Recall that one of the features of the standard theory is that the only difference it posits between inherent objects and normal direct objects is the way in which they receive their (C/c)ase, so that theory does not predict there to be any independent diagnostic that can distinguish, say, *interessieren* 'interest' with its inherent accusative from *schlagen* 'hit, beat' with its structural accusative.

This is problematic, however, because it means that using inherent Case as an explanation for why an object cannot become subject is potentially circular. That is, it is improper to posit inherent Case-assignment solely on the basis of subject-ineligibility and then to use this same inherent Case-assignment to explain the subject-ineligibility. It would of course be possible to avoid this circularity if the special inherent Case mechanism were independently necessary to get the morphology to come out right, which is the basic idea of the standard account. The way it is supposed to work is that the case that shows up on certain DPs is morphologically exceptional,

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thus it is plausible to assume that it is assigned by an exceptional mechanism. Then, since it is just these DPs that cannot become subjects, it is plausible to assume that this exceptional mechanism of case-assignment takes place in the syntax and is what blocks raising to subject. However, given the existence of verbs like *interessieren*, we can no longer claim that everything which must be treated by the grammar as inherent Case is truly morphologically exceptional: *interessieren* takes one nominative and one accusative DP just like *schieben*. So here the postulation of inherent Case is **only** necessary to get the subjecthood restriction. The circularity is clear and unavoidable (at least until we find an independent property of inherent Case-marked objects and work it into the theory).

This brings us to some additional problems of a technical nature for the traditional account. To begin with, it has never been made sufficiently clear how inherent Case assignment is supposed to work within Minimalism, with questions arising due to two of the main innovations of the framework. First, the GB account of inherent Case relies on the notion that, since inherent Case-assignment is a lexical property of verbs, it must take place at D-structure. D-structure is the level where lexical dependencies are generally resolved, sometimes even taken to be direct projection of lexical properties. Structural Case-assignment, on the other hand, is assumed to take place at S-structure, and this allows the analysis of what happens in the passive to take the form of a classic instance of ordered rule application. Inherent Case-assignment is ordered before structural, so if the former can apply in a given environment it will block application of the latter, and specifically an inherent Case-marked DP will not be allowed to raise to subject position. In Minimalism, however, the levels of D- and S-structure have been eliminated, so it is no longer possible to capture the blocking relationship in exactly this way. Second, in GB, Case was assigned to objects in situ under government by the verbal head, whether inherently due to a feature in

the lexical entry of that head or structurally due to the configuration in which the head appeared. In Minimalism, however, object Case has been argued to be parallel to subject Case in that it is assigned on the basis of a local structural relationship with a functional head. The question then is whether inherent Case is assigned by a functional head as well, and if so, whether it is the same head which handles structural accusative or a different one.

These two issues are closely related, at least in how we would have to handle them, so I will discuss them together. While there has been a significant amount of Minimalist discussion of how to handle quirky Case, especially the associated agreement facts, to my knowledge there has been quite a bit less on the mechanics of inherent Case, and there is certainly no standard treatment. Chomsky (1995a) mentions inherent Case in passing and continues to assume that it is assigned in situ, but the point is peripheral to his concerns in the passage, and it is clear that he is maintaining the assumption out of convenience, not for any substantive reason. Furthermore, he is only considering inherent Case in relation to English sentences with expletive *there*, where he argues, following Beletti (1988), that *there* get structural nominative while its associate gets inherent partitive Case. There is no discussion of the more overt type of inherent Case in languages like German that is at issue here. Lasnik (1995) briefly discusses the issues, also solely in the context of English expletive constructions. Regarding the level of assignment of inherent Case, he simply notes that the difference between D- and S-structure in unstatable in Minimalist terms and dismisses the question as though the related issues were no longer relevant. He then suggests, essentially in the interest of parallelism with other modes of Case-licensing, that inherent Case is checked in the specifier of a functional Agr head, under the assumption that adjunction of the verbal head to that Agr head by LF (if not earlier) will create a sufficiently local relationship, and concludes that this relationship should also be

sufficient to take care of the θ-assignment requirement. However, his discussion is purely programmatic and does not consider even in passing how this will deal with the facts of languages like German. Indeed, all he does is show that inherent Case could plausibly be fitted into the Minimalist view of Case-checking without proposing anything specific. For example, with regard to θ-marking, he argues that an inherently Case-marked argument in Spec-Agr$_O$P can receive a θ-role from a V adjoined to Agr$_O$. However, he does not show how on this analysis such θ-role-assignment can be made a prerequisite for inherent Case-assignment – a point that followed straightforwardly from the claim in GB terms that inherent Case is assigned at D-structure. Furthermore, there is no actual discussion of how inherent Case will block raising to subject.

Lasnik (1995)'s ideas are applied to a language with actual lexical case-marking in Stjepanović (1997). She argues on the basis of data from Serbo-Croatian that Lasnik was right to assume that inherent Case is assigned by a functional head just like structural accusative. The evidence is that inherent objects behave like structural accusatives with respect to binding, weak cross-over and superiority effects, all of which can be interpreted to indicate that the object in question has raised out of the VP into the specifier of a functional head. However, all of the tests she presents boil down to an indication that, at some level of structure, objects are located higher in the structure than adverbs. If one assumes that adverbs are adjoined to VP, while objects are merged as complements of V, then this supports an analysis where the objects raise out of VP. But there is another possibility, i.e. something like the VP-shell analysis of Larson (1988) and Pesetsky (1995), where (certain) adverbial adjuncts are generated within VP below the base position of objects. Because Stjepanovic presents no evidence that objects originate in a position below the adverbs she is considering, the argument for object raising is at best incomplete. Less ambiguous evidence that

lexically case-marked arguments undergo object shift (OS) is available from Icelandic, where various word-order facts have established that objects do originate below negation and certain sentential adverbs, and that they can raise past them under certain circumstances. Lexical case-marked objects do indeed raise past negation in the same contexts where accusative DOs do (thanks to Jóhanna Barðdal, for providing these sentences):

(90) Jón las   bækurnar   ekki.
      John read books-the:A not
      'John didn't read the books.'

(91) Jón hjálpaði Ólafi   ekki.
      John helped   Olaf:D not
      'John didn't help Olaf.'

(92) Jón stal bókunum   ekki.
      John stole books-the:D not
      'John didn't steal the books.'

But this still does not really imply that inherent Case is licensed outside the VP in the Spec of some functional head, which is what Stjepanovic was trying to show with the Serbo-Croatian data. First, it is fairly clear, as I have argued in Chapter 2, that OS is not really motivated by considerations of (C/c)ase. The trigger for the movement instead seems to have to do with specificity, and it is probably more closely related to scrambling than raising to subject (as shown most clearly by the fact that it is not obligatory). Second of all, Icelandic has quirky Case, distinct from normal inherent Case in that the DPs with which it is marked can still become subjects. We already know that they can raise overtly to subject position, so it should come as little surprise that they can also raise overtly to a derived object position. One might expect that in a language like German **all** Case-driven movement for these DPs would be blocked, since this would allow the simplest account for the ban on subjecthood.

However, German does not have overt OS of the Icelandic type, so this idea cannot be tested.

So the technical treatment of inherent Case within Minimalism is problematic. The whole attraction of the GB analysis was that one could claim that assigning inherent Case was a lexical property of certain verbs, which in the terms of that theory could straightforwardly be implemented in such a way as to ensure blocking of the assignment of structural Case. In Minimalism we are presented with a paradox of sorts because we would like Case-assignment/checking to be a uniform process, yet we need it to somehow operate differently with inherent Case. There is no longer any simple answer to the question of where lexical properties are taken care of, let alone one that will automatically be ordered before the satisfaction of structural requirements.

Another problem arises if we adopt the view of radical Late Insertion found in many versions of Distributed Morphology (Halle and Marantz, 1993, 1994, Marantz, 1995, 1997). This claims that all lexical/phonological material is inserted after Spell-out on the PF branch, crucially including lexical roots. The illustration given by Marantz (1995) is that, as far as the syntax are concerned, *cat* and *dog* are identical, and it is not until Lexical Insertion that the two are distinguished. This is a very strong hypothesis which amounts to saying that purely lexical features are irrelevant to the narrow syntax. It forces us to posit (and justify) deeper syntactic distinctions between root classes in order to explain their behavior, rather than simply stipulating lexical features to do the work. The implication for inherent Case is that the lexical features per se on a given verb cannot affect the earlier stages of the derivation, including that at which raising to subject takes place. That is, we cannot simply say, as the standard account does, that an object can be blocked from becoming subject as a result of something specified in the lexical entry of *helfen*. Rather, there must be

something more going on here, something purely syntactic about the environment in which *helfen* can appear that brings about this restriction. Of course, this argument is purely theory-internal. Other versions of DM (Halle, 1990, Embick and Halle, in preparation) and related theories (e.g. Beard, 1995, Chomsky, 2000) assume Late Insertion only for non-lexical material, and Embick (2000) presents evidence from Latin deponent verbs that the identity of verbal roots is indeed established within the narrow syntax. Nonetheless, the discussion of this issue helps to make clear just what is at stake theoretically in claiming that an idiosyncratic lexical morphological feature can affect something like A-movement.

One final problem, often discussed in the literature, is the correlation between lexically-specified case-marking and the semantic or thematic properties of the DPs that receive it. Recall that the standard account assumes that the property of assigning inherent Case is an idiosyncratic morphological feature on certain verbal lexical items. No explicit connections are drawn between this feature and other properties of the verbs in question. As a result, no predictions are made about which verbs will have such features in their lexical entries in a given language, in effect leading us to expect that they will be randomly distributed throughout the lexicon. However, it has been noted repeatedly that the cases assigned to verbal objects correlate with the semantics of the relationship between the verb and the object, both within and across languages. In traditional grammar and structuralist linguistics this was taken as a given, and a number of attempts were made to formulate, for specific languages, the semantic constraints on the assignment of each morphological case. The structuralists achieved a certain degree of sophistication in this area, e.g. in Hjelmslev (1935) and Jakobson (1936), making crucial use of the notion of a default case (traceable back to Pāṇini) and debating the efficacy of various types of semantic definition (Grundbedeutung/signification fondamentale vs. Hauptbedeutung/signification principale vs.

Gesamtbedeutung/signification générale). However, in so doing they reached a degree of precision that made apparent the mismatches between the semantics and the morphology, pointing up the apparent exceptions that any semantically anchored theory of case must deal with. For example, it is not difficult to find two synonymous verbs which disagree in the case they assign to their object, like German *gratulieren* and *beglückwünschen*, both meaning 'congratulate', of which the first assigns inherent dative while the second assigns structural accusative. Data like these led to the common conclusion within Generative linguistics that morphological case-marking could not be reliably predicted by semantic means (with some notable exceptions, like Case Grammar as formulated by Fillmore, 1968).

This is the background for the standard GB theory of inherent Case, which places restrictions on which θ-roles should go with which cases. Chomsky (1981, 1986b, p. 193) argues that inherent Case is assigned by a lexical category to an NP that it directly θ-marks. He does say that "Inherent Case is presumably closely linked to θ-role" (Chomsky, 1981, p. 171), but he does **not** make any claims about specific θ-roles being associated with specific cases. Similarly, Haider (1985) writes

> For non-arguments, I assume that . . . there is a direct connection between morphological Case and thematic function, similar to the realization of lexical Case on arguments, but with the difference that **lexical Case on arguments is not tied to unique thematic values** [p. 80, emphasis added].

By "lexical Case on arguments", Haider means what we are calling inherent Case, and he explicitly says that this is tied to θ-role assignment but not to unique thematic values. The real motivation that Chomsky and Haider have for assuming the θ-marking requirement on inherent Case-assignment is the ban against inherent Case-assignment in ECM constructions. Nothing more is claimed or implied.

Of course, this does not mean that this account could not be extended in some way to encode relationships between cases and θ-roles, but it must be kept in mind

that this would require additional stipulations or assumptions, and does not in any way follow from the primitives of the theory. Indeed, a number of authors have proposed such extensions while discussing data from languages like German. Most of them, however – including e.g. van Kemenade (1987), who argues that inherent Case-assignment in Old English is tied to specific θ-roles – are not explicit on precisely how this is to be formalized in terms of Chomsky and Haider's system. Others have argued for such a connection and (as far as I can tell, mistakenly) assumed that it is already part of the standard account. E.g. van Gelderen (1996, 1999) also discusses the assignment of accusative, dative and genitive in Old English as being tied to specific θ-roles, and cites both Haider (1985) and Chomsky (1986b) in support of the idea that this is what we should expect for inherent Case, even though this does not really seem to be what those authors intend. The problem is precisely that the most obvious formalizations of the connection between case-marking and θ-role assignment run into serious difficulties. Specifically, they have the same problem with phenomena like the *gratulieren/beglückwünschen* constellation as earlier, explicitly semantic theories. I suspect that this is why Chomsky and Haider never attempted to formulate a connection of this type. The point is not so much that the standard theory of inherent Case is technically incompatible with a story about the thematic patterns, or that those who formulated it were ignorant of those patterns, but rather that it is far from clear what a satisfactory treatment should look like. On the one hand, we have clear correlations which we would like our theory to capture, but on the other we have exceptions to those correlations as normally understood that will cause problems for theories designed to capture them. Furthermore, in order to fit in with our general ideas about the architecture of the grammar, a linking between specific θ-roles and cases would actually require a significant modification to the standard theory of inherent Case. The link cannot be directly from something at

LF to something at PF, because the former does not feed into the latter, so either θ-roles are determined within the narrow syntax, or they are derived at LF from some other syntactic feature or factor which is itself present in the narrow syntax. Either way, we would need to posit an additional syntactic difference between inherent and non-inherent objects.

Now, these issues only come up if there really are consistent patterns in the θ-roles of inherent Case-marked objects. In fact, mismatches and exceptions notwithstanding, an undeniable tendency for inherent case-assignment to go with certain semantic or thematic roles has consistently been found in research on specific languages with rich case-marking systems. Thus there has been a recurring expectancy in the related literature, sometimes explicit, sometimes not, that the theory of inherent Case must incorporate some sort of linking with specific θ-roles. To mention a mere fraction of what has been written about the subject, just on the Germanic languages, see van Kemenade (1987), van Gelderen (1996) on Old English, Wegener (1991), Wunderlich (1996), Blume (1998), McIntyre (2003), Hole (to appear) on German and Barðdal (2001), Maling (2001, 2002), Svenonius (2002) on Icelandic. For example, Blume (1998) finds that agentive verbs that take a single dative object (i.e. not including ditransitives) in German, Hungarian, Polish, Rumanian, Tongan, Samoan and Maori fall into three clear semantic classes:[4]

Verbs of communication/social gesture *zuhören* 'listen to', *antworten* 'answer', *schreiben* 'write to', *winken* 'wave to', *gratulieren* 'congratulate', *danken* 'thank', *vorlesen* 'read to', *drohen* 'threaten', *kündigen* 'give s.o. notice'.[5]

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[4]The fact that the correlation is not a quirk of German, but a real cross-linguistic pattern is strong evidence against the idea that the case-marking is the result of an idiosyncratic lexical feature. It is for this reason that I have chosen to present evidence from Blume (1998) rather than some of the others that are only concerned with a single language, but as I am mainly concerned with German in this chapter, I will only give German examples of the verbs in question.

[5]Note that even in English a number of these verbs take objects with special marking, in the form of overt PPs with *to*.

Verbs of relative motion *folgen* 'follow', *begegnen* 'meet', *ausweichen* 'dodge'.

'Obey' verbs *gehorchen* 'obey', *dienen* 'serve', *helfen* 'help'.

Blume argues that these classes can be uniformly captured by supposing that dative case is assigned to an argument if, in the sense of Dowty (1991), it shows proto-agent properties relative to the temporally or causally secondary event of a two-event predicate and no proto-patient properties. This makes more or less the right predictions, and it allows the dative that is assigned to the objects of these verbs to be unified with that which is assigned to the indirect object of double object verbs like *geben* 'give' and *kaufen* 'buy (s.o. s.t.)', under the by now fairly standard idea that such predicates are composed of a sub-event of transfer of possession and a sub-event of causation. Interestingly enough, Blume's formulation of the semantic constraints on dative assignment are strikingly similar in spirit to that of Svenonius (2002) for Icelandic, even though the two are working within rather different frameworks and do disagree on some non-trivial matters.

Indeed, it seems that Blume (1998) is on the right track, but there are some important problems for her specific proposal. The first is that there is an additional class of verbs with inherent dative objects in German and other languages which she does not discuss, because she is explicitly concerned only with agentive predicates. This is the class of non-agentive experiencer verbs, some examples of which are given below:

Experiencer verbs *gefallen* 'be pleasing to', *gehören* 'belong to', *scheinen* 'seem to', *einfallen* 'occur to'.

The issue for Blume is that her account of the other instances of the dative crucially depends on the relevant DP being an argument of a subordinate event. While it is natural to posit two sub-events for the agentive verbs (corresponding essentially to

the decomposition of the verb into a lexical V head and an agentive/causal ν head), it is considerably less reasonable to do so for statives like *gefallen* and *gehören*. This problem is not fatal for the idea that semantic constraints can be formulated for case-assignment, it just means that the particular constraints need some tweaking. A deeper problem is presented by the *gratulieren/beglückwünschen* type of counterexamples. Blume is of course aware of this issue, and her response is embedded in the framework she is assuming, specifically the Dowty-style view of thematic roles. She argues that the semantic constraints she formulates are not so much principles of synchronic grammar as constraints on the lexicon and children's acquisition thereof. That is, there are universal tendencies in argument structure in the sense of the mapping of semantic roles to subject, object and dative argument positions, which have an effect on and simplify the language acquisition process. Again, I will argue below that this is on the right track, although it will take some doing to flesh out the details of what all of this means in the framework I assume, which is rather different than that used by Dowty and Blume. I will propose that if we link inherent case-marking to syntactic argument structure positions rather than directly to semantic role types, the long-standing problems with mismatches and exceptions to generalizations can be overcome. For the time being, I will simply note that the mismatches generally seem to go only in one way: case-marking seems to more reliably predict semantic role than semantic role predicts case-marking. That is, while there are verbs that could be placed in one of the classes delineated above which do not assign dative to their objects, like *beglückwünschen* and object experiencer verbs like *erschrecken* 'startle, frighten', two-place verbs of other semantic classes, like verbs of creation (e.g. *machen* 'make') or verbs of physical contact (e.g. *schlagen* 'beat, hit') never mark their sole object dative.

Other work on datives in German from very different theoretical viewpoints has converged on the idea that the semantic role involved is somehow related to possession. Thus Wunderlich (1996) proposes that dative arguments are typically introduced by a semantic relation POSS which extends the lexical predicate. This relation is underspecified, and corresponds only roughly to what we would normally think of as possession, but it restricts datives to environments where there is some other entity that they can enter into the relation with. This is quite simple with recipient datives as in 93a, where the eventuality of the lexical predicate causes the POSS relationship to come about, but is also comprehensible with so-called pertinence datives as in 93b, where the POSS relationship exists independently.

(93)   a. Sie gab ihm   die etruskische Vase.
          she gave him:D the Etruscan   vase
          'She gave him the Etruscan vase.'

       b. Sie lief ihm   in   die Arme.
          she ran him:D into the arms
          'She ran into his arms.'

Hole (to appear) argues that datives are introduced by a head which relates them to the main predicate and requires that they bind a variable lower in the structure, where the variable is frequently the (implicit) possessor of an overt DP. McIntyre (2003) similarly proposes that datives are introduced in the specifier of a syntactic head which he labels HAVE. While many instances of the dative do not correspond to what we might call real possessors, he demonstrates that paraphrases with verbal *have* are quite generally available. An important point that he makes is that the HAVE relationship is not necessarily between the dative argument and some other DP. Rather, in most cases, the 'possessed' entity is an eventuality, which he encodes by letting HAVE take either a DP or a VP complement. For example, in 94, it need not be the case that the man owned the dog at any point.

(94) weil   dem Mann ein Hund weggelaufen ist.
      because the man:D a   dog:N away-run   is
      'because the man had a dog run away from him'

It could have been a dog that he was sitting, or even a dog he had never seen before that ran away from him as he approached. Yet the English translation involves the verb *have.* It would be plausible here to say that what the man had was a dog run away from him, not that what the man had was a dog, thus the head HAVE would take the entire VP as its complement here. In an example like 93a, it may well be that the complement of HAVE is just the DP *die etruskische Vase.*

Now, it would be incorrect to say that the proper semantic analysis of German datives has been clearly established, and it would be naive to claim that substantive differences do not remain between the claims of the researchers note here. Nonetheless, a good deal of progress has been made on this issue, and a certain amount of consensus has been reached. At the very least, there is agreement that the semantic patterns are real, and furthermore that they include 'indirect object' datives in standard ditransitives as well as the 'inherent' datives in one- and two-place constructions that are the main focus of this chapter. In the following sections I will have a great deal more to say about the parallels between these groups.

To summarize, then, the standard account of inherent Case from the Government and Binding era falls short on a number of counts. In its simplest and most attractive form, it is contradicted by the facts of Icelandic, runs the risk of being circular and stipulative, raises a host of technical problems and fails to account for correlations in the semantic/thematic properties of inherent Case-marked objects. I would like to suggest the failure lies in the assumption that the only thing that distinguishes inherent objects from structural accusative objects is the way that they are assigned (C/c)ase, with all of their other properties deriving ultimately from this. Of course

that assumption is inconsistent with the central hypothesis of this dissertation. More importantly, however, it denies us the ability to say anything about θ-roles and argument structure and puts us at a loss to deal with languages like Icelandic.

Note at this point that the situation here is familiar, in that case seems to be responsible for syntactic and semantic phenomena which it by rights should not be able to affect. This is precisely what we had to deal with in Chapter 3, and the solution I will propose here follows the same strategy as the one followed there. Specifically, I will propose that there is a hidden syntactic fact which is responsible for the surface morphological case, the syntactic and semantic properties that we have already discussed, and a host of others that will come up in the following sections. In other words, I will suggest that inherent dative objects in German are **syntactically** distinct from normal direct objects, and that this syntactic difference is not derivable from the morphological case assigned, but rather is responsible for it. The nature of this difference is suggested by both the morphology and the semantic/thematic restrictions. That is, there is another class of arguments in German that is regularly marked dative and plays the same type of semantic role as the inherent datives, i.e. the indirect objects. In the rest of this chapter, I will argue that inherent datives in German are, in a well-defined syntactic sense, the same as indirect objects, and will demonstrate how this can explain a series of morphological, syntactic and semantic parallels between the two types of DPs.

4.3   The structures of German indirect objects

To serve as the basis for my argument that inherent dative objects are in some sense the same as indirect objects, I will first show in this section that German IOs come in two main types. For each type I will introduce some of its crucial properties and

propose a basic structural analysis. In the next section I will then demonstrate that there are two analogous types of inherent datives and show that they have the same properties as the IOs in relevant respects.

4.3.1 Two types of IO

There is fairly general agreement in the recent literature that German has two structurally distinct classes of verbs that take one dative DP and one accusative DP (see e.g. Wegener, 1991, Haider, 1993, Fanselow, 2000, Meinunger, 2000, McIntyre, 2003, Cook, 2004). The two classes can be conveniently referred to by mnemonics based on the unmarked order of the two objects. The D-A class includes *schenken* 'give as a gift', *kaufen* 'buy', *verweigern* 'deny' and productive constructions with benefactive datives and the like. The A-D class includes verbs like *aussetzen* 'expose (to)', *unterziehen* 'subject (to)', *vorausschicken* 'send ahead of', and a number of other productive formations with prepositional prefixes.

These two classes can be distinguished by a series of tests. First of all, as implied by the names I have given them, they differ in the unmarked ordering of the two objects under neutral intonation (Haider, 1993, see also Lenerz (1977)).[6] Thus with D-A verbs like *trocknen* 'dry' with a benefactive IO, the dative precedes the accusative in the unmarked situation, as in 95. The order where the accusative precedes the dative, as in 96, is odd in a neutral context. On the other hand, with an A-D verb like *aussetzen*, the accusative typically precedes the dative, as in 97, and the inverse order, with dative before accusative as in 98, is odd:

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[6] Some authors, including Vogel and Steinbach (1998), have argued that these ordering preferences do not reflect a structural difference between the verb classes, but rather result from a preference for animate arguments to precede inanimate ones. However, there is evidence that when the animacy facts disagree with the class membership of a verb in terms of ordering predictions, it is the latter that wins out (see Fanselow, 2000, McIntyre, 2003, for relevant data and argumentation). Furthermore, the restrictions placed on ordering by animacy cannot explain the differing behavior of these verb classes with respect to the other tests discussed below.

(95)   wenn man dem Kind   die Tränen trocknet
         if   one the child:D the tears:A dries
         'if one dries the child's tears'

(96)   ? wenn man die Tränen dem Kind trocknet

(97)   wenn man die Kinder   der Gefahr   aussetzt
         if   one the children:A the danger:D exposes
         'if one exposes the children to the danger'

(98)   ? wenn man der Gefahr die Kinder aussetzt

The two classes also differ in where *nicht* 'not' can appear with a sentential nega-
tion interpretation under neutral intonation. With D-A verbs like *geben* 'give',[7] *nicht*
can receive this interpretation either when it appears between the two objects or in
the immediately pre-verbal position, as shown in 99. However, with an A-D verb like
aussetzen, sentential negation is restricted to the position between the two objects, as
shown in 100. If *nicht* occurs pre-verbally, it is preferably interpreted as constituent
negation on the verb (data from Wegener, 1991, p. 96):

(99)   Sie hat dem Jungen (nicht) das Buch   (nicht) gegeben.
         she has the boy:D (not)   the book:A (not)   given
         'She didn't give the book to the boy.'

(100)   Sie hat das Kind   (nicht) der Kälte   (?nicht) ausgesetzt.
         she has the child:A (not)   the cold:D (not)   exposed
         'She didn't expose the child to the cold.'

Furthermore, standard constituency tests based on topicalization patterns indi-
cate a clear distinction between these two verb classes. The standard underlying
assumption is that only constituents can move to the position (generally taken to be
Spec-CP) preceding the finite verb in a V2 clause. In sentence 101a, with the D-A

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[7]*Geben* may be one of a small number of verbs that can occur in either the D-A or the A-D
structure. I give the examples with *geben* solely because this is how they appear in Wegener (1991).
If we replace *geben* with a verb that can only appear in the D-A structure, like *kaufen*, the judgments
are unaffected.

verb *kaufen* 'buy', the accusative object and the nonfinite verb have fronted together, showing that they form a constituent to the exclusion of the dative argument (in this instance *einer Frau*) which has been left behind. The analogous fronting of the dative with the nonfinite verb to the exclusion of the accusative is considerably worse, as in 101b, suggesting that the dative and the verb do **not** form a constituent that excludes the accusative. The behavior with the A-D verb *aussetzen* 'expose to' is precisely the opposite. Fronting of the dative with the nonfinite verb to the exclusion of the accusative is good, as in 102a, while fronting of the accusative with the verb to the exclusion of the dative is much worse, as in 102b (data again from Wegener, 1991):[8]

(101) a. [Blumen kaufen]$_i$ kann man einer Frau   immer t_i.
           flowers buy   can one a   woman:D always
           'One can always buy a woman flowers.'

       b. *[Einer Frau kaufen]$_i$ kann man Blumen immer t_i.

(102) a. [Der Kälte ausgesetzt]$_i$ hat er das Kind t_i.
           the cold:D exposed   has he the child:A
           'He has exposed the child to the cold.'

       b. *[Das Kind ausgesetzt]$_i$ hat er der Kälte t_i.

There are also consistent semantic/thematic differences between the D-A and A-D verb classes. Thus D-A verbs typically take an animate experiencer, benefactive,

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[8]Some sentences showing the orders starred here have been reported as grammatical in the literature, e.g. Vogel and Steinbach (1998) give *Dem Jungen gegeben hat er das Buch.* This is not entirely unexpected, since such sentences should be derivable by scrambling the DO out of the VP and then topicalizing the VP-remnant. What is important is that sentences of this type are at best highly marked compared to ones where VP topicalization is not preceded by scrambling. This is precisely what we predict, because pragmatic motivation will be needed for both the topicalization and the scrambling, whereas in sentences like 101a motivation is needed only for the topicalization. An account that makes no structural distinction between the verb classes has no account for this asymmetry. Note also that if it is correct that *geben* can appear in either the D-A or the A-D structure, then examples like the one given by Vogel and Steinbach (1998) could be derived from the A-D structure, and thus would not be showing us anything surprising. This would explain why this example is so much better than the one cited in the text with *kaufen*, which uncontroversially cannot appear in the A-D structure.

recipient or pertinence dative. These are the semantic types that Wunderlich (1996), McIntyre (2003), Hole (to appear) have attempted to unify under possession-like analyses as discussed above. The dative objects of A-D verbs, on the other hand, typically have directional or locational semantics and are usually (but not always) inanimate. An interesting consequence of this is that the English translations of D-A verbs (e.g. *give* and *buy*, translating *geben* and *kaufen*) are frequently able to appear in the double object construction, while those of A-D verbs (e.g. *expose* and *send ahead*, translating *aussetzen* and *vorausschicken*) are barred from doing so.[9]

(103)   I gave John the book.

(104)   I bought my girlfriend a necklace.

(105)   a.   * I exposed the cold my children.

      b.   I exposed my children to the cold.

(106)   a.   * The general sent his army a group of scouts ahead.

      b.   The general sent a group of scouts ahead of his army.

Finally, these two verb classes show different behavior with respect to the so-called recipient passive. This is a passive-like construction formed with either *kriegen* or *bekommen* (both meaning 'receive' or 'get'), plus the past participle of the main verb. As its subject it takes an argument which would be marked dative in a normal active clause with the same verb.[10] However, it seems that it is only well-formed with D-A verbs, as in 107 (from Abraham, 1995, ch. 3), not with A-D verbs, as in 108

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[9]The examples with *send ahead* in 106 are given to show that the problem is not a lexical one. It has frequently been noted that Latinate verbs in English are typically not allowed to occur in the double object construction, and one could use this to explain 105, thereby eliminating the argument being made here. But of course not only is *send* non-Latinate, it is also very much able to appear in the double object construction as a simplex verb (*Professor Frink sent Jasper the books*) or when occurring with other particles (*Lenny sent Carl up a drink*).

[10]I will not take any position on the question of how the recipient passive is to be analyzed (see e.g. Haider, 1985, Fanselow, 1987, Cook, 2004, for discussion). All that is relevant here is that the recipient passive consistently picks out the same classes of verbs and objects as the other tests presented here.

and 109 (Wegener, 1991, p. 95):

(107)   Der Junge bekam eine Lederhose   geschenkt.
         The boy:N got   a   leather-pants:A given

(108)   * Die Kälte bekommt das Kind ausgesetzt.
         the cold   gets   the child exposed
         intended: 'The cold has the child exposed to it.'

(109)   * Das Original kriegt die Kopie angeglichen.
         the original gets   the copy   brought-into-line
         intended: 'The original has the copy brought into line with it.'

4.3.2   The structure of D-A verbs

We have good evidence then to support the idea that there are two different ditransi-
tive structures in German, in both of which one object is marked dative and the other
accusative. The question now is how we should analyze these structures. While many
of the details are underdetermined, the tests given above (especially the topicalization
test) actually give us a fair idea of what we have in terms of hierarchical structure
and constituency. For the D-A class verbs we can assume a fairly standard structure
where the accusative argument and the verb form a constituent to the exclusion of
the dative argument. The question is how exactly the dative should be introduced. I
will assume (following Marantz, 1993, McIntyre, 2004, among others) that the dative
is merged in the specifier of an applicative-like head, which I label ν_{APPL}:

(110)

$$\nu P$$

DP $\quad\quad$ ν'

Sie

$\nu\quad\quad\quad$ $\nu_{APPL}P$

DP $\quad\quad\quad$ ν_{APPL}'

dem Jungen $\quad$ $\nu_{APPL}\quad\quad$ VP

DP $\quad$ V

das Buch $\quad$ schenkt
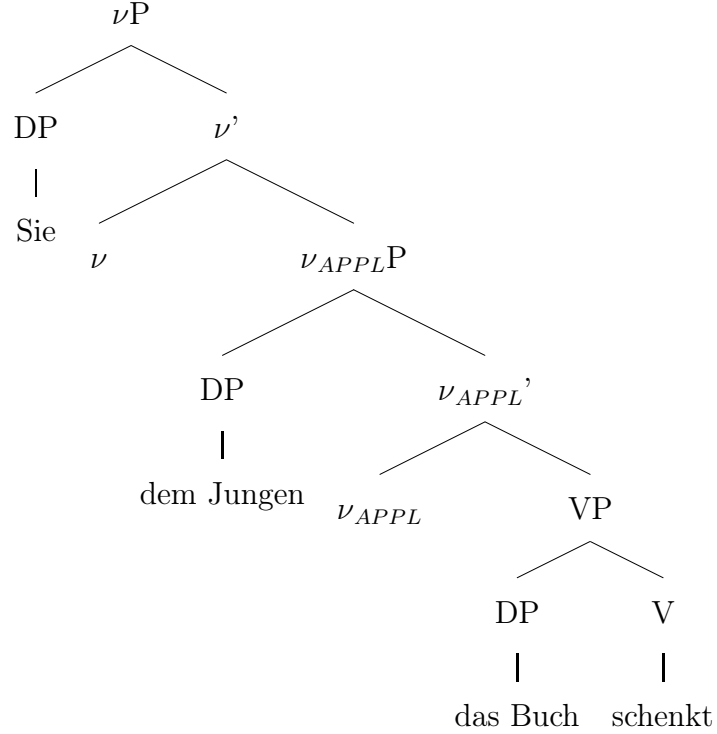
In addition to the configurational facts, this structure captures the notion that the (morpho-syntactic) addition of the dative argument accompanies a semantic extension of the verbal predicate in V, a notion common to the semantic accounts of the dative discussed above.

Such an analysis also allows us to say that the dative case on the IO is assigned not by specific lexical verbs, as is standardly claimed of inherent cases, but by the functional structure in which it is introduced. That the dative with German ditransitives is in some sense a structural case is argued for by Fanselow (1987), Czepluch (1987, 1988), Wegener (1991), Müller (1995), Abraham (1995).[11] That is, in this particular example it is not the verb *schenken* that is responsible for the dative on *dem Jungen*. Rather, what is relevant is the fact that *schenken* appears in a configuration with the (non-lexical) head ν_{APPL}, which itself introduces a DP and assigns it dative case.

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[11]I am not arguing here that the dative is structural in the same way that the nominative and accusative are, simply that it is not lexical. Thus arguments, e.g. by Haider (1985), that the dative cannot be structural because it does not participate in case alternations, do not apply to my analysis.

That this is the right idea is suggested initially by the fact that the dative-accusative pattern is indisputably the most common and least marked for German ditransitive verbs. It is quite clearly the default option for realizing a predicate with two objects. Of course, this does not in principle exclude the possibility that every verb which follows this pattern is explicitly specified to take a dative object. However, other evidence makes this extremely unlikely.

First of all, dative IOs occur predictably with novel verbs that have the right semantic/aspectual properties. This goes for borrowings like *faxen* 'fax', *SMSen* 'send via SMS/text message' and *mailen* '(e-)mail' as well as innovative formations according to productive derivational patterns, as shown in 111 and 112:

(111) Den Hof   werden wir Ihnen natürlich bebaumen.
      the courtyard:A will   we you:D naturally betree
      'We will of course plant the courtyard with trees for you.'

(112) Kannst du   mir die Brezel   bebuttern?
      can   you:N me:D the pretzel:A butter
      'Can you butter me the pretzel?'

Sentence 111 was constructed by Wegener (1991), with the verb *bebaumen* being derived according to a semi-productive process that creates verbs by prefixing *be-* to a locatum, in this case *Baum* 'tree'. Although the verb is novel, it is clear to native speakers that it can take a benefactive IO in the dative case as indicated here. Example 112, which Wegener reports hearing, illustrates exactly the same pattern, the verb this time based on *Butter* 'butter'. The point to note here is that the dative case assigned to these IOs cannot be explained by a feature in their lexical entries, because they have no pre-existing lexical entry. Rather, there must be a productive pattern which they are following.

Second, the dative-accusative pattern is the one adopted by verbs which in older stages of the language followed the now moribund accusative-genitive pattern (also

from Wegener, 1991):

(113) a. jemanden   seines Wunsches gewähren (archaic)
          someone:A his   wish:G   grant
          'to grant someone his wish'

       b. jemandem seine Bitte   gewähren (modern)
          someone:D his   request:A grant
          'to grant someone his request'

Third, the D-A pattern is recreated productively on the fly in the guise of so-called free datives, which are conditioned not by the identity of the lexical verb, but by broader semantic concerns (see e.g. Wegener, 1991, Abraham, 1995, Maling, 2001):

(114)   Er repariert das Auto.
          he repairs   the car:A
          'He repairs the car'

(115)   Er repariert dem Mann   das Auto.
          he repairs   the   man:D the car:A
          'He repairs the car for the man.' or 'He repairs the man's car.'

(116)   Er stiehlt seiner Freundin   einen Ring.
          he steals his   girlfriend:D a   ring:A
          'He steals his girlfriend a ring.'

(117)   Er stiehlt dem Juwelier   einen Ring.
          he steals the jeweler:D a   ring:A
          'He steals a ring from the jeweler.'

So to a normal transitive verb like *reparieren* 'repair' can be added a dative with benefactive (as in the first translation of 115) or pertinence interpretation (as in the second).[12] Similarly, to the transitive *stehlen* 'steal' can be added a dative with either recipient/benefactive interpretation, as in 116 or malefactive interpretation, as in 117.

Now, one might be tempted to argue, as do Haider (1985), Vogel and Steinbach (1998), that these datives are adjuncts, due to the very freedom of their appearance.

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[12]So-called 'pertinence datives' are a kind of affected possessor. See Wunderlich (1996), McIntyre (2003), Hole (to appear) among others for extensive discussion.

This is made somewhat less attractive by the clear semantic relationship between these and IOs which are clearly obligatory verbal arguments. The clinching evidence, however, is that two datives of this type cannot co-occur in a single clause, as shown by 118 and 119, nor can a so-called free dative co-occur with a clearly argumental IO, as shown by 120:[13]

(118) * Er repariert dem Mann seiner Frau das Auto.
          he repairs   the man:D his   wife:D the car:A
          intended: 'He repairs for the man his wife's car.'

(119) * Er stiehlt seiner Freundin   dem Juwelier einen Ring.
          he steals his   girlfriend:D the jeweler:D a   ring:A
          intended: 'He steals his girlfriend a ring from the jeweler.'

(120) * Er hat seiner Freundin seiner Mutter ein Kleid geschenkt.
          he has his:D girlfriend his:D mother a   dress gifted
          intended: 'He gave his mother a dress for (on behalf of) his girlfriend.'

It would appear, then, that the dative case on German IOs is not lexical, but is predictably assigned based on a DP's appearance in a given structural configuration. That is, the appearance of the dative in the above contexts is not a fact about the lexical items *stehlen*, *reparieren* and *schenken*, but rather a more general fact about the German language and the dative case. The idea that certain verbs are inherently specified to take a dative IO is correct only to the extent that some may be inherently specified to appear in an argument structure that contains the position reserved for datives. This is treated straightforwardly in terms of the analysis of D-A structures given in and around 110 above. Since the IO of a D-A verb occurs in a unique structural position, Spec-ν_{APPL}P, we can simply say that dative case is assigned to DPs that are merged in that position. Given the existence of the free dative and other

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[13]As McIntyre (2003) points out, the counterexamples to this restriction given by Vogel and Steinbach (1998) are invalid because they either involve the irrelevant ethical dative, have a multi-clausal structure or are rejected by informants.

productive patterns of use of the D-A construction, we can suppose that this head is freely available to extend verbal predicates to the extent that the resulting structures can be given non-deviant interpretations. Since Spec-ν_{APPL}P is a unique position, we have an explanation for why only one dative argument of this general type can occur per clause, contrary to what we might think if free datives were adjuncts.

4.3.3 The structure of A-D verbs

For the A-D class things are not quite so simple. The topicalization test indicates a structure where the dative argument and the verb form a constituent to the exclusion of the accusative argument, i.e. the opposite of what we have for the D-A class. The accusative with these verbs gives every indication of being a normal, structural accusative direct object. For example it becomes the nominative subject in the passive:

(121) a. Diese Kinder   sind   einer großen Gefahr   ausgesetzt worden.
          these children:N are:3PL a   great danger:D exposed   become
          'The children were exposed to a great danger.'

       b. Jeder Student   wird   einer gründlichen Prüfung unterzogen.
          each student:N becomes a   thorough   exam   subjected
          'Each student is subjected to a thorough exam.'

Thus we can start from the premise that the accusative arguments are in the same argument structure position with both verb classes, with the datives being different, an idea which is consistent with the tests that distinguish the class. We then need to find a place for the dative lower down in the tree.

Such a strategy is supported on an abstract level by the negation test, as shown schematically in 122. If the accusative is in the same position (labeled 2) with both *schenken* and *aussetzen,* then the lowest possible location for sentential negation, which immediately follows, is also plausibly in the same position (labeled 3) in both

structures. The fact that this (lowest) sentential negation shows up after both objects with *kaufen* but must come between them with *aussetzen* simply indicates that the dative argument with the latter is in a structurally lower position (labeled 4), which is unfilled in the structure with *kaufen*.

		1	2	3	4	5
(122)	*kaufen*	D	A	NEG		V
	aussetzen		A	NEG	D	V

The question, then, is what the nature of this position after sentential negation is. As it turns out, a hint of the answer can be gained from this same negation test (again from Wegener, 1991):

(123) Er hat das Buch (nicht) auf den Tisch (?nicht) gelegt.
he has the book:A (not) on the table (not) put
'He did not put the book on the table.'

As sentence 123 shows, clauses with an accusative object plus a PP complement show the same ordering behavior with respect to sentential negation as clauses with A-D verbs. That is, the PP is in at least approximately the same position as the A-D dative. Note, then, that the locational/directional semantics of these datives is most commonly associated with PPs, both within German and cross-linguistically. I would like to propose, therefore, that the dative in A-D structures is a PP with a non-overt P head (see Wegener, 1991, Meinunger, 2000, for similar proposals):[14]

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[14]In this tree the accusative argument is not the complement of V. However, in the analyses I have presented, there is no instance where a single head takes more than one DP argument. So we can simply define the structural object as the DP argument of V without making any explicit statements about complements and specifiers.

(124)

```
                        νP
                    ┌────┴────┐
                  DP          ν'
                   │      ┌────┴────┐
                  Er      ν         VP
                       ┌───────┴───────┐
                      DP              V'
                       │         ┌─────┴─────┐
                   die Kinder   PP           V
                             ┌───┴───┐       │
                            P       DP    aussetzt
                            │        │
                            ∅    der Kälte
```
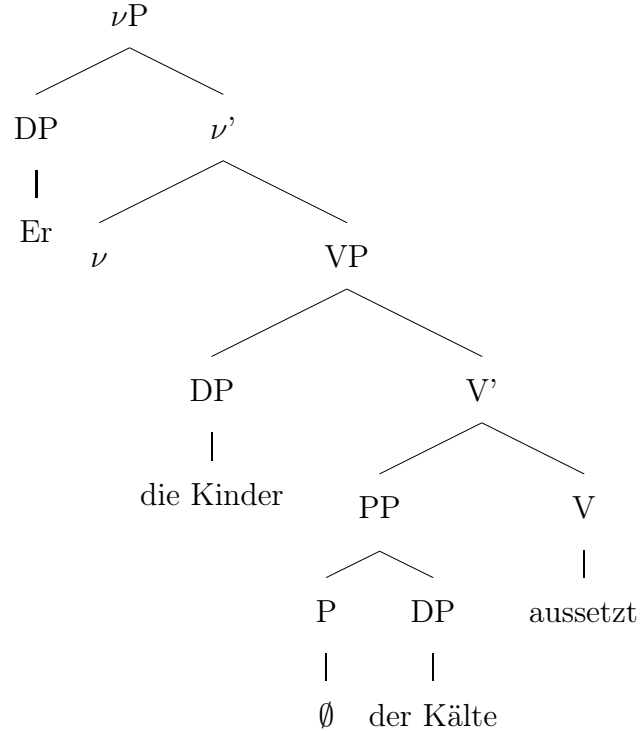
Consider this proposal in relation to the analysis of semantic case-marked DPs given in Chapter 3. There also, following Emonds (1987) and Nikanne (1993), I argued that certain apparently bare case-marked DPs are in fact embedded in PPs with a null P head, where the P relates the DP semantically to the rest of the clause, and in return the overt case-marking allows the content of the P to be recovered. Now, if underlying PPs can appear with marked morphological case and a null P when they are adverbial adjuncts, we would predict that they should also be able to do so when they are verbal arguments, just as PPs with overt heads can be verbal arguments, as in English *Put the book *(on the shelf)*. My claim, then, is that the A-D class verbs are the instantiation of this prediction.

The correct morphological analysis to go along with the syntactic one is actually far from clear here, and may not fully parallel those with the adverbial DPs. One tempting possibility, for which Meinunger (2000) argues, is that the P head with A-D verbs is not null at all, but is incorporated into the verb. For most A-D verbs

this is a fairly attractive idea because they involve separable, prepositional prefixes which could be taken to instantiate the incorporated P head (*aus* in *aussetzen*, *nach* in *nachschicken* 'send s.o./s.t. after s.o./s.t.', *entgegen* in *entgegensetzen* 'place s.t. opposite s.t.'). However, as McIntyre (2003) points out, there are reasons to be cautious regarding such an analysis. For example, some of the prefixes involved, if they were instantiations of the relevant P head, would actually be expected to assign accusative rather than dative here, like *an* in *angleichen* 'make similar to'. It is clear that we want to assume a complex structure for separable prefix verbs in German, since otherwise we would need excorporation to derive word-orders where the prefix and and the verb stem are discontinuous, but the proper structure may well be somewhat more complicated than that implied by the P incorporation idea. Indeed, the positing of an abstract PP in such structures is not entirely secure. I think the parallel with the bare DP adverbials discussed in Chapter 3 is compelling, but precisely how we analyze both those and this low dative type is fairly abstract, and to a certain extent theory-internal. These arguments have the distributional and semantic properties of PPs, and thus in the framework adopted here the natural way to analyze them is with an abstract P. As I noted in Chapter 3, however, matters do not change much if one assumes some other abstract adverbial category which shares properties with P. Cook (2004) presents an analysis that is extremely close in spirit to the one here, but differs in the details because it is framed in LFG terms. Following the general tenets of that framework, which assumes a central role for grammatical functions, she analyzes these low datives as obliques. Thus they are not abstract PPs, but the parallel is maintained in that PPs bear the oblique function as well. Crucially, the contrast with the higher datives with D-A verbs is maintained as well, which she takes to be 2nd objects. Thus while the label used differs, and there are non-trivial differences of detail, the distinctions made and the broad strokes of the

analysis are the same as those presented here.

4.3.4   Implications for semantic/thematic structure

A crucial feature of the analyses I have presented of these two classes of ditransitive verbs is what they allow us to say about the semantic/thematic properties of the arguments involved. I follow Hale and Keyser (1993, 2002, etc.) Baker (1997) and others in assuming that θ-roles, to the extent that they are syntactically determined, are essentially derivative of the position in which DPs are merged into a verb's (or other predicate's) argument structure. Such a view is made possible by the now-standard idea that verbal predicates with multiple arguments are actually composed of multiple underlying syntactic heads, allowing us to say that each argument occurs in a unique structurally-definable position relative to the various heads. Let us look, then, at how this will work with the structures I have proposed.

For both the D-A and A-D classes, I assume following Kratzer (1994), Pesetsky (1995), Chomsky (2001) and many others, a head ν at the top of the verbal complex, which introduces the (typically agentive) external argument in its specifier and has roughly causative semantics. I also assume for both that the main, lexical verbal head is in V, and furthermore that V takes the direct object as its argument. Now, the role associated with the argument of V does not seem to be highly restricted semantically, because the content of V is variable. The ν that introduces external arguments is a closed-class functional item and makes a consistent (if underspecified) contribution to the semantic interpretation, thus the argument it introduces is relatively constrained in its semantic relationship to the rest of the clause. V, on the other hand, is realized by lexical items from a large open class, with far more varied semantics. The semantic role of arguments of V is highly dependent on the lexical semantics of V, and is thus less constrained. There are restrictions and patterns, however, based in large

part on the fact that certain roles, like agentive causer, are typically introduced in the other, more specific positions. The point is, however, that while an honest-to-goodness non-agentive theme cannot appear in Spec-νP, a fairly agentive argument, or an experiencer of some sort, can very well appear as the argument of V. Having arguments in Spec-νP and V characterizes both D-A and A-D class structures as agentive transitives. This captures the fact that they have structural nominative and accusative arguments and are eligible for the passive with *werden*.

The difference between the two classes comes in how the dative argument is introduced. In the D-A class, I posit an applicative head ν_{APPL} between ν and V which takes the dative in its specifier. The choice of labels (which is taken from Anagnostopoulou, 2002) is intended to reflect the parallel between the heads that introduce the nominative and dative arguments. Both are non-lexical heads that extend the main verbal predicate and introduce an extra nominal argument. Note that this makes the prediction that applicative datives, like external subjects, will be semantically more restricted than arguments of V, because like ν, ν_{APPL} is a closed-class item with a consistent semantic contribution. This can help explain the semantic patterns discussed above. The common semantic factor shared by all high datives can be located in this head, whether that turns out to be some abstract form of possession, as argued by McIntyre (2003) or something somewhat different. Note that the idea of something like possession being involved derives the fact that these high datives are usually animate, as possessors are. The introduction of the dative with A-D verbs in a different position is meant to capture the semantic-thematic differences between the two classes. Specifically, as noted above, analyzing them as PPs in the complement of V accounts rather directly for their locational or directional semantics. While the class of prepositions is perhaps not as restricted as those of the heads introducing arguments above V, it is certainly more restricted than V. Note also that, since

prepositional objects are frequently inanimate, but can also be animate, this analysis gets the animacy facts with this class.

Now, a feature of these analyses that needs to be stressed is that the semantic/thematic restrictions on the various argument types are not mediated by independent θ-roles assigned by various heads. That is, I am not claiming that ν assigns an Agent role to its specifier, while ν_{APPL} assigns an Experiencer role and V assigns a Theme role, or even that each head has a set of roles that it can potentially assign. To the extent that θ-roles even make sense in this sort of system, they are purely syntactic and have labels no more specific than 'argument of ν' or 'argument of V'. θ-roles in this sense obviously stand at a significant remove from real semantic roles. The actual semantic relationship of DPs that bear such roles to the rest of the clause depends entirely on the lexical semantics of the relevant head. However, because we can make generalizations about the semantics of the heads themselves, we can also make generalizations about the semantics of the arguments that they take. The beauty of this view is that it correctly predicts that there will be distinct patterns in the semantics of dative objects, but that these patterns will be somewhat fuzzy and liable to exceptions. Dative case is in fact tied to specific θ-roles, but the mapping θ-roles to semantic roles is indirect at best. Thus it is possible for two verbs with very similar semantics to have different argument structures and thus to take arguments with different case-marking properties. That a given event can be conceived of in different ways with different argument structures is empirically well-supported (see e.g. Baker, 1997, for extensive discussion and documentation of this phenomenon). Some of the best-known are variations in experiencer verbs (*Cats frighten Peter* vs. *Peter fears cats*) and the so-called *spray/load* alternation (*John loaded the wagon with hay* vs. *John loaded hay onto the wagon*). I will argue below that the analysis developed here will allow us to handle the variation in dative case-assignment in examples like

the *gratulieren/beglückwünschen* constellation in just this way.

4.4   Inherent objects are indirect objects

Having established the relevant properties of German indirect objects and proposed
analyses for the structures in which they appear, I will now turn my attention back to
the inherent dative objects that are the central concern of this chapter. To begin, note
that, according to the analyses proposed above, both types of dative argument that
appear in ditransitive structures are structurally distinct from the accusative direct
object, which is consistently defined as DP argument of V. In other words – and this is
crucial – the structural definitions of the two types of datives do **not** depend directly
on the presence of an accusative. The lower dative with A-D verbs is actually in a
PP, while the higher dative with the D-A verbs is identifiable as the object occurring
in Spec-ν_{APPL}P. Neither definition requires any additional argument.

   This will allow a precise formulation of the hypothesis introduced at the end of 4.2,
that inherent objects are in some relevant sense the same as indirect objects:

(125)   Inherent dative objects are introduced in the same structural positions as
          indirect objects, i.e. in Spec-ν_{APPL}P or in a PP below V.

Of course, this makes a series of predictions. In the first place, it implies that there
will be two types of inherent dative objects corresponding to the two types of indi-
rect objects, and that they should differ from one another in ways that parallel the
differences between the D-A and A-D classes. I will indeed argue below that two
classes of inherent objects can be distinguished, examples of verbs taking the type
that corresponds to the IO of D-A verbs being *helfen* 'help' and *glauben* 'believe' and
examples of those corresponding to the A-D type being *folgen* 'follow' and *nachlaufen*
'run after'. But before I move on to motivation of these two classes and the related

issues, I will discuss some properties that all IOs and inherent datives have in common which distinguish them from direct objects, i.e. what I am analyzing as arguments of V.

First, and obviously, all of these DPs are assigned dative case. I have presented evidence above that the dative with D-A verbs is structural, in the sense that it is determined by the position in which these arguments are introduced rather than the lexical identity of the governing verb. Similarly, the dative with A-D verbs is assigned not so much by some lexical feature of the verbs as by the null P head that dominates the dative argument. Of course, there is a selectional relationship involving the lexical verb in both constructions, such that particular verbs are specified to occur in the relevant argument structure configurations, but there is no direct relationship between the verb and the case-assignment. This will extend straightforwardly to inherent datives in my analysis, since by hypothesis they appear in just the same structural positions where the dative is specified to be assigned.

We can say something similar about the behavior of the various dative arguments in the passive. Just as all inherent datives are banned from subject position, so are all indirect objects. This is demonstrated by the following examples:

(126)   a.   * Der Mann ist geholfen worden.
                the man:N is helped   become
                intended: 'The man was helped.'

         b.   * Der Mann ist gefolgt worden.
                the man:N is followed become
                intended: 'The man was followed.'

(127)   a.   * Der Mann ist ein Buch gegeben worden.
                the man:N is a   book given   become
                intended: 'The man was given a book.'

         b.   * Der Mann ist sein Schwiegervater ausgesetzt worden.
                the man:N is his father-in-law   exposed   become

intended: roughly 'The man had his father-in-law exposed to him'

Whatever we say to explain the ungrammaticality of IOs as subjects should carry over to inherent datives as subjects. I will consider this issue in some detail in Section 4.6, but for the time being all that is relevant is that the inherent objects and IOs pattern together as my analysis predicts.

There is a series of other tests available for German (and other languages) which pick out structural direct objects to the exclusion of other argument types. While the analyses of the relevant phenomena frequently remain controversial, it is clear that they reflect a real syntactic – not just morphological – difference, which supports the idea that direct objects are structurally defined and distinct. What is crucial for our purposes is that inherent datives go along with IOs and objects of Ps on these tests, as we should expect under the analyses being given here.

In the first place, IOs and inherent datives are (much) more heavily restricted as controllers of secondary predication than DOs are (Haider, 1985, 1997a). Thus the latter can control both depictive and resultative secondary predicates, as shown by 128a and 129a, while the former can control depictives only under very limited circumstances[15] and can never control resultatives, as in 129b.[16]

(128)   a.   Er sah sie   nackt.
             he saw her:A naked
             'He$_i$ saw her$_j$ naked$_{i/j}$.'

        b.   Er half   ihr   nackt.
             he helped her:D naked
             'He$_i$ helped her$_j$ naked$_{i/*j}$.'

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[15]They can only control depictive secondary predicates when no external subject is present, as in passives and unaccusatives (Haider, 1997a, Müller, 2001). When an external subject is present, as in 128b or 128c, the judgments are clear as reported.

[16]For each of the diagnostics being discussed here I have added examples like 128c with the lower type of dative object that occurs with A-D verbs and the inherent verbs like *folgen* and *nachlaufen* to show that they pattern the same way as the higher datives.

c.   Er ist seiner Frau   nackt nachgelaufen.
             he is his   wife:D naked run-after
             'He$_i$ ran after his wife$_j$ naked$_{i/*j}$.'

d.   Er gab ihr   den Apfel   nackt.
             he gave her:D the apple:A naked
             'He$_i$ gave her$_j$ the apple naked$_{i/*j}$.'

(129)   a.   Etwas   verdrießt mich zu Tode.
                 something vexes   me:A to death
                 'Something vexes me to death.'

        b.   * Etwas   mißfällt   mir   zu Tode.
                 something displeases me:D to death
                 intended: 'Something displeases me to death.'

Second, DOs, but not IOs and inherent datives, can be mapped to the genitive that appears with deverbal nominalizations (Maling, 2001). That is, the nominalization of a normal transitive verb like *Rettung* from *retten* 'rescue' can be followed by a genitive DP referring either to the notional object of the verb, as in 130a or its notional subject, as in 130b. When a verb that takes a dative object is nominalized, like *Hilfe* from *helfen*, the following genitive cannot be interpreted as referring to the notional object, only the subject, as in 131a. Similarly, when a double object verb is nominalized, like *Schenken* from *schenken* 'give as a gift', a following genitive can only be interpreted as the notional subject or direct object, not the indirect object, as in 131b. Examples 132a and 132b show that this applies also to the lower dative.

(130)   a.   Die Rettung des Heißluftballonfahrers verlief   ohne   Zwischenfall.
             the rescue   the balloonist:G   proceeded without incident
             'The rescue of the balloonist proceeded without incident.'

        b.   Die Rettungen der   Küstenwache verlaufen in der Regel ohne
             the rescues   the:G coast-guard proceed   in the rule   without
             Zwischenfälle.
             incidents
             'Rescues by the coast-guard proceed as a rule without incident.'

(131)   a. die Hilfe des Priesters
the help the priest:G

'the priest's help/*help given to the priest'

b. das Schenken des Jungen
the giving   the boy:G

'the giving of the boy' (where the boy is given to someone, not where

something is given to the boy)

(132)   a. das Nachlaufen   fremder Menschen
the running-after strange people:G
'running after done by strange people' * 'running after strange people'

b. die Aussetzung des Winters
the exposure   the winter:G

'the exposure of the winter (to something)' *'the exposure (of something)

to the winter'

Third, unlike accusative objects (and subjects), IOs and inherent datives are not

eligible for so-called topic drop (Bayer, Bader, and Meng, 2001). This is the phe-

nomenon whereby, in informal spoken German, known, pronominal topics can be

elided. Consider the following as answers to the question *Hast du den Fritz gesehen?*

'Have you seen Fritz?':

(133) (Den)   kenn' ich nicht.
(him:A) know I   not
'I don't know him.'

(134)   a. *(Dem) hab' ich grad mit seiner Arbeit geholfen.
(him:D) have I   just with his   paper helped
'I just helped him with his paper.'

b. *(Dem) hab' ich grad eine Aufgabe   gegeben.
(him:D) have I   just an   assignment given
'I just gave him an assignment.'

(135)   a. *(Dem) bin ich grad hierher nachgekommen.
(him:D) am I   just hither come-after
'I just followed him here.'

b. *(Dem) hab' ich grad einen armen Studenten ausgeliefert.
   (him:D) have I   just a   poor student:A turned-over
   'I just turned a poor student over to him.'

As shown in 133, this is possible if the pronominal topic is a normal direct object which would be marked accusative if overt. However, 134a and 134b show that higher inherent dative objects and IOs cannot be elided in this way, and 135a and 135b show the same for lower datives.

Other tests have been cited in the literature which show basically the same thing, although the judgments are a bit less clear, and counterexamples can be found, so I will mention them here only briefly, referring the reader to the cited sources. According to Baker (1997), Maling (2001), synthetic compounds containing a nominalized verb and an object of that verb seem to be fully productive only when that object would appear in clausal syntax as a normal accusative DO. When it would be an IO or inherent dative they are much more marked. Thus *Schuhmacher* 'shoemaker', formed from the normal accusative-assigning verbs *machen* 'make', is fully natural, but *Kinderhelferin, Altenhelferin, Armenhelferin* formed from *helfen*, meaning something like 'helper of children, the elderly or the poor', are much less so. From the ditransitives *spenden* 'donate' and *geben* 'give' we have the DO compounds *Blutspender* 'blood donor' and *Geldgeber* 'giver of money', but the analogous IO compounds *Kirchenspender* 'one who donates to the church' and *Armengeber* 'one who gives to the poor' are rather bad.[17] Similarly, Bayer et al. (2001) and Maling (2001) report that indirect and inherent dative objects can never become the subject of a middle construction, while certain DOs can and certain others cannot. See e.g. Bayer

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[17]As Maling (2001) points out, there is one well-known counterexample to this generalization, namely *Krankenhelfer(in)* 'nurse'. Moreover other counterexamples can be found by Google search (Andrew McIntyre, p.c.). Thus it may be too strong to say that compounds of this type are completely out. Nonetheless, the acceptability judgments she reports are real, so it may be best to say that speakers are more resistant to form these compounds with underlying IOs and inherent datives than with accusative DOs.

et al. (2001) in addition to Maling (2001).

4.5 The classes of inherent datives

As discussed above, the separation of the D-A class from the A-D class implies that there are two types of dative object, one which I claim is introduce in Spec-ν_{APPL}P, the other in a PP within VP. But of course, the location of the dative argument is only one variable in potential argument structures. Other variables are the existence of an external subject in Spec-νP and an internal object argument of V. Standard ditransitive verbs are those where both Spec-vP and Comp-V are filled, with the addition of a DP in Spec-ν_{APPL}P for D-A verbs like *kaufen* and a DP in Comp-P for A-D verbs like *aussetzen*. My hypothesis in this chapter is that what are called inherent dative constructions are actually just like either the D-A structure or the A-D structure, but with one or both of the other argument positions empty as well. This predicts a whole array of logically possible classes, the most important of which I will discuss here, divided into two sets defined according to where the dative appears.

4.5.1 Argument structures with the higher dative

In this subsection I will consider verbs that take a dative argument in Spec-ν_{APPL}VP. There are three main subclasses here, depending on whether the structure also has an argument in Spec-νP, VP or neither. The members of these classes will differ predictably in word order facts, agentivity and related matters, but they should all have in common the thematic restrictions on their dative argument, which should be the same as those on the dative with D-A verbs. Given the discussions above, we expect these restrictions to be fuzzy, but clearly recognizable. These are the datives that have been analyzed as some sort of abstract possessors (Wunderlich,

1996, McIntyre, 2004) which, descriptively speaking, are instantiated as beneficiaries, recipients, experiencers and pertinence possessors.

4.5.1.1 *helfen*-class verbs

The first class of high inherent dative verbs includes what Blume (1998) termed the 'verbs of communication/social gesture' and 'obey verbs', like *helfen* 'help', *glauben* 'believe' and *gehorchen* 'obey'. The non-dative argument of these verbs is agentive, so we can take it to be an external subject in Spec-νP. This yields a structure like D-A verbs without an object in Comp-V, as in 136:[18]

(136)
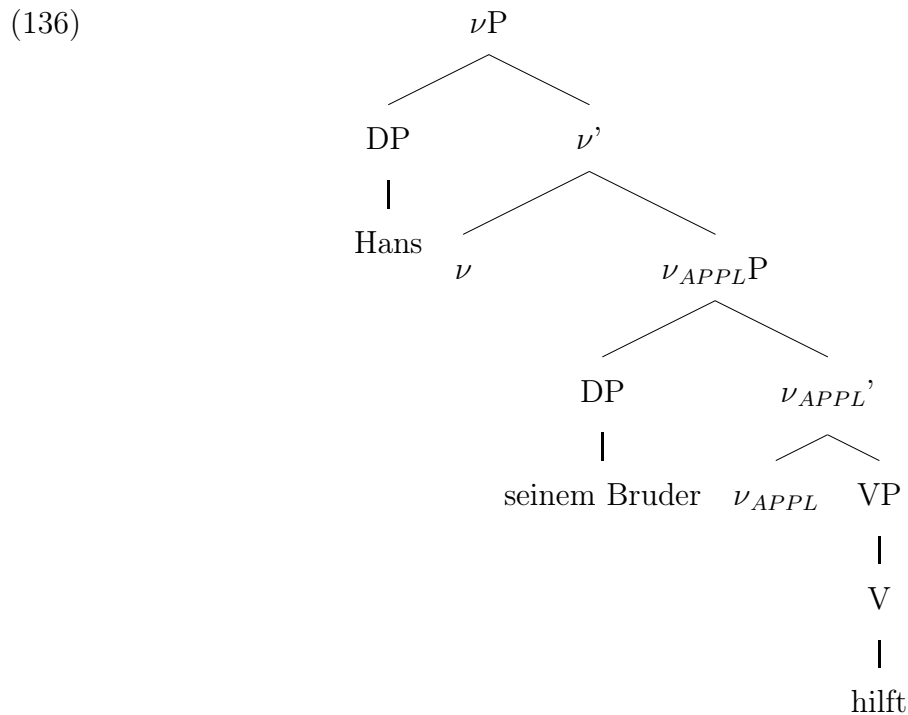
Support for this analysis comes mainly from the parallels between this class and the D-A verbs. One diagnostic, which is sensitive to the properties of both the dative argument and the nominative, is the availability of the so-called recipient passive discussed above. Recall that, whatever the correct analysis of this construction turns

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[18]A rather similar analysis is proposed by Abraham (1983), but without much discussion.

out to be, it is possible with D-A verbs, but not A-D verbs, and thus seems to depend on the applicative-type dative. Now, if verbs like *helfen* have this same kind of dative argument, then they should allow the recipient passive as well. Indeed this is the case:(from Abraham, 1995, ch. 3):[19]

(137)   Der Junge bekam eine Lederhose   geschenkt.
         The boy:N got   a   leather-pants:A given
         'The boy was given a pair of leather pants.'

(138)   Er   kriegte geholfen.
         He:N got   helped
         'He was helped.'

In footnote 3 I also noted that the standard passive is only possible in German with verbs that have an external subject. It turns out that this restriction applies to the recipient passive as well. We will see below that the recipient passive is not possible with certain verbs that lack an external argument even though they have a dative introduced by the applicative head. For now, note that the fact that *helfen*-class verbs allow passives of both types is as predicted given the analysis where the nominative subject is introduced in Spec-νP.

Perhaps the best piece of evidence for the analysis of this class as D-A verbs minus the DO is that certain verbs like *glauben* 'believe' and *raten* 'advise' can actually alternate between the *geben*-class and the *helfen*-class. That is, they take an external subject and a higher dative object, but can appear either with or without an additional structural accusative. For example, *glauben* can be used, as in 139a, with a sole dative object of the person of whom something is believed. But it can also take an additional object of what is believed of that person, in the accusative, with the unmarked order being dative before accusative, as in 139b:

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[19]The verbs *bekommen* and *kriegen* are more or less synonymous and equally available in the recipient passive.

(139)   a. Er glaubt   seinem Bruder.
            he believes his   brother:D
            'He believes his brother.'

         b. Er glaubt   seinem Bruder   die Geschichte.
            he believes his   brother:D the story:A
            roughly, 'He believes his brother's story.'

Crucially, the morphological, syntactic and semantic properties of the dative argument remain the same whether the accusative object is present or not. This is strong evidence for the idea that the status of an argument as an 'indirect object' is not dependent on the additional presence of a direct object, but is based solely on the structural position in which it is introduced (Spec-ν_{APPL}P under my analysis).

Finally, verbs in this class live up to our expectations in terms of the thematic properties of the dative argument which, given the assumptions outlined above, should have the same θ-role as the dative argument with *schenken*. This is trivially true with verbs like *glauben*, because the thematic properties of the dative argument remain stable independent of the presence of an accusative object. Beyond this, the same types of productive datives show up here as with the the D-A class. Thus we have recipients with a (growing) class of verbs of communication with an implied message:

(140)   dass ich ihm   geantwortet/geschrieben/ge-emailt habe.
        that I   him:D answered/written/e-mailed   have
        'that I answered/wrote/e-mailed him.'

We also find pertinence datives appearing in this structure. This interpretation requires a lower DP that can be understood as possessed by the dative, and while this usually means an accusative object, a DP object of a preposition is sufficient as well, as in 141:

(141)   Er schlug ihm   ins   Gesicht.
        he hit   him:D in-the face

'He hit him in the face.'

Again, the appearance of a dative does **not** depend on the presence of a direct object. The pertinence dative does depend on another DP, but this is clearly a semantic restriction on the interpretation, not any sort of syntactic licensing on dative case-assignment.

As was discussed above, the indirect connection between θ-roles and actual semantic roles I am assuming here can help us to understand the roughness of the correlation between inherent dative case-assignment and the semantics. Consider again the classic example of *beglückwünschen* with accusative object beside *gratulieren* with dative, both meaning 'congratulate'. While this is problematic for theories that posit a direct link between semantics and case-assignment, such variation can be handled under the theory being presented here. Given the fact that a single event with a constant set of participants can have alternating linguistic representations with the participants appearing in different argument structure positions, it should come as no surprise that a person being congratulated can be realized, in our terms, either in Spec-ν_{APPL}P or in VP. Why this should be the case with 'congratulate' and not, say, 'hit' is that a person who is congratulated is much more easily conceived of as a beneficiary or recipient of the congratulatory act than the person who is hit can be conceived of in this way. Now, an interesting fact which may at first glance seem problematic for my claim that inherent datives are indirect objects is that the kind of case-marking variation we have between *gratulieren* and *beglückwünschen* is much more common with two-place verbs than with three-place verbs. That is, we can predict with a lot less certainty whether an object will be marked dative with a particular verb when it is that verb's only object than when the verb takes a second object. One could take this as support for the view that indirect objects are marked dative precisely because they are the third object, whereas inherent dative is assigned by unpredictable lexical fiat.

However, there is another interpretation available which is highly consistent with the claims I am making here. I am arguing that the dative versus accusative marking on an object is tied to the structural position in which the object is introduced into the clause. Now, given an abstract predicate meaning 'congratulate', taking two logical arguments, there is a certain amount of flexibility in how the arguments can be realized. Since the congratulator is agentive, it will most likely be introduced by ν, but this still leaves two possible slots for the congratulatee. Hence, in principle, variability of this kind is possible with two-place predicates, subject to the availability of proper interpretations. Given an abstract three-place predicate like 'give', however, no such flexibility is available. The recipient argument will be essentially forced to appear in Spec-ν_{APPL}P (or perhaps within a lower PP), since the argument slot within VP will be filled by the argument which is given.

This account of the *gratulieren/beglückwünschen* type of alternation fits in nicely with the rest of my claims in this chapter. However, my arguments thus far have been largely abstract, showing little more than that such an analysis is possible. What we would like is some evidence that it is correct, i.e. that these verb types really do differ in their argument structures. Fortunately, some such evidence is indeed available. We should expect verbs of the two types to differ, if only slightly, in their semantics. An interesting fact of just this sort (pointed out by Heide Wegener, p.c.) comes from *helfen* and *unterstützen*. As with the congratulate verbs, we here again have near-synonyms, meaning 'help' or 'support', with the former taking a dative object and the latter an accusative. The interesting thing is that while the latter requires an agentive subject, the former can appear also with non-agentive inanimates:

(142) a. Das Buch hat mir   sehr geholfen.
           the book has me:D very helped
           'The book helped me a lot.'

b. ?* Das Buch hat mich sehr unterstützt.
   the book has me very supported
   intended 'The book supported me a lot.'

One could object that the verbs have different meanings, as indicated by my English glosses, but that is precisely the point. Different argument structures, as implied by different case-marking, go along with different nuances of meaning. Now, why is it that a verb with a dative object should be able to take a non-agentive subject when a verb with an accusative object cannot? Under my analysis, the accusative object with the latter is introduced as the argument of V, the position that typically houses themes, patients and the like. This means that the nominative argument can only be introduced in Spec-νP, the position that generally implies agentivity due to the semantics of the head, thus forcing the agentive reading with verbs of this type. With the former, however, the recipient of the helping is realized in Specν_{APPL}P, which leaves open both of the argument slots in VP and νP. Typically, the 'helper' will be merged in the external agentive slot, but in principle at least, it is possible for it to be merged in the internal slot when a non-agentive reading is desired. Note that this is roughly parallel to Pesetsky (1995)'s analysis of the variation between *fear* and *frighten*. With the former, the impetus for the emotion is conceived of non-agentively and introduced as a theme, i.e. within VP in my terms. With the latter, however, it is at least potentially agentive, and thus shows up in the external subject position, deriving, among other things, the word order difference between the two verb classes.

A second piece of evidence in favor of positing distinct argument structures for these verb pairs comes from the morphological characteristics of the verb *beglückwün-schen* itself. Unlike *helfen*, it is **not** a simple verb stem, but has been transparently derived from the noun *Glückwunsch* 'congratulations' by a more or less productive process. The prefix *be-* is added to a nominal root X in order to derive a verb mean-

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ing, roughly 'provide with X'. Other examples with the nouns from which they are derived are *bewaffnen* 'arm' (*Waffe* 'weapon'), *bekleiden* 'clothe' (*Kleid* 'dress, piece of clothing'), *bekränzen* 'wreathe' (*Kranz* 'wreath') and *bespicken* 'grease (a pan)' (*Speck* 'bacon'). Crucially, whatever the precise analysis of such verbs turns out to be, they all take normal accusative direct objects of the person or thing to whom or which X is being provided. Now, for one thing, this shows that the behavior of *begückwün-schen* is quite regular and predictable based on its structure, but more importantly, it tells us something about the abstract situation that is being described here. It quite explicitly involves a recipient type role. The fact that it happens to be realized as the VP-internal argument with *beglückwünschen* is due to the derivation of the particular verb form, but when the same situation is described using a simplex verb, the recipient role is realized, as we might expect, in Spec-ν_{APPL}P.[20]

4.5.1.2 *gefallen*-class verbs

The second class of verbs with the high inherent dative is perhaps the one for which this analysis is the least controversial. It includes verbs like *gefallen* 'be pleasing to' and *gehören* 'belong to'. I follow Wegener (1991) and Holmberg and Platzack (1995) in taking these to be like D-A verbs without an external subject. That is, where the *helfen*-class are unergatives with a high dative, these are the analogous unaccusatives:

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[20]One might object that my theory predicts inherent dative versions of verbs like *kick* because it is possible to conceive of the kicked person as a recipient, as in *give someone a kick*. However, the likelihood of the lexicalization of a given argument structure should be proportional to how plausible the relevant conception of its semantic content is. It is easy to conceive of helping as being done for someone rather than to someone, and so many languages have lexicalized the corresponding argument structure which leads to the inherent dative. While such a conception is possible with things like kicking, it is much less likely. Therefore the relevant argument structure can be created synthetically for such meanings in English, but it has not been regularized as 'the' argument structure for any verb with this type of meaning, which is how an inherent dative verb would have to come about.

(143)

$\nu_{APPL}P$ tree:

- $\nu_{APPL}P$
  - DP — dem Mann
  - ν_{APPL}'
    - ν_{APPL}
    - VP
      - DP — die Musik
      - V — gefällt
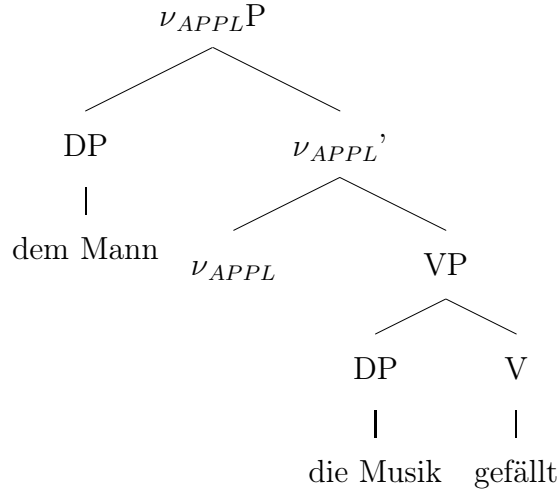
This analysis is initially plausible based on the semantics of the verbs involved, especially the fact that their nominative subjects are clearly not external agentive arguments, but more like themes. However there is structural evidence as well. In the first place, it has frequently been observed that, unlike with other nominative-dative verbs, the unmarked order with *gefallen*-class verbs is dative before nominative:

(144) ... weil dem Mann   die Musik gefällt.
       because the   man:D the music pleases
       '... because the man likes the music.'

Furthermore, we again find uses of the productive dative types parallel to those with the D-A verbs. Interestingly enough, it is possible to put together pairs of sentences, of which one contains a *gefallen*-class verb and the other a D-A class verb, where, in terms of argument structure, the latter differs from the former solely in the addition of an external subject causing the event in question. Thus the only relevant difference between 145a and 145b is that in the latter an additional argument is present which is responsible for the gas running out, and the only relevant difference between 146a and 146b is that in 146b we have an additional participant responsible for the flight of the stone. Crucially, the syntactic, semantic and morphological properties of the

dative arguments are consistent, completely independent of whether an external argument is present or not.

(145)   a. weil   ihm   das Benzin ausgegangen ist
            because him:D the gas:N   run-out   is
            'because he ran out of gas'

        b. weil   ich ihm   das Benzin abgezapft   habe
            because I   him:D the gas:A   siphoned-off have
            'because I siphoned off his gas'

(146)   a. weil   mir   ein Stein   auf den Kopf gefallen ist
            because me:D a   stone:N on the head fallen   is
            'because a stone fell on my head'

        b. weil   er mir   einen Stein   auf den Kopf geworfen hat
            because he me:D a   stone:A on the head thrown   has
            'because he hit me in the head with a stone'

This also predicts that *gefallen*-class verbs should be parallel to the passives of D-A class verbs, and indeed they are. Aside from the difference in verbal morphology and the ability to refer to the demoted agent with a by-phrase (found also with passive/unaccusative pairs without an additional dative argument), passives of D-A verbs are just like the *gefallen*-class verbs. This is demonstrated by the actual passives of 145b and 146b:

(147)   weil   ihm   das Benzin abgezapft   worden ist.
        because him:D the gas:N   siphoned-off become is
        'because his gas was siphoned off.'

(148)   weil   mir   ein Stein   auf den Kopf geworfen worden ist
        because mir:D a   stone:N on the head thrown   become is
        'because I got hit in the head with a stone'

There is additional syntactic evidence that the nominative argument with *gefallen* class verbs occupies Comp-V rather than Spec-*v*P. As was discussed above, the recip-

ient passive is only well-formed with verbs which take an argument in Spec-ν_{APPL}P, i.e. a high dative, thus we might expect it to be possible here. However, it is not:

(149)   * Er bekommt gefallen.

(150)   * Er kriegt das Benzin ausgegangen.

As alluded to above, the reason for this is that German only allows verbs with external arguments to form passives. In support of this note that, again unlike the *helfen*-class verbs, the *gefallen*-class verbs cannot form a normal passive with *werden* either:

(151)   * Ihm wird gefallen.

(152)   * Ihm wird das Benzin ausgegangen.

4.5.1.3   *schwindeln*-class verbs

In the two previous subsections we have seen two verb classes that both have a high dative in Spec-ν_{APPL}P but differ in whether their additional nominative argument is an external subject in Spec-νP or an internal argument of V. According to my analysis the D-A verb class constitutes the option where both of these positions are filled. Given these three options we might expect there to be an additional class of verbs where neither position is filled. Indeed, these do exist, in the form of regularly impersonal verbs with a dative experiencer like *schwindeln* 'be dizzy', *schaudern* 'shudder' and *ekeln* 'be disgusted', as in the following examples:[21]

(153)   Mir   schwindelt, wenn ich zu schnell aufstehe.
        me:D is-dizzy   when I   too fast   stand-up
        'I get dizzy when I stand up too fast.'

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[21]There is some variation in the case-marking with these verbs. All three, especially the latter two, can appear instead with an inherent accusative, and they can sometimes also be encountered with normal nominative subjects. The latter phenomenon is essentially the same as what happened to verbs with dative experiencers in English. See Smith (1996) and Chapter 6 discussion of the inherent accusative versions.

(154) Mir   schauderte, als   ich an sein Ende dachte.
     me:D shuddered   when I   on his end   thought
     'I shuddered when I thought of his end.'

(155) Mir   ekelt   vor   Saumagen.
     me:D disgusts before sowstomach
     'I'm disgusted by sow's stomach.'

There is basically only one question to settle on the analysis of these verbs. Where is the dative introduced, in Spec-ν_{APPL}P or in a PP within VP? The thematic evidence quite clearly points toward Spec-ν_{APPL}P. For one thing, this argument position is quite strongly restricted to animates. For another, these verbs are semantically quite close to the *gefallen*-class verbs, having a dative experiencer of some emotional or bodily state, with the only difference being the absence of a nominative theme which brings on the state. With the *schwindeln* class the impetus of the reaction can only be realized with the preposition *vor* as in 155.

4.5.2   Argument structures with the lower dative

We move now to verbs with the lower dative, i.e. an argument within a PP that is itself an argument of V. I have argued above that the A-D class, including *aussetzen* etc., have this lower dative, plus an external subject in Spec-νP and an internal argument of V. Just as was the case with the higher datives, we should then expect verbs that differ from these in terms of whether they have the two argument structure slots aside from the dative filled. Thematically, we expect the dative with verbs of these types to be like the dative with *aussetzen* etc., i.e. to be a preferably inanimate location, goal, reference point of motion or the like – central functions of PPs in general. Indeed, this is the class that Blume (1998) refers to as the verbs of relative motion. Note then that these are relational roles, giving a point of reference for some motion or other action, and it does not make sense to indicate a point of

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reference without indicating what is a point of reference for. It is apparently because of this that there is no lower dative counterpart to the *schwindeln* class. There are, however, plenty of verbs with the lower dative plus an argument in either Spec-νP or VP. These are, in other words, unergatives and unaccusatives with an additional PP complement. Unfortunately, distinguishing unergatives from unaccusatives in German is not entirely straightforward, and it is especially difficult with verbs of this type. For one thing, the agent of the motion is simultaneously theme-like, being that which is moved. For another, unlike with verbs where the dative is introduced by ν_{APPL}, the word order facts are of no help to us. The lower dative position is below both the external and internal argument positions, so whether the nominative argument is introduced in the former or the latter, it will have no effect on the unmarked order in the surface string. Because of these issues, and because my main concern here is with the position of the dative, I will not attempt to distinguish these verb classes, treating them as though for concreteness sake as though they all had external subjects.

The structure I am proposing for verbs of this type, of which *folgen* 'follow' is an example, is the following:

(156)

```
                        νP
                       /  \
                     DP    ν'
                     |    /  \
                     Er  ν    VP
                             |
                             V'
                            /  \
                          PP    V
                         /  \   |
                        P    DP folgt
                        |    |
                        ∅    dem grünen Auto
```
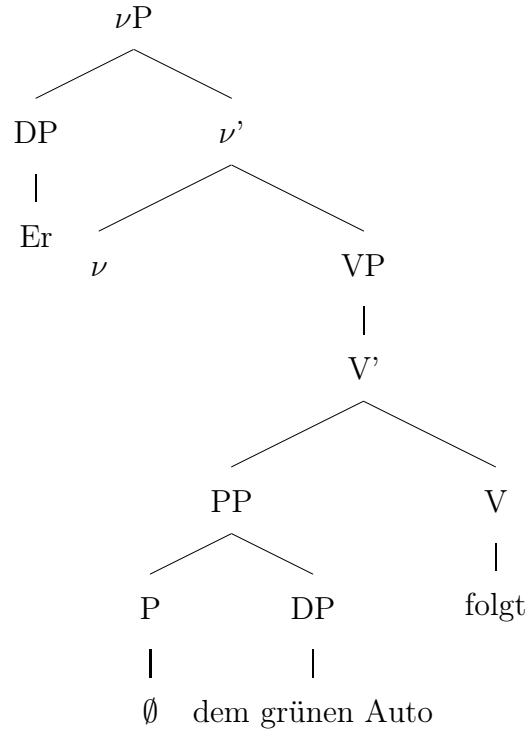
Abstractly, then, *folgen* consists of an intransitive verbal predicate plus a PP, corresponding roughly to 'go after'. The evidence for the analysis comes mainly from the parallels between this class and the corresponding A-D ditransitives. Note first of all that, as was noted above for the A-D class, the *folgen* class consists mainly of productively derived prepositional prefix verbs:

A-D class *widmen* but *aussetzen, nachschicken, entgegensetzen* etc.

***folgen*-class** *folgen* but *ausweichen, nachgehen, entgegenkommen* etc.

The composition of a verb of motion with a preposition is thus quite transparent. In the case of the A-D verbs, the verb of motion is a transitive, whereas in the case of the *folgen*-class verbs, it is an intransitive. Furthermore, the dative object of the *folgen*-class verbs does indeed have the same directional/locational role characteristic to the IO of A-D verbs, typically with inanimates, in distinction to the dative objects of D-A, *gefallen* and *helfen*-class verbs. Indeed, as with the D-A and *gefallen*-class

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verbs, it is possible to find pairs of sentences, one of which has a verb from each of the two classes, where the only difference in terms of their argument structure is the transitivity:

(157) a. Der Polizist   ist dem Kriminellen nachgekommen.
           the police-officer:N is the criminal:D after-come
           'The police officer came after the criminal.'

       b. Der Kommandant hat den Polizisten   dem Kriminellen
           the commandant has the police-officer:A the criminal:D
           nachgeschickt.
           after-sent
           'The commandant sent the police officer after the criminal.'

Similarly, as was the case with the A-D verbs, the recipient passive is impossible with verbs like *folgen*:

(158) a. * Er kriegte gefolgt.
              he got   followed
              intended: 'He was followed.'

       b. * Er bekam ausgewichen.
              he got   evaded
              intended: 'He was evaded.'

(159)   Ihm   ist gefolgt   worden.
           him:D is followed become
           'He was followed.'

As discussed above, this is a diagnostic showing that the dative argument is not introduced in Spec-ν_{APPL}P. The fact that an impersonal passive is possible, as in 159, shows that the problem is not the lack of an external subject.

Finally, the analysis here makes an interesting prediction. If the *folgen*-class verbs are indeed intransitive verbs of motion, then they should take the auxiliary *sein* in the compound tenses. Indeed, this is borne out:

(160) a. Er ist/*hat seiner Freundin   nachgefahren.
           he is/*has his   girlfriend:D after-gone

           'He went after his girlfriend.' (in the sense of 'followed')

       b. Er ist/*hat nach Rom   gefahren.
           he is/*has to   Rome gone

           'He went to Rome.'

(161) a. Er *ist/hat seiner Freundin   geholfen.
           he *is/has his   girlfriend:D helped

           'He helped his girlfriend.

       b. Er *ist/hat gearbeitet.
           he *is/has worked

           'He was working.'

Auxiliary selection in German is a complicated matter, and unlike in certain other
European languages it does not seem to boil down to the unaccusative/unergative
distinction. One thing that can be said for sure, however, is that *sein* only appears
with intransitives (although not with all intransitives). That is, there are no verbs
that take an accusative direct object and have *sein* as their auxiliary. These *folgen*
verbs are the only things that have the look of transitives that do take *sein*, so our
account of auxiliary selection can be greatly simplified under an analysis where they
are in fact intransitives. Under the standard analysis, where *folgen* is a transitive verb
with an idiosyncratic feature signaling that it assigns inherent dative to its object,
the auxiliary facts are bewildering.

4.6   So what about subjecthood?

All of this brings us back to one of the central questions about inherent dative ob-
jects. Specifically, why can't they become subjects in the passive or in unaccusative
constructions? I started this chapter by rejecting the standard explanation for this
based on special Case-assignment, but I have not yet proposed anything to replace

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it. For the *folgen*-class verbs, the answer is relatively simple. Under my analysis, the dative argument with these verbs is actually contained within a PP, and in German (as in most other languages) A-movement out of PPs is simply impossible:

(162)   Ich habe mit   Hans gesprochen.
        I   have with Hans spoken
        'I have spoken with Hans.'

(163)   * Hans$_i$ ist mit   t$_i$ gesprochen worden.
          Hans is with spoken become
          intended: 'Hans was spoken with'

(164)   * Der Mann   ist gefolgt   worden.
          the man:N is   followed become
          intended: 'The man was followed.'

That is, whatever explains the ungrammaticality of 163 will also explain the ungrammaticality of 164.

For the *helfen, gefallen* and *schwindeln*-classes, we could analogously say that A-movement out of Spec-ν_{APPL}P position is impossible, since it is blocked with D-A verbs like *helfen* as well. However, this just begs the further question of why exactly A-movement should be banned in such a situation in German. Indeed, many languages, including English and Icelandic, **do** allow A-movement from this position. So what we really must ask is why English and Icelandic allow IO passives while German does not. The answer to this question is not yet clear, but I will discuss here some of the related issues, including the relevance of this mystery to the strength of the analyses I have given in this paper.

First of all, we can do away with any residual ideas that the overt dative case, which German has and English lacks, is what is responsible for the difference. The data on this point are quite clear. Icelandic has richer m-case than German, but allows IOs and the dative objects of verbs like *hjálpa* 'help' to become subjects as

in 165 and 166 (Zaenen et al., 1985).

(165)   Konunginum voru gefnar ambáttir.
           the-king:D   were given slaves:N
           'The king was given maidservants.'

(166)   Honum var hjálpað.
           him:D   was helped
           'He was helped.'

On the other hand, Dutch has no more case-marking than English, yet it is like German in barring IOs from becoming subjects in the passive. So the property of allowing IOs to become subjects cuts across the property of having rich morphological case – one more piece of evidence that the case-marking on inherent datives is but a symptom of something larger, not the explanation for their restricted behavior.

Of course, one could object that, just because Icelandic dative m-case fails to block subjecthood, does not mean that we cannot expect it to do so in German. Indeed, the most common view here, which one finds across frameworks, is that there is parametric variation on whether or not subject selection is sensitive to case-marking, with Icelandic and German differing in how they go on this point. Note, however, that this is not an analysis. It amounts to nothing more than a restatement of the descriptive fact that Icelandic has dative subjects while German does not.

So then what is it that differentiates languages like German and Dutch from those like Icelandic and English? If anything, within Germanic, the divide correlates with the VO/OV distinction. English and all of the Scandinavian languages, which are VO, allow IOs to become subjects, while German and Dutch, which are OV, do not. This is suggestive as an avenue for future research, but I will not pursue it further here, because it is not obvious why OV word-order should block IOs from being subjects, nor is it clear that the correlation is supported outside Germanic. A more promising possibility is that the difference is related to the status of the EPP in the various

languages. It is well-established that Icelandic and English are both characterized by a straightforward EPP requirement. That is, in every clause, the highest DP is forced to raise to Spec-TP in order to satisfy the EPP, and is designated subject thereby. For German, on the other hand, it is not so clear that the EPP is active, at least at the IP level. There is a requirement in matrix clauses that something raise to Spec-CP (the so-called V2 topic position), but this is not restricted to DPs, and it does not apply in embedded contexts. Thus it is not involved in subject determination. It has been assumed at various times that German does have obligatory raising to Spec-IP, either for Case or EPP reasons, but there is essentially no evidence for it. Indeed, the clearest evidence for the EPP in English and Icelandic – the requirement that an expletive be inserted when nothing else raises to the subject position – would tend to argue against assuming the EPP for German:

(167)   a. *(Es) wird   morgen   getanzt.
            it   becomes tomorrow danced
            'There will be dancing tomorrow.'

        b. dass (*es) morgen   getanzt wird.
            that (*it) tomorrow danced becomes
            'that there will be dancing tomorrow.'

        c. Morgen   wird   (*es) getanzt.
            tomorrow becomes (*it) danced
            'Tomorrow there will be dancing.'

In the matrix impersonal clause in 167a an expletive subject must be inserted, but this is to satisfy the need for a V2 topic. When the same sentence is embedded, as in 167b, the expletive is no longer needed or even possible. The same thing is shown by 167c, where an adverb raises to satisfy the V2 topic requirement, and again the expletive subject is impossible. It has been suggested that in such sentences a null expletive is present to satisfy the EPP, but there is no evidence for such an expletive, and its

existence would be rather surprising, given the fact that German is not otherwise a pro-drop language. Indeed, Hubert Haider has argued in a series of publications that German simply lacks obligatory raising to subject (see especially Haider, 1997b).

Now, if this is correct, then German does not have the same means for subject determination at its disposal as English and Icelandic do. That is, there is no position where one can say, "whatever has ended up here is the subject." German thus must have a different strategy for identifying the subject, and thus it should not come as a surprise that the results are different than in these other languages. Unfortunately, it is still not entirely clear what this other strategy is or how it works. Part of the reason for this is that the tests for subjecthood adapted for languages like English and Icelandic do not produce such clear results for German. For one thing, due to what we have just said about the lack of a derived subject position and the OV-VO distinction, the word-order tests are completely worthless. The tests regarding the availability of PRO have been regarded in the past as fairly secure and unambiguous for German, but recent work by Barðdal (2002), Barðdal and Eythórsson (2003) has shed some doubt on this. They have found a number of examples of PRO in dative positions in German texts, and they have presented evidence that some of the classic judgments about dative PRO may reflect not so much a ban on dative subjects as a ban on case mismatches.

(168)   a.   * Ich hoffe PRO geholfen zu werden.
                I   hope PRO helped   to be
                intended: 'I hope to be helped.'

        b.   Mir   gefällt es PRO geholfen zu werden.
              me:D pleases it PRO helped   to become
              'I like to be helped.'

Sentences like 168a are indeed bad, where the presumably dative PRO is controlled by a nominative subject, but Barðdal (2002) reports that more than half of her

informants find 168b acceptable, where the argument controlling dative PRO is itself dative. It is hard to know exactly what to make of facts like these. German clearly does not allow dative subjects to the extent that Icelandic does, but it may well be that it does not categorically disallow them as is standardly thought. A proper theory of German subjecthood will have to have some explanation for these facts and the others that these authors discuss.

In sum, then, the subjecthood facts remain bit of a mystery, even if some promising avenues for their explanation are in view. Nonetheless, this does not actually constitute a step backward from the theory of inherent case I have been arguing against. The traditional account does indeed have an explanation for the German subjecthood facts, but, as I have argued, this explanation cannot be correct. In fact it is directly contradicted by the Icelandic passivization facts. Remember, calling Icelandic case 'quirky' is an admission that it doesn't fit into the theory, not an explanation. On the other hand, my theory can account for the Icelandic situation without stipulation, because a priori we have no reason to expect IOs to be blocked from becoming subjects. The German subjecthood facts still await an explanation under my theory, but they are not incompatible with what I say about Icelandic and English, and given the apparent lack of an EPP in German, we have a good idea of why the facts are different, even if we cannot explain them in detail. Thus my theory is actually superior to the traditional one on in its coverage of subjecthood, and it is **far** superior in accounting for the other semantic and structural facts about inherent objects that have been the focus of this chapter.

4.7 Conclusion

While a number of questions concerning inherent and quirky Case remain, I have shown in this chapter that the special syntactic behavior of the relevant DPs cannot be due to their special case-marking.[22] Rather, at least within German, there is very good evidence that all their marked characteristics, including the case-marking itself, stem from the fact that they are inserted into different argument structure positions than normal accusative direct objects. Along the way I have developed the beginnings of a theory of the types of verbal argument structures that are relevant, and explored some of the syntactic and semantic properties of the relevant classes. A closely-related issue, which I hope to address in future work, is the relationship between verbal argument structures and those of other syntactic categories. In particular, there is good reason to believe that the theory laid out here can be extended to handle what are normally referred to as adjective complements, which in German are marked either dative or genitive. The distinction between the two cases looks very much like it results from the different structural positions in which arguments of adjectives are introduced, and indeed, there is reason to think that the datives are in a position that is analogous to the applicative position with verbal predicates.

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[22]Another persistent mystery with German dative objects – which I have not discussed because I have nothing of substance to add to what has already been said about it – is their behavior with binding. Much has been made of the fact that the dative object cannot bind a reflexive in the accusative object in the standard sentences with *zeigen* 'show', on the basis of which some authors (see especially Müller, 1995) have argued that all double object structures in German underlying have the order of accusative before dative. However, aside from the fact that such analyses are well-suited to deal only with the binding data and cannot compete with my analysis when it comes to any of the other facts, matters with binding itself are actually far more complicated than is sometimes reported. To begin with, note that, due to the semantics involved, the reflexive binding facts that are generally reported involve the behavior of a single verb. Variable binding facts can be investigated with any number of verbs, and they turn out to pattern exactly as would be predicted under the sort of analysis presented here (see Haider, 1993). Furthermore McIntyre (2004) shows that reflexive binding of the accusative by the dative is actually possible in a number of contexts. To be sure, something interesting is going on here that is worthy of investigation, but the evidence currently available does not lead one to believe that the analyses presented here are fundamentally flawed.

If this turns out to be on the right track, we will not only be able to further our understanding of the structure of adjective phrases, but will also be able to learn quite a bit about the nature of this higher dative position, which seems to be licensed both there and in verb phrases.

In terms of the central hypothesis of this dissertation, however, the important result of this chapter is not the details of the analysis proposed for inherent objects. Rather, it is the demonstration that a theory which uses morphological case to explain the syntactic properties of inherent objects is untenable, and thus the phenomenon which looked to most troublesome for the hypothesis that case is purely morphological turns out not to be problematic after all. When it comes to subject determination in German, the analysis given here raises as many questions as it answers. But while I have not been able to give a solution to this problem, I have shown that the traditional theory based on morphological case-marking cannot be correct. This chapter also instantiates rather nicely the secondary idea of this dissertation. Specifically, when we stop relying on case to explain syntactic facts, we are led to look more closely at the relevant phenomena and thereby gain a deeper understanding of their syntactic properties.

Chapter 5

On morphological case and

word-order freedom

5.1 The correlation and two ways to explain it

A commonly made cross-linguistic generalization is that languages with extensive case-marking tend also to have greater freedom of word order than languages without.[1] Explicit statements to this effect can be found in Sapir (1921, pp. 66, 177ff.), Jakobson (1936, p. 28) and more recently in Blake (2001, p. 15), but the idea goes back to the beginning of comparative studies of language. Thus on the one hand, languages like Sanskrit, Finnish and Latin, which have rich case-marking systems, allow the order of nominal arguments in a sentence to be permuted without changing the propositional meaning of the sentence (see the Latin examples in 169). On the other hand, swapping the order of arguments in languages like English and French, whose case-marking is limited to relics in the pronominal system, is not possible without swapping their

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[1]Earlier versions of this work were presented at BLS 29 and at the 2003 Conference on Comparative Diachronic Syntax in Leiden. Thanks are due to the audiences there for their comments and criticisms.

grammatical roles (see the English examples in 170).

(169)   a. Puella puerum videt.
           girl:N boy:A   sees
           'The girl sees the boy.'

       b. Puerum puella videt.
           boy:A   girl:N sees
           'The girl sees the boy.'

(170)   a. The girl sees the boy.

       b. The boy sees the girl.

That a correlation of this sort exists is not really a matter of debate. What is controversial is what form it takes and exactly how we are to explain it. Of course, the question is directly relevant to the main topics of this dissertation, because the correlation constitutes a connection of some sort between morphological case and the syntactic derivation.

In order to make the following discussion maximally clear, I will start by laying out some basic assumptions. First of all, I assume that there is a core of formal linguistic knowledge or grammar which is distinct from the knowledge relating to language use. I further assume that a complete linguistic theory should incorporate tools to deal with both sides of this distinction and provide a principled way to determine which tools should be used to explain any given linguistic phenomenon. Thus, in place of the Chomskyan terms *competence* and *performance*, I will use *(narrow) synchronic grammar* on the one hand and the more differentiated *(principles of) (language) use*, *acquisition* and *change* on the other. Obviously, in this chapter I will not be developing anything like a full theory of what sorts of phenomena should be handled by the various components, but the following should serve as reasonable guidelines:

(171)   Principles of the narrow synchronic grammar deal with derivation and representation and are stated in formal/structural terms.

(172)   Principles of use, acquisition and change may make reference to the speaker/hearer, e.g. to constraints on ease of production, comprehension and acquisition, to social factors, and to the effects of context via memory and information structures.

Clearly, the latter like the former will not be undifferentiated mass of principles, but will consist of several component theories, for each of which a different type of principles is appropriate. The bulk of this dissertation is concerned with issues of the narrow synchronic grammar, but in this chapter I will argue that not all linguistic phenomena are best accounted for there. Rather, we must take care that in each instance our proposed explanation is operating on the correct level.

Considered in these terms, it is clear that the case-marking/word-order freedom correlation (henceforth CWC) could be explained in terms of use, acquisition and change:

A use-based explanation: At the level of the individual speaker/hearer, word-order variation is easier to interpret, learn, and maintain over time in a language which marks grammatical relations with morphological case.

However, we can also imagine that this constraint is encoded directly within the narrow synchronic grammar:

A synchronic-grammatical explanation: The principles of grammar which determine word order make reference to m-case, such that rich case-marking licenses word orders which are impossible in its absence.

Any number of explanations of this latter type have been proposed over the years, of which I will mention three recent examples here. Roberts (1997) proposes that the movements which are responsible for DP ordering are driven by features tied to

the presence of rich case-marking. Specifically, assuming a Minimalist framework, he argues that the strength of Case features in a language is related to overt case-marking. Kiparsky (1997) develops a system in which the association of a DP with its θ-role must be guided either by overt case-marking or by canonical ordering. A DP can thus only leave its canonical position if it is case-marked. Finally, Neeleman and Weerman (1999) propose that Case is a syntactic head K. When K is null, as in English, the ECP applies, forcing it to remain properly local to its licensing head. When K is overt, as in Latin, the ECP does not apply, because there is no empty category, and the DP is free to move around.

Explanations of this type clearly challenge the central hypothesis of this dissertation. If morphological case is not active until after Spell-out and cannot affect syntactic operations, then it should not be able to directly affect word order in any way – not just freedom of word order, but also basic word-order patterns. If it can be shown that m-case **does** affect word order – whether by licensing variation that would otherwise not be possible or in some other way – then my hypothesis is contradicted. Note that this does not mean that there should be no relationship between word order and case-marking, just that the former cannot be derived from the latter. Rather, as has been argued at various times throughout this dissertation, the syntactic structure at Spell-out largely determines case-marking patterns. It is clear that some sort of correlation does exist between rich case-marking and word-order freedom, so along with arguing against a synchronic-grammatical account, I will also discuss certain aspects and advantages of the alternative use-based account to demonstrate that it is a viable and attractive option.

It is clear that the pressures placed on the speaker-hearer as described above play at least **some** role in the restrictions on word-order freedom. Thus the burden of proof is arguably on those like Roberts, Kiparsky and Neeleman and Weerman who

propose an additional synchronic-grammatical component to the correlation. They must show that such a hybrid explanation can account for facts that a simple use-based explanation misses. In what follows I will argue that this burden cannot be overcome. Section 5.2 investigates the general nature of the CWC and shows that it raises a series of considerable theoretical problems for the synchronic-grammatical approach. Section 5.3 examines some specific empirical examples that have been taken to support the synchronic-grammatical approach and shows that at best they are ambiguous, and at worst they argue directly **against** it. Now, given the breadth of this topic, the discussion and results I present in this chapter will necessarily be preliminary and incomplete. On the theoretical side, I will devote little space to criticism of any particular theory, concentrating instead on general issues that any theory must deal with. On the empirical side I can cover only a fraction of the relevant phenomena, but I will attempt to present examples which are representative of common patterns.

5.2   Theoretical Issues

In this section I will discuss three characteristics of the CWC and investigate how each could be dealt with in a theory that seeks to explain the correlation within the narrow synchronic grammar. In the process a series of theoretical problems will be encountered which, I will argue, cannot be overcome.

5.2.1   The CWC crosses the syntax-morphology interface

A relationship between case and word order is at its base a relationship between morphology and syntax and must be considered in terms of how these two components of the grammar interact. If we assume that m-case affects word order within the

synchronic grammar, then we must assume that the syntax depends on the morphology. Of course this is not an uncommon assumption, implicit e.g. in strong versions of the Lexicalist Hypothesis, according to which the syntax deals with fully formed and inflected words. That is, the morphological properties of a word, including its case-marking, are already determined at the point when it enters into the syntactic structure, thus they can, in principle, affect syntactic processes like those which determine word order. However, recent work, especially within Distributed Morphology, has yielded strong evidence for just the opposite view. In DM this is formulated as the principle of Late Insertion, according to which the syntax works with under-specified feature bundles, and morpho-phonological material is inserted into these feature bundles only after Spell-out. But if this is on the right track, then it should be impossible for actual case-marking to affect word order, because the case-markers themselves will simply not be present until after Spell-out, i.e. after word order has already been determined.

The obvious response to this objection is that what is really relevant to word order freedom is abstract Case, which is a syntactic feature and thus can have consequences within the narrow syntax before the insertion of morpho-phonological material. The connection to the actual morphological case forms would be maintained by assuming that they are just the spelling out of features that are already there. However, this too runs into a series of problems.

The first is that the simplest hypothesis – that languages with morphological case have syntactic Case, while those without morphological case do not – is clearly untenable. Syntactic Case is standardly supposed to play a role in DP positioning and licensing that is independent of word-order freedom and important in every language. Thus one would have to argue that abstract Case is universal, but fundamentally different in languages with morphological case than in those without, i.e. English

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would have K, but Latin would have K', and only K' would allow word-order variation. But of course this would imply a considerable complication of Case theory, which would now have to justify distinguishing K from K' while still calling both Case.

The second problem is that morphological case and positional DP-licensing are **not** directly connected (See especially Chapter 2 and Yip et al., 1987, Marantz, 1991, Harley, 1995a, Schütze, 1997, Sigurðsson, 2001, McFadden, 2002a). While the theory of syntactic Case can be modified to regulate parameterized word-order freedom, the results I have presented thus far in this dissertation rule out the possibility that such a modification would immediately yield a dependency of the word-order freedom on morphological case.

The third problem is that, no matter what we might do to fix the problems just discussed, it would not actually constitute a synchronic-grammatical explanation of the CWC.[2] Recall that it would amount to claiming that word-order freedom depends directly on a feature we are calling K'. But of course K' is syntactic, so it cannot in turn depend synchronically on m-case (again because in the view adopted here the syntax precedes the insertion of morpho-phonological material and thus cannot depend on the presence or identity of any given piece of inflection). What we would have to say is that m-case is a cue for the acquisition of K', i.e. when the learner is presented with a language with rich case-marking, she can conclude that the language must have K', and thus the relevant word-order freedoms. This itself is not problematic, in fact it is quite plausible, but it explains the CWC through principles of acquisition, **not** the synchronic grammar. This can be made clear if we consider a hypothetical scenario. Let us imagine a language which has overt case-marking and considerable word-order freedom, but which is losing the former due to phonological reduction of

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[2]The argument here is parallel to one made by Bobaljik (2002) for theories that posit a direct connection between rich agreement and verb raising.

unstressed final syllables. The speakers in some generation A successfully acquire both the case-marking and the word-order freedoms, but the case-marking they produce is so weak and phonologically reduced that the speakers in generation B fail to acquire it. However, generation B speakers are still presented with considerable word-order freedom in their parents' speech which can only be possible in a grammar with K'. Since K' is not connected to case-marking in any synchronic way, they can thus acquire a grammar that has K' (and word-order freedom), but no case-marking. In a theory where the CWC really is encoded directly in the synchronic grammar, such a thing would be impossible.

To sum up then, if morphological case-assignment occurs after the application of the processes that determine word order and cannot be directly related to any syntactic feature that is active in those processes, then it is in principle impossible to make word-order freedom depend synchronically on the richness of case-marking. Attempts to do so are forced by theoretical considerations to make concessions which in the end amount to adopting a theory where the real force of the correlation is in the language acquisition process, not in the synchronic grammar. Of course, an account of the CWC which is explicitly based on use and acquisition from the start does not run into any of these problems, because it does **not** rely on a synchronic causal connection from morphological case to syntax.

5.2.2 The CWC involves optionality

The optionality that is implicit in word-order freedom is notoriously problematic for approaches to the CWC like that of Roberts (1997). According to his theory, rich overt case-marking implies a strong N feature on Agr_O, driving overt movement of object DPs to Spec-Agr_O. He explicitly relates this (p. 421) to the apparent cross-linguistic connection between rich agreement morphology and V-to-I raising, thereby

motivating the idea that feature strength might be tied to overt morphology in general. However, there is a difference between V-to-I movement and DP movement. The former is generally obligatory in the languages that have it, whereas certain instances of the latter are optional. The whole point of the CWC is not that languages with rich case-marking have a different word order than those without, but that they have greater optionality in their word order. Roberts does allow for this to a certain extent, in that he makes scrambling dependent on the prior application of overt raising to Spec-Agr$_O$. Still, it is not generally thought that all of the variability in word orders in the Old and Middle English data that he discusses can be attributed to scrambling. Rather, there is very good evidence that, for several centuries, there was variation in the OV-VO status of clauses, with the former gradually being replaced by the latter (see e.g. Kroch and Taylor, 2000, Pintzuk, 2002a,b, for discussion and argumentation). In Roberts's (1997) system this implies that, during these stages, there was variation in the occurrence of raising to Spec-Agr$_O$, and therefore in the strength of the N features on Agr$_O$. Now, variable feature strength is one of the standard ways to treat optionality within Minimalism, but it raises certain questions if feature strength is tied directly to richness of morphology, as claimed by Roberts. It might be plausible to posit varying feature strength corresponding to case-marking that is on the verge of being lost, as in Early Middle English, but this will not work for languages with an intact system of case-marking. Of course it is mainly the latter that exhibit the relevant types of word-order freedom. For the specific example of English, Pintzuk (2002b) has presented evidence that the beginning of the rise of VO order goes back to 950 in OE, two centuries or so before case-marking began to disappear.

In contrast to Roberts, Kiparsky (1997) and Neeleman and Weerman (1999), design their theories specifically to derive the optionality effect. For them, m-case does not cause DPs to move. Instead, it satisfies obligations which would otherwise have to

be met by rigid ordering. This is in principle a very attractive approach to optionality, a phenomenon that presents a challenge for all formal theories of morpho-syntax. But the theoretical steps they take to instantiate the idea are themselves questionable. Neeleman and Weerman e.g. make crucial use of the ECP, formulated as a PF filter, to keep caseless DPs local to their licensing heads. However, both filters and the government relation that the ECP depends on have generally been abandoned in recent work in the Principles and Parameters tradition (which Neeleman and Weerman generally adhere to) because of the complexity they introduce into the grammar. One of the main moves of the Minimalist Program has been to reimplement notions like the Case Filter as principles that steer individual steps of the derivation rather than as well-formedness constraints on the output. That is, rather than allowing derivations to proceed freely and weeding out the ones where a DP ends up without having its Case feature properly assigned/licensed, Case features are recast as instructions forcing the derivation to handle them in specific ways at specific times. The advantage is that the generation of an utterance consists of the derivation of a single convergent structure, rather than the parallel derivation of a series of structures which must all be evaluated for convergence. Of course, any number of syntactic theories take a rather different view, where the generation of utterances amounts to the comparison of a series of representations, as notably in Optimality Theory. If one takes a representational view rather than a derivational one, one could propose the Neeleman-Weerman ECP as one of a series of constraints that work together to determine a convergent output. However, this is clearly not the intention of these authors, and such a theory would make rather different predictions than the one they develop.

A larger problem is presented by the formulation of the ECP as a filter which applies at PF. Neeleman and Weerman (1999) are forced to this move, because they want the ECP to distinguish DPs with case-marking in the form of an overtly filled

K from those with an empty K. This is a significant departure from traditional for-mulations of the ECP as a principle operating at S-structure, whose main purpose was to prevent elements from moving to a position from which they could no govern their trace. Note then that the central facts that the ECP was proposed to account for have, in more recent Principles and Parameters theories, been reinterpreted as lo-cality effects on movement, binding and the like, so we must question the motivation for continuing to posit the ECP as an independent principle at all. Furthermore, PF filters in general must be regarded as dubious because they are difficult to reconcile with the clear instances of default behavior displayed by the morphology. That is, for the most part it would seem that PF is purely interpretive, doing its best to come up with an output for any convergent structure that is passed to it at Spell-out. If it were possible for a derivation to 'crash at PF', as Neeleman and Weerman would have it, it would be considerably more difficult to account for morphological and phonological defaults.

The theory of Kiparsky (1997) avoids criticism on this point because it is based on a rather different, unification-based framework. It is explicitly of the representational, constraint-based type discussed above, more explicitly built to handle optionality within the synchronic grammar. With both Kiparsky (1997) and Neeleman and Weerman (1999) in mind, I will simply note that one is forced at the very least to make different assumptions about the basic model of the grammar than I am making if one wishes to tie optionality to the richness of case within the synchronic grammar.

5.2.3   The CWC depends on 'richness' and 'freedom'

Another familiar and problematic question for accounts of the CWC (and indeed in a more general sense for any theory that makes some phenomenon depend on the richness of some type of morphology) is precisely how 'rich' case-marking must be to

allow word-order freedom, and how the grammar is to measure this 'richness'. How we answer this depends deeply on where we encode the CWC. A synchronic-grammatical explanation must define richness in purely formal terms that apply universally. It cannot use vague or speaker/hearer-based notions like 'sufficiently distinct', 'unambiguous' or 'salient', because such notions are not defined within the narrow synchronic grammar. But a definition that can satisfy these restrictions **and** account for the cross-linguistic variation on this point turns out to be impossible to formulate.[3]

First of all, richness clearly cannot be reduced to the simple presence or absence of a marker on a given form. It is typical in case-marking languages that one case in a given paradigm will have a zero marker – usually the nominative or absolutive. Even Indo-European languages like Latin and Greek, which have a nominative singular ending -*s* in certain noun declensions, have a null ending in its place in others. This includes most notably the *ā*-stems (e.g. Latin *puella* 'girl', Greek *agorā* 'marketplace') and the *n*-stems (e.g. Latin *natiō* 'nation', Greek *poimēn* 'shepherd'). Yet such forms have the same word-order freedoms as ones with clear overt markers. Of course, what is actually relevant is not the presence or shape of a particular case form, but the distinctiveness between forms. However, even this cannot be determined by simply considering the paradigms of individual nouns. Latin *genū* 'knee' is the same in the nominative, dative, accusative and ablative, yet is no more restricted in its positional behavior than *prīnceps* 'chief', which has four distinct forms for these cases. So 'richness' of morphology, as it is relevant to word-order freedom, is defined not in terms of particular forms, but of distinctions between them, and it is determined language by language, not word by word. This is problematic if we want

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[3]The following owes much to the discussion in Bobaljik (2002) of theories of the correlation between rich agreement morphology and verb raising. The parallels between that correlation and the CWC are instructive, and it is not an accident that both Bobaljik (2002) and Alexiadou and Fanselow (2000) come to the conclusion that the former must be explained in large part through principles of acquisition and change.

the synchronic grammar to be sensitive to morphological richness. It implies that the determination cannot be based strictly on the morphological information present in a given utterance, thus it is unclear how the grammar can know, in the course of a single derivation, whether case-marking richness is sufficient to license some reordering process. To be a bit more concrete, imagine this is terms of Neeleman and Weerman (1999)'s theory. The grammar must be able to determine whether a given instance of the K head is to count as empty for the purposes of the ECP, and thus force rigid word order. This cannot, however, be done based on whether there is overt phonological material, due to the issue with null endings discussed above. Even if it is to go by some more abstract criterion, the issue cannot ultimately be reduced to any property of the particular K head in question, but must depend on a comparison across K heads throughout the language. This is clearly not the sort of thing that can or should be computed in the course of the derivation of a particular sentence, but must rather be set on a language-wide basis, presumably in the course of acquisition. Again, the influence of case-marking on word-order freedom is moved, at least in part, from the synchronic derivational grammar to the language acquisition device.

Assuming for the sake of argument that this issue can be dealt with, we still need a universally valid formulation for our richness metric. We could try something like the following:

(173)   If a language distinguishes subject from object case in at least one number of at least one productive noun inflection class, then it has K'.

This is intentionally analogous to proposals that have been made for V-to-I raising, for example the following from Rohrbacher (1994):

(174)   A language has V to I raising if and only if in at least one number of one tense of the regular verbs, the person features [1st] and [2nd] are both distinctively

marked [p.108].[4]

Under the assumption that there **was** a strong implication to be found in the correlation between tense and agreement morphology and verb raising, a whole series of works through the 80s and 90s proposed ever more precise formulations of exactly how much morphology is necessary to predict verb raising (see e.g. Platzack, 1988, Falk, 1993, Holmberg and Platzack, 1995, Rohrbacher, 1994, Vikner, 1997). At each stage, however, another language or dialect was found which contradicted the most recent formulation in one direction or the other, and Rohrbacher's attempt is no different in this respect. Tromsø Norwegian and Kronoby Swedish, e.g., show no person distinctions, yet still have overt verb raising. Indeed, Bobaljik (2002) has shown that the variation attested just within the Germanic languages is such that no definition of this kind could predict without exception which of them will have V-to-I and which will not.[5] The task is no easier with the CWC. Formulations like that in 173, if intended to represent a principle of synchronic grammar, derive strong implications which brook no exceptions. But I will present data in Section 5.3 that would be counterexamples to any formulation of the CWC as a strong implication. Specifically, there are heavily case-marking languages like Icelandic which lack scrambling, the paradigm example of word-order freedom, just as there are non-case-marking languages like Dutch which have it. The point is not that previous attempts at formalizing implications from morphological richness to syntax in this way have been incorrectly formulated or not fine-grained enough, but that they are completely on the wrong track. Syntax simply does not depend on morphology in the way that must be assumed in such theories.[6]

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[4]By distinctively marked, Rohrbacher means distinct from each other **and** from other forms, including e.g. the infinitive.

[5]See also Sprouse (1998) and Sundquist (2002) for criticism of attempts to tie verb raising directly to rich agreement.

[6]Thanks are due to Tony Kroch for initially pointing out this issue with respect to verb raising and its broader relevance.

Note, then, that even if we set aside all of what has been said to this point and imagine that we can somehow construct a satisfactory definition for the richness metric, we would still be back where we ended up in Section 5.2.1. That is, we will have put the CWC in the acquisition component rather than in the synchronic grammar. Consider what is at issue here. An essentially deductive step must be made from intra-paradigmatic morphological distinctions to the positing of a language-wide syntactic feature K'. The synchronic grammar cannot make this leap because it would involve a syntactic feature depending on morphological information, going contrary to the ordering of levels established within Distributed Morphology. Rather, the step being posited here is precisely the sort of thing we would expect the language acquisition device to do, which must construct a grammar on the basis of a set of input data and the constraints of Universal Grammar. Indeed, it would essentially amount to the setting of a parameter.

An explicitly use and acquisition-based explanation of the CWC is again able to avoid these problems, in large part because it does not require a formal definition for 'rich' morphology. Rather, it depends on the ease with which speakers and hearers can use and understand a given utterance. Thus it **can** use notions like 'sufficiently distinct' and 'unambiguous', which makes the task much easier, and predicts only a correlation between word-order freedom and case-marking, not a strong implication. This is partly because, if the general ease of speaker/hearers is what is at stake, then case-marking should have no special status as compared to other disambiguating cues. Other factors like agreement morphology and intonation should interact with word-order freedom in the same way. Consider in this light the German example in 175, where both case-marking and agreement are ambiguous:[7]

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[7]N/A indicates that a form is ambiguous between nominative and accusative.

(175) dass die Katze eine Frau gesehen hat.
    that the cat:N/A a woman:N/A seen has
    'that the cat saw a woman' **or** 'that a woman saw the cat'

One might expect that such an example would only be interpretable as the unmarked SOV order, since the morphology to support a reordering to OSV is lacking. This is not, however, the case, as the sentence really is ambiguous as written.[8] In actual speech, on the other hand, sentences of this type will be disambiguated by intonation and context. When the SOV interpretation is intended, it will typically be accompanied by an unmarked intonational pattern, with no element bearing focal or contrastive stress. If the more marked OSV interpretation is intended, on the other hand, the speaker will in all likelihood place focal stress on *die Frau*.

Now, if intonation can be used to diagnose reordering in this way, then it should be relevant for the learning, use and, by extension, viability of word-order variation.[9] Furthermore, we have no reason a priori to assume that this relevance is of a different quality than that of case-marking.[10] Thus it is hard to see why the interaction of case with word-order freedom should be encoded in the synchronic grammar, while that with intonation should not be. A more reasonable account would be that sentential intonation is determined somewhere on the PF branch, on the basis of syntactic structure. It therefore provides insight into that structure for the hearer, who can use it to decide between the various alternative structures which could be consistent with the surface string of the utterance. The language acquirer, once she has learned the basic intonational pattern of her language, can use it in the same way to interpret

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[8]Beatrice Santorini, p.c., points out that sentences of this type have been reported to be unambiguous in the past, but incorrectly so. The more marked OSV interpretation can be difficult to get out of the blue, but is absolutely available in appropriate contexts.

[9]See Hale (1992) for discussion of intonation as a clear diagnostic of reordering in Papago (now usually known as O'odham), a language with extremely free word order, rich verbal agreement, and no nominal case-marking.

[10]It may, however, be of a different quantity. That is, case-marking is probably a better disambiguator and thus also a stronger prop for word-order variation than intonation is.

the surface string and thereby recognize and learn the reordering processes that are available in the language she is acquiring. Of course, I am proposing exactly the same thing for morphological case. It is supplied on the PF branch on the basis of the syntactic structure and thus can be used by the hearer to arrive at the correct interpretation of a potentially ambiguous string.

Example 175 brings us to another issue, because very similar reorderings to the one found there are actually possible in English as well:

(176)   a. That cat I've never seen before.

         b. Beans, I like.

OSV is a marked order for the normally SVO English, and English has essentially no case-marking, so why aren't sentences like 176a and the classic 176b considered a counterexample to the CWC? The answer, apparently, is that the reordering process involved here is topicalization, and topicalization is just not one of the processes that the CWC is supposed to cover. I.e. unlike e.g. scrambling, we find it cross-linguistically quite independent of whether a language has rich case-marking. Of course, such an explanation is circular (the CWC does not have to cover topicalization because topicalization does not obey the CWC) unless we can demonstrate a principled distinction between the two types of reordering and show why case-marking is relevant to the one and not the other. Now, it has been proposed (see e.g. Kiparsky, 1997, Fanselow, 2001) that topicalization is operator or A'-movement, while scrambling is A-movement, under the assumption that only A-movement is subject to the CWC. However, the correct analysis of scrambling remains controversial. See e.g. the papers in Corver and van Riemsdijk (1994) for an array of mutually incompatible theories, some of which claim that scrambling is A-movement, some that it is A'-movement, and others that there are both A- and A'-varieties of scrambling. In

the end, even if these issues can be resolved, and a satisfactory distinction can be drawn between scrambling and topicalization, a synchronic-grammatical account of the CWC must be able to do this for **every** type of reordering process. The point is, we are not dealing simply with a monolithic 'free' versus 'rigid' distinction in word orders cross-linguistically, but with a continuum, and languages vary widely in exactly which types of reordering they allow. This goes from fairly rigid English, through German with its more liberal scrambling and topicalization operating on the backdrop of a rigid ordering of verbal elements, to so-called non-configurational languages which allow all (or nearly all) sentential elements to be displaced and are permissive with so-called discontinuous constituents. Finding a way to correlate this variation directly and consistently with case-marking facts has poor prospects of success. Much like optionality, formal theories of synchronic grammar are simply ill-equipped to deal with continua of this kind. This is not necessarily a weakness of such theories however. There are benefits of having a division of labor in our linguistic descriptions like that laid out at the beginning of this chapter, and phenomena like the CWC are simply much better explained in terms of use, acquisition and change.

For example, note that an account based on hearer disambiguation has a straightforward account of the greater cross-linguistic availability of topicalization than scrambling. Since topicalization involves movement across all intervening elements to the edge of the clause, it is more easily detected by the hearer in the absence of case-marking than the shorter scrambling of, say, one object across another. What is interesting is that even topicalization of objects is markedly less common in English (or Dutch, which has a more German-like V2 grammar) than in German. Case-marking thus seems to have an effect on the frequency of use of a reordering process that is not actually assumed to depend on it for licensing. This implies, as was pointed out in the introduction, that a synchronic-grammatical account of the CWC must have a

synchronic licensing story for things like scrambling, **and** an acquisition and change story for things like topicalization. Of course, an acquisition-and-change-based theory on its own is simpler and thus to be preferred in the absence of evidence that it cannot account for facts which the more complicated hybrid theory can.

5.3 Empirical issues

As we have seen in the previous section, serious theoretical issues for any theory that would explain the CWC within the narrow synchronic grammar. A use and acquisition-based explanation, according to which case-marking makes word-order variation easier to understand and therefore easier to learn, can avoid such difficulties. Still, in the end the success of any theory must hinge on its ability to account for the empirical facts of language. Thus in this section I will consider the data relevant to the CWC, including the empirical arguments that have been made in support of a synchronic-grammatical explanation. We will see that the arguments do not hold up under close scrutiny, and that the facts actually argue **against** a synchronic-grammatical explanation.

5.3.1 How strong is the correlation?

To begin with we must ask what sort of correlation we are dealing with. As was noted at the outset, it is clear that certain word-order freedoms do pattern with the presence of overt case-marking, but is the correlation properly speaking a bi-conditional or one-way implication, or just a tendency? It is clear to start with that it cannot be a true bi-conditional implication. There is no shortage of languages which have rich case-marking yet lack scrambling, the prototypical type of word-order freedom that is supposed to depend on case. For example, as Table 5.1 shows, Icelandic has

the same number of distinct cases as German, and far more distinct morphology on the nouns themselves. German also has more instances of syncretism, as e.g. in the

	German		Icelandic	
	SG	PL	SG	PL
N	der Mann	die Männer	hest-**ur**-*inn*	hest-**ar**-*nir*
G	des Mann-**es**	der Männer	hest-**s**-*ins*	hest-**a**-*nna*
D	dem Mann	den Männer-**n**	hest-**i**-*num*	hest-**u**-*num*
A	den Mann	die Männer	hest-*inn*	hest-**a**-*na*

Table 5.1: German and Icelandic DEF MASC strong nouns

nominative/accusative plural. Yet, as is well known, German allows scrambling of one object across another, while Icelandic does not.

A less familiar example of this type, discussed by Kiparsky (1997), is Grisons Swiss German. This dialect has the four-case system of standard German, yet does not allow the DO to be scrambled across the IO:

(177) a. und den het dr dogdor S. em   Bbuur de   KB erklärt
           and then has the doctor S. the:D farmer the:A AI explained
           'and then Dr. S. explained artificial insemination to the farmer.'

      b. * und den het dr dogdor S. de KB em Bbuur erklärt

So rich case-marking does not necessarily imply word-order freedoms. Kiparsky (1997) notes this, but argues that the CWC does hold as a proper implication in the other direction:

> The most important point about this relationship is that it is not a vague correlation or tendency, as often assumed, but an exceptionless implication, which however holds in one direction only: *lack of inflectional morphology implies fixed order of direct nominal arguments* [p. 461, emphasis in original].

This is crucial, because only an actual implication can be properly encoded as a principle of the synchronic grammar. That is, formal principles of grammar should not allow exceptions. Kiparsky (1997) himself implies as much when he says that "[t]he

unclarity of traditional formulations on this point is probably to blame for the disrepute and neglect into which even the valid half of the implication has fallen in modern theorizing about syntax" (p. 461). In other words, in his view the correlation has not been regarded as something to be explained by the theory of grammar precisely because it has been considered to be a tendency rather than an implication. Indeed, if it could be shown that the CWC is an exceptionless cross-linguistic implication, this could constitute an argument in favor of a synchronic-grammatical account.

However, even the one-way implication cannot be maintained. Dutch has no more case-marking than English, yet, as I will show in the next subsection, it allows scrambling of one object across another. Thus the CWC is not an implication at all, but a (perhaps strong) tendency. The synchronic-grammatical accounts cannot handle this. On the other hand, a tendential relationship is precisely what an acquisition- and change-based account predicts, because, as discussed in the previous section, it predicts that factors beyond case-marking will play a role, and because language acquisition is not necessarily a deterministic process.

5.3.2 Dutch scrambling, Russian OVS, and pragmatic markedness

It is frequently reported that Dutch objects can scramble across negation and adverbs, but not across other DPs. Indeed, essentially everyone who argues for a synchronic-grammatical account of the CWC reports this, including Kiparsky (1997) and Neeleman and Weerman (1999). It would indeed be an ideal example to demonstrate a strong version of the CWC, because Dutch and German are about as close to a minimal pair as we are likely to find. The syntax of the two languages is strikingly similar, both being OV and having a V2 grammar of the type that is sometimes labeled CP-

V2 and analyzed as lacking CP-recursion (see e.g. Kroch, Taylor, and Ringe, 1995, for a discussion of the difference between CP- and IP-V2 languages and related issues). One of the few clear differences between them is that German has a full-fledged case-marking system, while Dutch does not. If it were the case that Dutch lacked the kind of scrambling that is found in German, then we could potentially argue that this represents the uninterrupted working of the CWC.

In this vein, then, Kiparsky (1997) reports the following:[11]

(178)   a.   dass Jan seinem Vater das Buch gibt
                that Jan his   father the book gives
                'that Jan gives his father the book'

        b.   dass Jan das Buch seinem Vater gibt

(179)   a.   dat Jan zijn vader het boek geeft
                that Jan his father the book gives
                'that Jan gives his father the book'

        b.   * dat Jan het boek zijn vader geeft

However, matters are not that simple. Zwart (1997) reports the data in 180 and the explanation in 181:

(180)   a.   . . . dat Jan Marie (gisteren) het boek gegeven heeft
                that John Mary yesterday the book given has
                '. . . that John gave Mary the book yesterday.'

        b. ??. . . dat Jan   het boek Marie gegeven heeft
                that   John the book Mary given   has
                '. . . that John gave Mary the book.'

        c.   . . . dat Jan   het boek Marie terug gegeven heeft
                that   John the book Mary back given   has
                '. . . that John gave the book back to Mary.'

(181)   "[180b] is unacceptable in a neutral stress pattern, i.e. with *Marie* slightly
        focused. Almost any marked stress pattern makes [180b] acceptable though.

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[11]He actually marks 178b with a star, but it is clear from his discussion that this is a typo.

Thus, in [180c] the particle *terug* is in focus, and the order of the objects appears to be free" (p. 32).[12]

I have confirmed Zwart's judgments with two native speakers, so it does not appear that we are dealing with questionable data.

In short, then, Dutch **does** allow scrambling of one object across another. Granted, a special intonation and, presumably, an appropriate discourse context are required to license such scrambled orders, but this applies to German scrambling as well (See e.g. Lenerz, 1977, Haider, 1993, for discussion of the interaction of intonation and discourse status with German word order). Now, it is true that, under certain circumstances, German allows both orderings of objects in double object constructions with unmarked intonation. However, recall that I have argued above in Chapter 4 that there are actually two distinct underlying structures for double object verbs in German, one with IO-DO order that corresponds structurally to the English double object, and another with DO-IO order analogous to the English *to*-dative. It would seem that, in fact, what have been analyzed as instances of 'short scrambling' with no intonational effects, are actually just the the surface manifestation of these two distinct underlying structures. The main evidence for this was that, in fact, different verbs show different behavior in this respect. One of the arguments for a distinction between D-A class verbs like *kaufen* 'buy' and A-D verbs like *aussetzen* 'expose' was after all that each class is restricted to one ordering under neutral intonation. There is a group of verbs including *geben* 'give' that can have either ordering without

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[12]It has been claimed (e.g. by Neeleman, 1994) that Dutch only allows this ordering in instances of so-called 'focus scrambling', which is an instance of A'-movement that is insensitive to m-case. This contrasts with 'short scrambling', which is A-movement and cannot cross arguments in the absence of m-case. However, note that in 180c it is *terug* that is in focus, not the object, and indeed Zwart's claim that "[a]lmost any marked stress pattern makes [180b] acceptable" does not support the restriction Neeleman claims. Zwart (1997, Section III.2.2) demonstrates in great detail that the relationship between focus and movement in Dutch is by no means as clear as Neeleman would have it be. Also, if focus scrambling is indeed A' movement, some measures will have to be taken to explain why English does not allow it.

intonational distinction, but this is apparently because they allow both underlying structures. If we were to say that *geben* allowed scrambling without intonational effects, we would be at a loss to explain why *kaufen* and *aussetzen* do not. The simplest story is that there is no scrambling that does not leave an intonational trace, and that the ordering variation of this type that does exist is due to the variation between two different base structures. Indeed, even Kiparsky (1997) concludes that German must have two different base-generated orders for ditransitive verbs.

So the only true instances of scrambling are those movements that are intonationally marked, and Dutch has these just as well as German. Now, it is true that Dutch does not have any sentences with base-generated DO-IO ordering an unmarked intonation, but the reason for this is not syntactic. The structure that shows up like this in German (i.e. that with verbs like *aussetzen*) is in fact, by hypothesis, the same structure that shows up in Dutch and English with a preposition marking the IO. Recall from Chapter 3 that it is common for two languages to differ morphologically in that the one spells out a given syntactic object as an affix while the other spells it out as an adposition. The difference between German and Dutch is thus simply that German morphology spells out the post-accusative argument in the dative case while Dutch spells it out with an overt preposition. This should not be terribly surprising, since I have analyzed the lower dative in German as a covert PP. I will argue in section 5.3.4.1 below for essentially the same analysis of a change from Old English to late Middle English.

Of course, there is one important difference between the two languages with respect to real scrambling of one object across another. Namely, it is much more common and less marked in German than in Dutch. This is for the very simple use-related reason that scrambling runs a greater risk of being misinterpreted in the absence of case-marking. The lower frequency and higher markedness in Dutch can

plausibly be interpreted as amounting to a smaller number of pragmatic contexts in which the scrambled order is felicitous. Presumably, in a discourse context where scrambling would have a high degree of motivation, it would be easier for hearers to recognize and correctly interpret it, with the help, of course, of intonational cues, because they would in a sense be expecting it. But in the absence of such a context, the scrambling would be unexpected and difficult to parse correctly. Thus we can guess that Dutch speakers have difficulty when presented with this order in grammaticality tests because they are required to supply such a context out of the blue. Furthermore, the marked intonation, which must accompany scrambling and helps to identify it, is not indicated in writing, whereas case-marking is. Of course, this interpretation of the facts is only possible if we adopt a use- and acquisition-based account of the CWC. Synchronic-grammatical accounts are again at a loss (at least the ones that we have been considering), because they are not equipped to deal with tendencies and frequencies.

Similar remarks are in order for claims that have been made about certain patterns in languages that do have rich case-marking. In particular, it has been reported from time to time that marked word orders are impossible even in such languages when the case-marking on the specific nouns involved is ambiguous. For example, Jakobson (1936) claims that OVS order is possible in highly case-marking Russian only in sentences where the case-marking is unambiguous. Thus he gives 182 as OK, because *syna* is marked accusative, but says that 183 is impossible because neither *mat'* nor *doč'* shows a nominative/accusative distinction:

(182)   Syna   rodila mat'   prošlym letom.
             son:A bore   mother:N/A last   summer
             'The mother bore the son last summer.'

(183)   * Doč   rodila mat'.
             daughter:N/A bore   mother:N/A

intended: 'The mother bore the daughter.'

However, according to native speakers I have consulted on the issue, this claim is simply incorrect (as was the similar claim about German noted above). What **is** true is that this ordering is marked and requires contextual motivation and/or a marked intonational pattern – just as in Dutch. Russian speakers thus presumably have the same difficulty with 183 encountered out of the blue that Dutch speakers have with 180b. This situation is actually the basis for a joke, which capitalizes on the fact that Georgian names are indeclinable. The punch-line (with ambiguous case-marking and OVS) is:[13]

(184) Net, mama, Givi udaril Katso, a   menya udaril Vano!
       no, mama Givi hit   Katso, and me   hit   Vano
       'No, mama, Katso hit Givi and Vano hit me!'

On the one hand, this reinforces the claim made in Section 5.2.3 that word-order freedom is determined on a language-wide basis, not word-by-word. On the other, this drives home the role played by context and intonation in supporting marked word orders.

5.3.3 OV-VO and overt object shift

One area of word order where scholars have made especially specific claims about the role of case-marking is the positioning of objects. As discussed above, Roberts (1997) seeks to explain the change from OV to VO order in the history of English at least partially on the basis of the loss of case-marking. Since he is assuming a Kaynean

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[13]Special thanks go to Sophia Malamud for providing this example. The full joke (translated) goes like this. "Gogi comes home after a soccer practice with a huge bruise on his face. Gogi's mother: what happened? Gogi: you see, Mama, Givi was fighting with Katso and Vano. . . Mother: well, what do you have to do with all this? Gogi: you see, Mama, Givi is from my team, and there was a fight. Mother: well, who started it, and why were you in it? Gogi: you see, Givi hit Katso. . . Mother: oh, so you had to hit someone too? Gogi: no, Mama, Givi hit Katso, and me hit Vano!"

asymmetric view of phrase-structure, the difference between OV and VO cannot be explained with different settings of a head-directionality parameter or the like, but must result from the differential application of movement processes. Specifically, OV results from a combination of overt object shift to Spec-AgrO with the lack of V-to-I raising. Indeed, it has become quite common to claim that overt object shift especially is related to case. Holmberg and Platzack (1995) e.g. argue that the reason why in Icelandic full NPs and pronouns can undergo OS, while in Mainland Scandinavian only pronouns can, is that Icelandic has case-marking on all DPs while Mainland Scandinavian has only it on pronouns. However, while such attempts frequently have a certain attractiveness when designed to deal with one phenomenon within a specific group of languages, they run into a series of problems when one enlarges the language sample or takes seriously the general ideas of the syntax-morphology interface that they are based on.

First of all, a host of problems arises if we consider a comparison between Dutch, German, Icelandic, and their immediate predecessors. As demonstrated in table 5.1 above, Icelandic has if anything richer case-marking than German, yet it is VO while German is OV. Roberts' explanation of this is that Icelandic has V-to-I raising, while German does not. In fact, such an analysis seems to be fairly well-motivated for Icelandic, but it raises problems for German. We can say that objects raise to Spec-Agr$_O$ because German still has sufficiently rich case-marking, cuing strong N features for Agr$_O$, but German verbal agreement morphology is at least as rich and distinctive as its case morphology, and it is as rich as that in Icelandic. Consider the present paradigms for *heyra* 'hear' and *tragen* 'carry' in Table 5.2 (p. 176).

In Icelandic the 2nd and 3rd singular are non-distinct, while in German the 1st and 3rd plural are non-distinct. I know of no formulation of the richness metric for verbal agreement that would distinguish these two languages, and while one could of

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	Icelandic	German		Icelandic	German
1s	heyri	trage	1p	heyrum	tragen
2s	heyrir	trägst	2p	heyrið	tragt
3s	heyrir	trägt	3p	heyra	tragen

Table 5.2: Icelandic and German present tense

course formulate one, it would be completely ad hoc. Thus, if V-to-I raising is tied to richness of verbal agreement, and Icelandic agreement is rich enough to trigger it, then German should have it too and be VO. If we assume with Roberts (1997) that there are no right-headed phrases, then we have no way to account for the fact that German is instead OV. In other words, a unified treatment of Icelandic and German under the assumption of a direct relationship between case-marking and object shift is incompatible with a direct relationship between agreement-marking and verb raising.

Note, furthermore, that Dutch has the same embedded clause OV order as German (modulo some irrelevant differences in the verb cluster), meaning that under Roberts' analysis we must again posit object shift to Spec-AgrO and failure of V-to-I raising. But, as noted above, Dutch has no more case morphology than English, and it has nearly as much verb agreement as German. Roberts' account of this is that, alongside the morphological trigger for strong N features, there is a potential syntactic trigger. I.e. a child will learn that Agr_O has strong N features either if there is rich case morphology or if there is unambiguous syntactic evidence that movement to Spec-Agr_O has occurred. In other words, case-marking is a sufficient, but not a necessary, condition for strong N features. The question then, of course, is how a language like English ever lost raising to Spec-Agr_O, thereby becoming VO. Roberts' argument there is that the existence of other reordering processes – including V-to-I raising and frequent DP extraposition – obscured the evidence for it that was presented to learners. When the morphological trigger was lost as well, there was no longer sufficient evidence to posit a strong N feature, and this reverted to its default weak

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setting. One problem with this story comes again from the verb agreement facts. Why should older stages of English have had V-to-I while similar stages of Dutch (and German) did not? Consider on top of this that older forms of Dutch and German also allowed post-verbal DPs (derived by extraposition under Roberts' analysis), just like the older (more OV) stages of English, as in the Middle Dutch example 185 from Neeleman and Weerman (1999):

(185) Hi soude dorbreken   den muur.
       he would through-break the wall:A
       'He would break through the wall.'

According to Roberts then, orders of this kind served to eliminate the raising of objects to Agr_O in English, but in Dutch and German they simply disappeared for no apparent reason.

It is interesting to note that Neeleman and Weerman's (1999) theory tells a very different story about these data. They continue to assume a version of the head directionality parameter, allowing base-generation of both OV and VO independent of case-marking. What case-marking does in their system is allow for variation from the basic ordering, i.e. VO sentences in a basically OV language and vice-versa – what they call 'leakage'. So the change from OV to VO in English did not depend on the loss of case-marking, but the elimination of variation between the two orders did. The attraction of their analysis is that it can explain the loss of DP extraposition in Dutch as resulting from the loss of case-marking. Without case-marking, objects to the right of V in a head-final language contain an empty category that cannot be properly governed, and thus are ruled out. However, German now presents a problem, because it lost extraposition (or VO leakages) just as Dutch did (and just as English lost OV leakages), even though its case-marking remained robust. Now, if German could lose surface VO orders at roughly the same time that Dutch did, while

Dutch lost case-marking and German retained it, then there is really no justification whatsoever for saying that the Dutch change had anything to do with case-marking.

In Section 5.2.2 I discussed the problem faced by the Roberts-style account of overt object shift due to the optionality of the operation. Indeed, it is a priori suspicious to explain the obligatory OV order of German by the same mechanism that is supposed to be responsible for ordering variation within Icelandic. In German, all objects, independent of definiteness, specificity and the like, must appear before the verb cluster in subordinate clauses, but in Icelandic, overt object shift is variable, depending directly on definiteness, specificity and the pronoun/full NP distinction. Indeed, as far as its conditions of application are concerned, Icelandic OS is strikingly similar to German scrambling, and therefore of a very different nature than the latter language's basic, obligatory OV-ness. The more detailed and complicated account of Holmberg and Platzack (1995) does not fare any better in this respect.

Indeed, the historical development of OV and VO orders and object shift within the Scandinavian languages raise considerable difficulties for theories that tie word-order directly to morphological factors. Even though it has essentially undergone no changes in its morphological system, Icelandic has lost OV orderings over the course of its recorded history. What is more, the loss of OV orders is actually just part of a larger change in the ordering of all verbal complements. That is, pre-verbal complements of all types – DPs, PPs and clauses – are lost at the same time, as shown by Hróarsdóttir (2000). Thus even in principle the change cannot be blamed on changes in the case-marking system, since these would be irrelevant to all verbal complements except DPs. (Sundquist, 2002), a large-scale study of the historical development of the Mainland Scandinavian languages makes similar arguments, supported with strong statistical evidence. Looking at Middle Norwegian in the period from 1250 to 1525, he performs a logistic regression analysis of the frequencies of pre-verbal

objects and pre-verbal PPs. This resulting slopes are nearly identical for pronominal objects, non-pronominal objects and PPs (-.024, -.028 and -.024 logit units per year respectively).[14] Sundquist thus argues, following the Constant Rate Hypothesis (Kroch, 1989), that the loss of pre-verbal PPs and the loss of pre-verbal objects represent a single change. If this is correct, then it is hard to maintain that the loss of case-marking is the driving force in the change, since this should not have any effect on PPs, and since pronouns never lose their case-marking in Norwegian. Crucially, the statistical analysis makes it very difficult to claim that OV order was lost because of the loss of case-marking, with the other XV orders subsequently being eliminated due to a general preference for a consistent head-complement order. If this were so, we would expect a time lag in the rates at which the orderings changed. In case this were not enough Sundquist (2002) also presents evidence that the loss of pre-verbal objects themselves does not even track the loss of case-marking as closely as had been assumed. The most relevant syncretisms in the nominal paradigms appear a full two centuries before the start of the major decline in OV orders. Furthermore, as noted above, pronominal objects retain their case-marking distinctions much later, yet the frequency of their pre-verbal appearance declines at the same rate as that of nominal objects.

Matters do not get any better when we turn to the development of overt OS. The current distribution of OS in the modern Scandinavian languages would seem to strongly indicate a connection to case-marking. The pattern, again, is that, the pronouns have retained a nominative/oblique distinction in all of the Scandinavian languages, and they undergo overt OS in all of the languages as well. Full DPs, on the other hand, have lost case-marking in Mainland Scandinavian, and in contrast to Ice-

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[14]That is, while these three complement types occur pre-verbally at different frequencies in any given time period, all three frequencies decrease at the same rate. See Kroch (1989) for the classic discussion of this sort of change and the associated Constant Rate Hypothesis.

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landic cannot undergo OS. This is the basis for theories like Holmberg and Platzack (1995), which formalize the dependency of OS on case-marking. However, the historical facts militate quite strongly against this. Sundquist (2002, ch. 4) shows first of all that the frequency of pronominal OS in Norwegian has unexpectedly **increased** over time. In his corpus spanning from 1275 to 1525, only 77.5% of non-indefinite pronouns shift overtly, while in the modern standard language overt OS of such pronouns is mandatory. This is surprising for case-based accounts, since the number of distinct cases for pronouns has decreased over the period, but the data on non-pronominal OS are much worse. The available evidence seems to indicate that, unlike Modern Icelandic and like Modern Mainland Scandinavian, the older Scandinavian languages did not allow it, even though they had the rich case-marking system that has survived in Icelandic. Sundquist (2002) finds that of the 135 non-pronominal objects that appear with a diagnostic adverbial element in his corpus of Middle Norwegian, **zero** undergo overt OS, and Haugan's (1998) examination of the entire Old Norse saga corpus does not turn up any examples either. This reordering is lacking in Faroese as well, although its case-marking remains nearly as rich as that in Icelandic (Vikner, 1994, Holmberg, 1999). It would thus seem that overt OS of non-pronominal objects is an innovation of Modern Icelandic! But if this is so, then we can conclude nothing about a potential relationship to overt case-marking. Given the data from Old Norse, Middle Norwegian and Modern Faroese, rich case-marking does not imply the possibility of non-pronominal OS. Furthermore, we cannot draw any conclusions about the effects of case-marking from the fact that the Modern Scandinavian languages do not have non-pronominal OS, because their case-rich ancestor did not have it either. That is, it is simply not the case that Mainland Scandinavian lost OS when it lost case-marking, because it never had it in the first place.

In summary, then, while the CWC is broadly supported as a tendency, it cannot

be maintained as a strong implication, either in full bi-conditional form, or in a single direction. Even when we look at changes that seem to confirm the CWC, an examination of the details shows that the loss of certain word orders is not tied as closely to the loss of case-marking as we would expect if the CWC were encoded as a synchronic principle of the grammar. Rather, morphological changes of this type seem to have the more gradual and non-deterministic type of effect on syntactic changes that we expect if the key role of the morphology is to aid interpretation and disambiguation for the hearer and the language acquirer, not to directly license operations of the syntactic derivation of particular utterances.

5.3.4 Misanalyses

To conclude this survey of empirical data relating to the CWC, I would like to discuss an interesting class of examples which initially seem to support a synchronic-grammatical account of it, but in the end turn out to have alternative analyses which support nothing of the sort.

5.3.4.1 Ditransitives from Old to Middle English

Consider first a familiar example from the history of English. OE lacked what I call the *to*-dative construction (e.g. *John gave the books to Mary*), but allowed either order in the double object construction. That is to say, it allowed both IO-DO and DO-IO orders without any prepositional marking. In early ME, as case distinctions were being lost, the *to*-dative arose, and DO-IO order without a preposition disappeared. Thus it would seem that, when case-marking was lost, so was a certain type of word-order freedom, and the construction with *to* was created to fill the gap. However, I have argued in a previous paper (McFadden, 2002c), on the basis of evidence from a study of the *Penn-Helsinki Parsed Corpus of Middle English*, 2nd edition (Kroch

and Taylor, 1999), that what we have in early Middle English is not the derivation of two surface orders from a single base order by a scrambling rule which was lost when case-marking was lost. Rather, there were two distinct ditransitive constructions in late OE and early ME. Sentences with IO-DO order generally had a structure like the modern double object construction, e.g. *John gave Mary the books*, but at least some sentences with surface DO-IO order had a structure like the modern *to*-dative construction, with dative case-marking in place of the preposition *to*. The evidence for this analysis comes from a combination of quantitative analyses showing that the DO-IO sentences as a group do not look like the clear instances of movement that can be demonstrated for the language. Indeed there is one group of sentences in which we have DO-IO order, where the DO is a full NP and the IO is a pronoun. Such orders cannot plausibly be derived by scrambling, because if anything we expect a pronoun to scramble leftwards, and they cannot be derived by extraposition, because only heavy elements extrapose, never pronouns. In other words, it is not the case that DO-IO order from scrambling was lost and a new construction with *to* was created to replace it. The DO-IO structure was always available and has been retained. It has become the *to*-dative construction, not by a syntactic change, but by a morphological one, with dative case-marking replaced by the preposition *to*.

Note that the two accounts of the CWC make different predictions about a change like this. If DO-IO order without *to* depends on case-marking within the synchronic grammar, it should disappear as soon as case-marking is lost, but if the connection is based on use and acquisition, then languages that retain reordering after morphological case is lost may be rare and even unstable, but not necessarily impossible. As it turns out, sentences indicative of such a stage can be found in the corpus:[15]

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[15]This example is from the Trinity Homilies (ca. 1225, East Midlands dialect). This text shows no remaining distinction between accusative and dative in the nouns or the demonstrative. There only remaining distinction is in the 3rd person singular masculine pronoun, between accusative *hine*

(186) and ure drihten ... ʒaf   leue þe deuel to binimende him his oref
       and our lord   ... gave leave the devil to take   him his cattle
       'And our lord ... gave the devil leave to take his [Job's] cattle from him.'

So this historical development provides no evidence for a connection between case-marking and word order in the narrow synchronic grammar. The development from OE and early ME to late ME and ModE was purely a change in the morphological marking of DPs in ditransitive structures, not the loss of an actual word-order variant.[16]

5.3.4.2 'Semantic' case DPs

DPs bearing 'semantic' or 'adverbial' case show a remarkable degree of freedom in their positioning cross-linguistically, frequently even beyond that of other case-marked DPs in a given language. In German, e.g., argument DPs are banned from the position following the clause-final verb cluster, as in 187b, but semantic case-marked DPs, like the accusative of time in 187c are OK here.[17]

(187) a.   Er hat letzten Sonntag   seinen Bruder   besucht.
            he has last   Sunday:A his   brother:A visited
            'He visited his brother last Sunday.'

       b.   * Er hat letzten Sonntag besucht seinen Bruder.

       c.   ? Er hat seinen Bruder besucht letzten Sonntag.

It is tempting perhaps to think that it is the special case-marking that frees these nominals from the normal constraints on DP licensing and ordering. But these are just the type of adverbial DPs that I argued in Chapter 3 are actually underlyingly

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and dative *him*. In any case, the example given has no such potentially disambiguating pronouns.

[16]See also Pintzuk (2002a) for evidence that case-marking did not affect word order within Old English.

[17]The question mark on 187c indicates simply that the order with extraposition is marked. It is proscribed in writing, but fairly common in speech. The contrast with the truly ungrammatical 187b is quite strong.

PPs, following Emonds (1985, 1987) and Nikanne (1993). Recall that this accounts for how they are assigned θ-roles and why they have the same semantic range as overt PPs. What is most relevant here, however, is that this also explains the word-order freedom just noted. As was noted in that chapter, the ability to extrapose is a general property of German PPs, shown again in 188:

(188)　? Er hat seinen Bruder besucht im März.
　　　　 he has his　　 brother visited　in　March
　　　　 'He visited his brother in March.'

The word-order freedom is thus due to the fact that these constituents are PPs rather than DPs. The case-marking is a symptom of the PP structure, not the cause of the freedom.

5.3.4.3　Case drop

One might imagine that the clearest possible evidence for a synchronic CWC would be where a given word order is only possible in some language in the presence of a case-marker. Indeed, examples of this kind have been reported by Lamontagne and Travis (1987) for Japanese and Turkish.[18]

(189)　John-ga dare-(o) nagutta no?
　　　　John-N who-(A) hit　　 Q
　　　　'Who did John hit?'

(190)　Dare-*(o) John-ga nagutta no?

In the unmarked order in 189, the accusative marker *-o* on the direct object can be dropped, but if the object is fronted, as in 190, it cannot. Lamontagne and Travis thus argue that case is a syntactic head, subject to the ECP when it is phonologically

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[18]The behavior of the two languages seems to be the same in the relevant respects, so I will restrict my attention here to the Japanese data.

null.[19] The null K is properly governed in 189, but not in 190, because it has moved away from the licensing verb. Of course, if this analysis is correct, then my hypothesis is in trouble, since m-case would be affecting synchronic grammatical processes.

However, an alternative analysis of these facts is available. Recall that there is nothing in my theory to prevent word order from affecting morphological case. Like all morphology, it is inserted on the basis of the output of the syntactic derivation, including the portions that derive overt word oder. Thus all we need say about 189 and 190 is that in Japanese (and Turkish), a case-marker **must** be inserted on objects that have moved out of VP (or whatever the precise generalization turns out to be). When the object remains VP-internal, there are two morphological options, -*o* and -∅, with the choice between the two being conditioned by other factors.

In fact, there are reasons to prefer an account where case-drop depends on word-order to one where word-order depends on case-drop. In particular, the latter would predict that object topicalization of the type in 190 should be impossible in languages which lack m-case, because there would be no overt version of K available to obviate the effects of the ECP. But of course, as noted above, object topicalization is very much possible in in many languages without m-case, like English, Dutch and the mainland Scandinavian languages. To account for this, one might be tempted to assume that languages that have no overt case-marking lack the K head entirely, and thus never run into trouble with the ECP. However, this would have the odd result here that the word-order of languages with case-marking would actually be more restricted than that of those without! Of course, if instead case-drop in Japanese and Turkish depends on word-order, then topicalization in caseless languages presents no problem.

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[19]This is the original source of this idea, developed in further detail by Neeleman and Weerman (1999).

5.4 Conclusion

We have seen theoretical and empirical arguments that the CWC is a tendency that results from principles of language use, acquisition and change, not itself a principle of the narrow synchronic grammar. We can imagine that the way the correlation works is roughly as follows. As a language like Old English, with a high degree of word-order freedom, lost its case-marking, the more marked word orders would have become increasingly difficult to interpret correctly. As a result, it would have become increasingly difficult for children to acquire the processes that derived such marked word orders. This would presumably have been helped along by increasing avoidance of the use of marked orders, even by those who had acquired them, in the interest of being understood. The already marked orders would have become increasingly marked, requiring stronger and stronger pragmatic, contextual and intonational motivation to ensure their unambiguous interpretation. Eventually, this process would progress to the point where the evidence for the marked orders in the primary linguistic data would have been insufficient to allow children to acquire the word-order freedom, yielding essentially the Modern English situation. Of course, as noted all along, other factors can play a significant role in the interpretation of word-order variation, allowing, under certain circumstances, the preservation (and presumably even creation) of the relevant types of word-order freedom even in the absence of morphological case-marking, as we have observed in Dutch. Clearly, there is a mass of relevant empirical data still to be examined, but the idea, which of course must be tested, is that any phenomenon which has been taken to indicate a synchronic-grammatical CWC will yield to one of the types of alternative analysis laid out above.

Chapter 6

The post-syntactic assignment of morphological case

6.1 Introduction

In the preceding chapters of this dissertation I have focused mainly on what case-marking can and cannot do for its DP within the clausal syntax. I have argued that it cannot determine the DP's semantic role, that it cannot drive or block raising to subject and cannot directly license or block reordering processes. In the next two chapters I will change gears a bit to look at the case-markers themselves, starting in this chapter with an outline of how morphological case-assignment can be handled in the morphological component. Put somewhat differently, while my concern until now has been to show that the narrow syntax does not need case, here I will try to show that case-assignment does not require the use of syntactic operations. Obviously, this view depends crucially on the DM idea that the input to the morphology is the fully articulated structure output by the syntax. My discussion will be based on the examples of German and Icelandic, and will concentrate on issues that are

of general, cross-linguistic importance: the structural/non-structural distinction, the dependency relationship in the structural cases, and the case-marking patterns in Raising, ECM and Control constructions.

6.2   The dependency of structural case

As discussed in Chapter 2, a central insight of recent work on morphological case (see e.g. Yip et al., 1987, Marantz, 1991, Bittner and Hale, 1996) is that most case systems are built around a two-way opposition in the structural cases. There is an unmarked case which appears on the sole argument of intransitives, and a dependent case which can only show up when a second structural argument is present. The difference between nominative-accusative and ergative-absolutive systems lies in which argument gets the dependent case in transitives. In this section I will motivate a specific formulation of the dependent case mechanism and show that it accounts for the morphological facts better than Burzio's Generalization.

6.2.1   Separating out the non-structural cases

The structural cases contrast in most languages with non-structural cases, which mark DPs functioning e.g. as indirect objects, objects of prepositions. These differ from the structural cases in that they do not figure into the dependency relationship in any way, as demonstrated by the following examples involving the dative that is assigned to indirect objects in German:

(191)   a. dass sie   einen Mantel gekauft hat
           that she:N a   coat:A bought has
           'that she bought a coat'

        b. dass ein Mantel gekauft worden ist
           that a   coat   bought become is

'that a coat was bought'

(192)   a. dass sie   ihm   einen Mantel gekauft hat
        that she:N him:D a   coat:A bought has
        'that she bought him a coat'

        b. dass ihm   ein Mantel gekauft worden ist
        that him:D a   coat:N bought become is
        'that a coat was bought for him'

Sentence 191a is a normal mono-transitive structure with a nominative subject and a dependent accusative object. When it is passivized, as in 191b, the accusative argument becomes nominative. If we add a dative indirect object to such sentences, it has no effect on the other arguments. Dependent accusative is still assigned in the active version 192a and is still replaced by a nominative in the passive 192b. That is, the dative is neither itself affected by the other arguments, nor does it interfere with the assignment of their structural cases. It neither becomes nominative in the passive nor licenses dependent accusative on the direct object. The nominative and accusative that appear in these examples are clearly different. Thus on the DP *Mantel* 'coat' we get accusative in the active when the subject is present, but nominative in the passive when it is not. It is in this sense related to the dependency relationship that I will use the terms structural and non-structural from this point on.

Now, while non-structural case-marked arguments are irrelevant to the morphology of other arguments, they are by no means syntactically irrelevant. This fact is at the center of the dissociation of morphological case and positional licensing. So in Icelandic, a dative-marked argument is left out of the determination of structural cases, yet it is very well capable of becoming the syntactic subject. For example 193 is the passive of a ditransitive, essentially the analogue of 192b, but where the dative argument *konunginum* has become subject upon suppression of the external argument:

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(193) Konunginum   voru   gefnar   ambáttir.
       king:D:SG:MASC were:PL given:PL:FEM slaves:PL:FEM

       'The king was given maidservants.' (Zaenen et al., 1985)

As it turns out, these properties of non-structurally case-marked arguments are relevant here because they will allow us to tease apart the mechanics and locality of structural case-assignment. Because they can fill space syntactically without disturbing morphological dependencies, they will allow us to test how far case-dependencies can be stretched.

6.2.2 What does dependent case depend on?

The first question we about dependent case that we must tackle is precisely what it depends on. We could imagine either that the accusative is licensed by a higher nominative, or that it is licensed by a higher structural argument. While the former possibility may seem more intuitive, we have reason to doubt it. It would imply that the case-assignment on a given DP would depend on the case assigned to a higher DP, but this would be impossible if the morphological component obeys cyclicity, since the lower DP would be assigned case before the higher one. Clearly, the assignment of accusative does depend on the presence of some element higher in the tree, but since it occurs after Spell-out, counter-cyclicity can be avoided if what it depends on is an aspect of structure that is determined in the narrow syntax. In other words, the determination that the higher argument will license a lower accusative must be possible purely on the basis of its syntactic properties.

What is relevant is whether the higher argument is structural in the sense defined in the previous section because, DPs that get non-structural cases do not license the assignment of dependent accusative to a lower argument. It may seem that this will get us into trouble with cyclicity again, because we would apparently need to

know that the higher argument is not going to get dative, genitive or some other non-structural case before the determination actually takes place. Fortunately, this problem can be avoided.

Note that we do not actually need to know which case the higher DP will get, just that it will be structural, and as it turns out, the structural/non-structural divide follows distinctions that are visible already in the pre-Spell-out syntax. Recall e.g. from Chapter 4 that inherent dative case in German is not assigned based on lexical idiosyncrasies to syntactically normally direct objects, but to structural distinct argument types introduced in Spec-ν_{APPL}P and Comp-P. As it turns out, arguments eligible for one of the two structural cases in German and Icelandic can **only** be introduced in Comp-V and Spec-νP. In fact, DPs introduced in Spec-νP can **only** be marked with one of the structural cases. The one apparently exceptionless rule about about the association of cases and θ-roles in Icelandic is that agentive subjects never get quirky case. Now, the position in which a DP is introduced is clearly a matter of the narrow syntax, and thus will be determined and available for reference by the time we get to the morphological component. Thus this is precisely the sort of thing that assignment of accusative case could depend on.

What, then, about DPs introduced in Comp-V? They, too, receive of structural cases, and thus might be expected to be licensers for lower DPs receiving dependent accusative. There is a potential problem in the existence of verbs in Icelandic which could be analyzed as assigning lexical dative to arguments introduced in this position.[1] However, the problem does not arise, because there are no positions eligible for structural case located below objects in Comp-V.[2] The only possible licensers for

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[1] As discussed by Maling (2001) and Svenonius (2002), verbs like *breyta* 'change', *eyða* 'destroy', *loka* 'close', *læsa* 'lock' *sökkva* 'sink' and *útrýma* 'exterminate' assign dative to what seem to be themes. However, since Icelandic differs from German in that it does not distinguish arguments in Spec-ν_{APPL}P from those in Comp-V in terms of their ability to become subjects, we cannot tell for sure which structure these verbs have.

[2] Finite and control clauses are possible below objects, but these are irrelevant because a depen-

structural accusative are thus arguments introduced in Spec-νP, which allows us to formulate the following hypothesis:

(194)   A DP is assigned dependent accusative case if it is c-commanded by a local filled Spec-νP.

Now, this may sound at first like a recapitulation of BG: accusative case is assigned when the verb projects an external argument. However, there are differences, and these turn out to be crucial. First, we have separated out the issues of DP-licensing from the assignment of accusative case. As argued in Chapter 2, it is hard to see why the licensing of an internal argument should depend on the presence of an external one as BG had it, but it is reasonable that this should affect morphological case-assignment, since it provides a way to ensure that two DPs in a local environment will generally be distinguished by the case system.

The second important departure from BG is a lack of direct reference to θ-role assignment. BG claimed that assignment of accusative depended on the assignment of an external θ-role, while the formulation in 194 is concerned only with Spec-νP being filled. Of course, this is a thematic position that is typically associated with particular θ-role types, but it is defined in syntactic, not thematic terms. For one thing thing this is good because it may be that θ-roles are not determined until LF, and thus would not be visible to case-assignment in the morphology. On the other hand, it is determined within the narrow syntax whether ν will introduce a DP argument, thus it would be unproblematic for a morphological operations to refer to to this fact. More importantly, however, the formulation of dependent case in purely structural rather than thematic terms will allow us an account of the problematic data for traditional version of BG discussed in Chapter 2

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dency relationship cannot cross a CP boundary. ECM infinitives are not CPs, but since they are in the complement of the matrix verb there is no place for a matrix object in Comp-V.

Consider the German existential construction with *es gibt* .... Even though *es* is not thematic, and there is no other DP that could plausibly be getting an external θ-role, the object is marked accusative in examples like 195:

(195)   Es gibt einen Fußballgott.
        it gives a   football-god:A
        'There is a god of football.'

The key to understanding what is going on here is to note that, contrary to what one might expect on the basis of the English translation, *es* is not a normal expletive in this construction. German expletive *es* is introduced in Spec-CP in order to satisfy the need for a V2 topic in Spec-VP, thus it can be recognized by its disappearance in non-V2 environments like the inverted question in 196b. The *es* of *es gibt*, however, is still obligatory in such questions, as in 197a. In this respect, this *es* patterns with weather-*es* in 197b, rather than the true expletives.

(196)   a. Es wird   heute getanzt!
           it becomes today danced
           'There will be dancing today!'

        b. Wird   (*es) heute getantzt?
           becomes (*it) today (*it)   danced
           'Will there be dancing today?'

(197)   a. Gibt *(es) einen Fußballgott?
           gives *(it) a   football-god:A
           'Is there a god of football?'

        b. Hat *(es) geregnet?
           has *(it) rained
           'Did it rain?'

This *es* must thus be introduced in Spec-*ν*P. If accusative case-assignment depends on the presence of a DP in that position, then we have an explanation for the accusative case, and the fact that the DP is non-thematic is simply irrelevant.

This same account can be extended to the Ukrainian *no/to* construction. Recall that Maling and Sigurjónsdóttir (2002) argue there is no thematic subject in sentences like 198, yet the object appears with accusative case.

(198) Cerkvu   bulo   zbudovano   v 1640 roc'i.
      church:FEM.A was:NT build:PTC.NT in 1640 year.
      'The church was built in 1640.'

Given our analysis of the *es gibt* construction, we can essentially adopt Maling and Sigurjónsdóttir (2002)'s proposal that what we have here is an empty expletive in subject position. The crucial point is that this expletive must be introduced in Spec-νP.

The status of true expletives with respect to case-assignment is rather different, and the dependent case theory being developed here allows a much simpler account of it than is currently available. As shown in 199a, a structural DP below expletive *es* is marked nominative, and as shown in 199b, it triggers agreement on the verb.

(199) a. Es bleibt   nur noch ein Linguist   im   Zimmer.
           it remains only still one linguist:N in-the room
           'There's only one linguist left in the room.'

       b. Es bleiben   nur noch zwei Linguisten im   Zimmer
           it remain:PL only still two linguists   in-the room
           'There are only two linguists left in the room.'

Standard accounts of this case-marking claim that the lower DP gets nominative case by association with the expletive, either via abstract movement to the expletive position or by some transmission mechanism. As discussed in Chapter 2, however, the evidence from scope interpretation points against abstract raising, and the transmission mechanism is nothing more than a stipulation to maintain the idea that nominative case is tied to a specific position.

Under the dependent case proposal, we can avoid such unnecessary stipulations. The central idea is that nominative is unmarked with respect to the accusative. If the conditions for the assignment of accusative are not met for a DP (and no non-structural case has been assigned), then it will show up nominative. Thus we must simply ensure that accusative is not assigned here, and this is straightforward. The sentences in 200 show again that German expletives disappear when they are not needed to satisfy the V2 topic requirement, in these instances because another XP *in diesem Zimmer* has raised to Spec-CP to do so.

(200)   a.   In diesem Zimmer bleibt   nur   noch ein Linguist.
            in this   room   remains only still   one linguist:N
            'In this room there's only one linguist left.'

        b.   In diesem Zimmer bleiben nur   noch zwei Linguisten.
            in this   room   remain only still   two linguists
            'In this room there are only two linguists left.'

The simplest way to interpret this fact is to assume that they are introduced into the structure in Spec-CP in the first place. If this is so, then Spec-νP will never be filled in these structures, and the conditions for assignment of dependent accusative are not to be met.

Note also that avoiding a dependency of accusative directly on the assignment of nominative allows a simple account of case-assignment in control clauses like 201:

(201)   PRO so   einen Lärm   zu machen ist extrem   unhöflich.
        PRO such a   noise:A to make   is extremely impolite
        'It is extremely impolite to make so much noise.'

There is no overt nominative DP in the matrix clause, yet the object is marked accusative. This is straightforwardly predicted if what matters is the syntactic presence of a DP in SpecνP, because PRO will be introduced in that external subject position in this example. The fact that it is not pronounced and is not marked nominative

is simply irrelevant. There is thus good support for the idea that what structural accusative depends on is a filled Spec-νP, not the presence of a higher nominative.

6.2.3 The locality of dependent case

The second question we must deal with in our account of dependent case is how local a filled Spec-νP must be in order to trigger the assignment of accusative case to a lower DP. For purposes of discussion, until we get closer to an answer this question, I will refer to the amount of structure that is relevant to the determination of structural case-assignment as the 'case domain.' To start with, it is clear that case domains do not cross finite clause boundaries:

(202) Ich verlange, dass er/*ihn   kommt.
       I:N demand   that he:N/*A comes
       'I demand that he comes.'

The presence of the external subject *ich* introduced in Spec-νP in the matrix clause in 202 is apparently too far away to license dependent accusative on the argument of the embedded clause. We can thus adopt 203 as an initial hypothesis:

(203) **Case Domain (1st version)** The case domain for a DP is equal to the
       minimal finite clause that contains it.

This raises the question of whether case-dependencies are possible across nonfinite clause boundaries. At first blush, it would seem that they are, given what happens in raising and ECM constructions:

(204)   a. Er   scheint *ich/mich zu sehen
           he:N seems   *I/me   to see
           'He seems to see me.'

        b. Ich sah *er/ihn   ankommen.
           I:N saw him:*N/A arrive

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'I saw him arrive.'

In 204a the embedded subject has raised to the matrix clause, yet it still manages to license dependent accusative on the embedded object. Similarly, in 204b, the embedded subject gets accusative marking dependent on the matrix subject, thus they must be within the same domain.

However, given our conclusions in Section 6.2.2, sentences of this type do not actually demonstrate that a single case domain can include multiple clauses. What counts for the case-marking of a lower DP is not the surface position of a higher DP, but where it is introduced. Thus in 204a it is not the pronounced copy of *er* in the matrix clause that triggers dependent accusative, but the unpronounced copy in Spec-νP in the embedded clause. In ECM constructions, we know that the embedded subject gets into a close syntactic relationship with the matrix verb. It may thus be that the effect of this relationship is to void the boundary between them which would otherwise delineate two case domains.

What we want to know is whether an embedded object – which is unambiguously contained within the embedded clause and not at its edge – can get an accusative that is dependent on the matrix subject. Unfortunately, replacing the unergative *ankommen* in 204b with a transitive, as in 205, does not clear things up.

(205) Ich sah ihn   den Mantel kaufen.
       I:N saw him:A the coat:A buy
       'I saw him buy the coat.'

While the embedded object does get accusative case, we cannot tell whether this accusative depends on the nominative matrix subject, or on the accusative embedded subject. If structural accusative depends not on a higher nominative, but on a higher filled Spec-νP, then either of these higher subjects could be responsible.

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What we need is an example where the matrix subject is the only potential licenser of accusative, and this is where DPs with non-structural cases come in handy. The test involves taking what would normally be a dative-nominative clause and embedding it under an ECM verb. The dative is not a structural argument, so it will be irrelevant to the potential assignment of accusative. If the licensing of dependent accusative is possible across nonfinite clause boundaries, then the argument below the dative should be accusative here as well, dependent on the matrix subject. For German, this is the case:

(206)   a. Dem Gast   wird   guter Wein   eingeschenkt.
              the   guest:D becomes good wine:N in-given
              'The guest is poured good wine.'

         b. Der Wirt   lässt dem Gast   guten Wein   einschenken.
              the innkeeper:N lets the guest:D good wine:A in-give
              'The innkeeper has good wine poured for the guest.'

We know from examples like 206a, where the clause is not embedded, that the dative argument does not license the assignment of dependent accusative case to the object. Thus it must be the matrix nominative subject that does so in 206b, and we are justified in assuming a single, large case domain for German causative ECM.

However, this is not the whole story. German only allows ECM-like constructions under very restricted circumstances, with bare infinitives embedded under verbs of perception and causation. It does **not** allow English-style ECM under verbs like *believe*:

(207)   * Der Wirt   glaubt den Gast   zu viel Wein getrunken zu
            the innkeeper:N believes the guest:A too much wine drunk   to
            haben.
            have
            intended: 'The innkeeper believes the guest to have drunk too much wine.'

Now, we have independent reason to think that the former construction type involves less structure in the embedded clause than the latter. In English, for example, the former only allows a bare infinitive, while the latter takes a *to* infinitive which can be extended with temporal-aspectual auxiliaries:

(208) a.   I saw/had John (*to) pour the guest some wine.

  b.   *I saw/had John have poured the guest some wine.

(209)   I believe John to have poured the guest some wine.

Given this, it may be that the type of ECM in 206b and 208 is mono-clausal. We could thus explain the fact that 206b has a single case domain without abandoning the idea that case domains are clause-bounded. If this is correct, then the larger kind of ECM, which is clearly bi-clausal, should show different case-assignment in languages that allow it.

Fortunately, Icelandic does allow such constructions, and the case-assignment pattern is indeed distinct from that in German:

(210) a. Henni leiðist Haraldur/*Harald.
     Her:D bored Harald:N/*A
     'She was bored by Harald.'

  b. Ég taldi   henni leiðast Haraldur/*Harald.
     I:N believed her:D bore   Harald:N/*A
     'I believed her to be bored by Harald.' (Maling and Sprouse, 1995)

(211) a. Ég tel   honum hafa verið sýndir drengirnir.
     I   believe him:D have been   shown:N   boys-the:N
     'I believe him to have been shown the boys.'

  b. Ég tel   drengina   hafa   verið sýnda honum.
     I   believe boys-the:A to-have been   shown:A him:D
     'I believe the boys to have been shown to him.' (Schütze, 1997)

Example 210a involves a verb that takes a quirky dative subject and a nominative object. Embedding this under the ECM verb *telja* 'believe' does **not** affect the case-

assignment: the embedded object still gets nominative case. In such constructions, then, the matrix subject and embedded object are apparently **not** in the same case domain, dependent accusative is not licensed, and the structural default nominative must appear. The contrast in 211 shows a further interesting fact. Certain double object verbs in Icelandic allow either ordering of the two objects and thus allow either object to become subject in the passive. When we embed the version where the IO becomes subject under an ECM verb, as in 211a, we get the same result as in 210b, with the embedded object coming out nominative. However, when we embed the version where the DO becomes subject, as in 211b, that derived subject is marked accusative. Of course, this is what we should expect, since structural subjects generally get accusative under ECM. Still, it demonstrates quite nicely that there are two case domains in such sentences. The higher domain includes the matrix subject also includes the embedded subject, but not the embedded object, while the lower one includes the embedded subject and the embedded object, but not the matrix subject. How the embedded subject gets to straddle the two case domains will be discussed below.

Now, it could of course be that the contrast between 206b on the one hand and 210b and 211a on the other reflects not a syntactic distinction between the constructions in German and Icelandic, but a morphological one. That is, it is in principle possible that these constructions are all of the same size (all bi-clausal or all mono-clausal in the relevant sense), and German and Icelandic simply differ on how they have set the size of the case domain. Fortunately, Icelandic allows the smaller mono-clausal construction as well, with the verb *læta* 'let' used in a causative function, and its behavior provides additional support for the analysis presented here:[3]

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[3]Special thanks to Jóhanna Barðdal for providing this crucial example.

(212) Gestgjafinn lét skenkja honum nýjan drykk.
host:N let pour him:D new drink:A
'The host had a new drink poured for him.'

Two things are important about this example. First, unlike in the normal ECM example, the dative argument does not come to intervene between the matrix and embedded verbs. This confirms that the constructions are indeed syntactically distinct in some way. Second, crucially, the embedded object is marked accusative, just as in the German example. Thus the contrast in case-marking between German 206b and Icelandic 210b cannot be due to a different parameter settings for the size of the case domain, because the contrast is replicated within Icelandic between 210b and 212. Rather, it is indeed due to a difference in the size of the embedded structure in the two types of ECM. The larger type of ECM with *believe*-class verbs contains two clauses and thus two distinct case domains, so an embedded object will show up nominative if there is no DP introduced in embedded Spec-νP. The small type with causative and perception verbs, however, involves a single clause and a single case domain. The embedded object can thus be marked accusative dependent on a subject in matrix Spec-νP.

The specific analysis I will suggest is that the larger ECM involves an embedded TP, while the smaller type involves an embedded VP. Starting with the English data in 208, this explains why we get *to* and temporal auxiliaries under *believe* but not under perception and causative verbs, assuming that these reside in the Infl complex. It also gives us a nice take on the Icelandic word-order facts. If TP is lacking in 212, then there is no derived subject position Spec-TP for the dative argument to raise to.[4] Presumably, this DP is introduced in Spec-ν_{APPL}P, and V will raise past it to

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[4]This suggests a possible explanation for the cross-linguistic variation in the availability of the larger type of ECM. Both English and Icelandic have the EPP, i.e. a requirement that Spec-TP be filled by the highest DP in the clause, but German does not. Now, ECM with *believe*-class verbs involves a local relationship being established between the matrix verb and the embedded subject,

ν. In the English example 208a, *John* precedes the embedded verb because, as an external subject, it is introduced in Spec-νP, above the surface position of the verb. This would lead us to expect that, if an external subject is added to 212, we should get this same ordering, and this is confirmed by 213:[5]

(213) Gestgjafinn lét einhvern   skenkja honum nýjan drykk.
      host:N   let someone:A pour   him:D new   drink:A
      'The host had someone pour him a new drink.'

This result is welcome. All other things being equal, we should prefer a theory that posits smaller case domains, because we would like to restrict the search space for the operation that assigns dependent case as much as possible. If we have to allow domains to cross clausal boundaries in instances of ECM, raising and the like, then we introduce the possibility of unbounded dependencies in the determination of case-marking. Fortunately, the Icelandic data demonstrate that case domains do not cross clausal boundaries. We can thus restrict our working hypothesis:

(214) **Case Domain (2nd version)** The case domain for a DP is equal to the minimal clause that contains it.

which works fine in English and Icelandic because the latter is consistently located in Spec-TP at the edge of the embedded clause. However, since German subjects do not reliably occupy such a position, the ECM relationship cannot be established. The smaller configuration being discussed here does not involve a derived subject position in the lower part of the structure, so the difference between English and Icelandic on the one hand, and German on the other, is neutralized.

[5]The sentence in 212 is reminiscent of the French *faire ... par* construction discussed in Kayne (1975, § 3.5), where the external argument under the causative is absorbed without any passive verbal morphology. However, as 213 demonstrates, the external subject can in fact appear in its expected thematic position in Icelandic, whereas in the French construction it must be introduced by the preposition *par*:

(1) Elle fera   manger cette pomme par Jean.
    she do:FUT eat   that apple   by Jean
    'She'll have that apple eaten by Jean.'

Thus while in French we seem to have a syntactic passive (see Kayne, 1975, for additional evidence), the Icelandic construction is neither clearly active or passive. In this sense, it is like the cognate German construction with *lassen* 'let'.

Let us consider the important cases in terms of this hypothesis and see how far it gets us.

Raising examples like 204a are handled straightforwardly as suggested above. The unpronounced copy of the subject introduced in Spec-νP of the embedded clause is within the same clause as the embedded object, and thus triggers assignment of accusative. There is no DP higher than this, so the subject can only end up nominative.

The ECM structures are a bit more interesting. Recall from the discussion surrounding 211 that the embedded subject in the larger type of ECM seems to straddle two case domains. In fact, for the purposes of any given case-assignment operation, it only counts as being in a single domain, but due to the fact that it is involved in two such assignments at different stages of the derivation, it has the appearance of being in two places at once. First, the case on the embedded object must be determined, and what is relevant here is again the unpronounced copy of the embedded subject in Spec-νP. Both DPs are located within the same clause, thus the object is assigned dependent accusative case. When we come to the determination of case for the embedded subject itself, what is relevant is not that lower copy, but the pronounced copy that has raised to Spec-TP. The issue that arises is that this position is still within the lower clause, and thus would not be in the same case domain as the matrix subject. Since the embedded subject is marked accusative, however, it must be in the same domain as the matrix subject, and we are presented with a problem for 214.

One way to resolve this would be to adopt the idea from the work on phases (see especially Chomsky, 2001), that the edge of a domain is accessible to the next domain up. That is, the head that defines a phase and its specifier can count as though they were in the immediately dominating phase, these positions constituting escape hatches circumventing the Phase Impenetrability Condition. Translated into current terms, we could say that TP defines case domains, but DPs located at the

edge, in Spec-TP, can count as though they were in the immediately dominating case domain. This modification would get the facts right for ECM constructions, as the raised copy of the embedded subject in TP would be in the same domain as the matrix subject, and thus would receive dependent accusative case.[6]

Now, if we are led independently to adopt this element of phase theory, we should consider whether correct definition of the case domain is in fact better defined in terms of phases rather than clauses. The maximally simple hypothesis would be the following:

(215) **Case Domain: (3rd version)** The case domain for a DP is equal to the minimal phase in which it is contained.

If phases are defined by CP and νP, as is standardly assumed, most of the facts will come out right. In a simple transitive clause, both the object and the relevant copy of the subject in Spec-νP will be located within the same νP, and the latter will correctly license accusative on the former. This locality is unaffected in the lower clause of raising and ECM constructions, because the unpronounced copy remains no matter how far the highest copy may raise. The embedded subject in an ECM construction will correctly be assigned accusative, because its highest copy raises out of the lower νP into the phase defined by the matrix CP. Since TP is not a phase, it does not matter that a TP boundary intervenes between the embedded subject and the copy of the matrix subject in matrix Spec-νP. However, a DP that remains within the embedded νP rather than raising to Spec-TP will not be in the same phase as a subject in a higher clause. This correctly explains why the object in a dative-nominative frame does not become accusative when embedded under an ECM verb

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[6]The same result is achieved if we follow Postal (1974), Lasnik (2001) and others in assuming that ECM subjects raise into the matrix clause. Such raising would bring the higher copy of the embedded subject into the matrix case domain, and it would get dependent accusative without the assumption that case domains are penetrable at the edge.

in examples like 210b. Finally, the subjects of embedded finite, and PRO infinitival clauses will be correctly protected from getting dependent accusative on the basis of a matrix DP because these clause-types are CPs.

The only issues for this phase-based analysis arise with the smaller type of ECM constructions. I have suggested that sentences like 213 have a structure like that in 216 (some irrelevant details have been omitted):

(216)

νP
├── Gestgjafinn
└── ν'
    ├── ν
    │   └── lét
    └── νP
        ├── einhvern
        └── ν'
            ├── ν_i
            │   └── skenkja
            └── ν_{APPL}P
                ├── DP
                │   └── honum
                └── ν_{APPL}'
                    ├── ν_{APPL}
                    │   └── t_i
                    └── VP
                        ├── V
                        │   └── t_i
                        └── DP
                            └── nýjan drykk
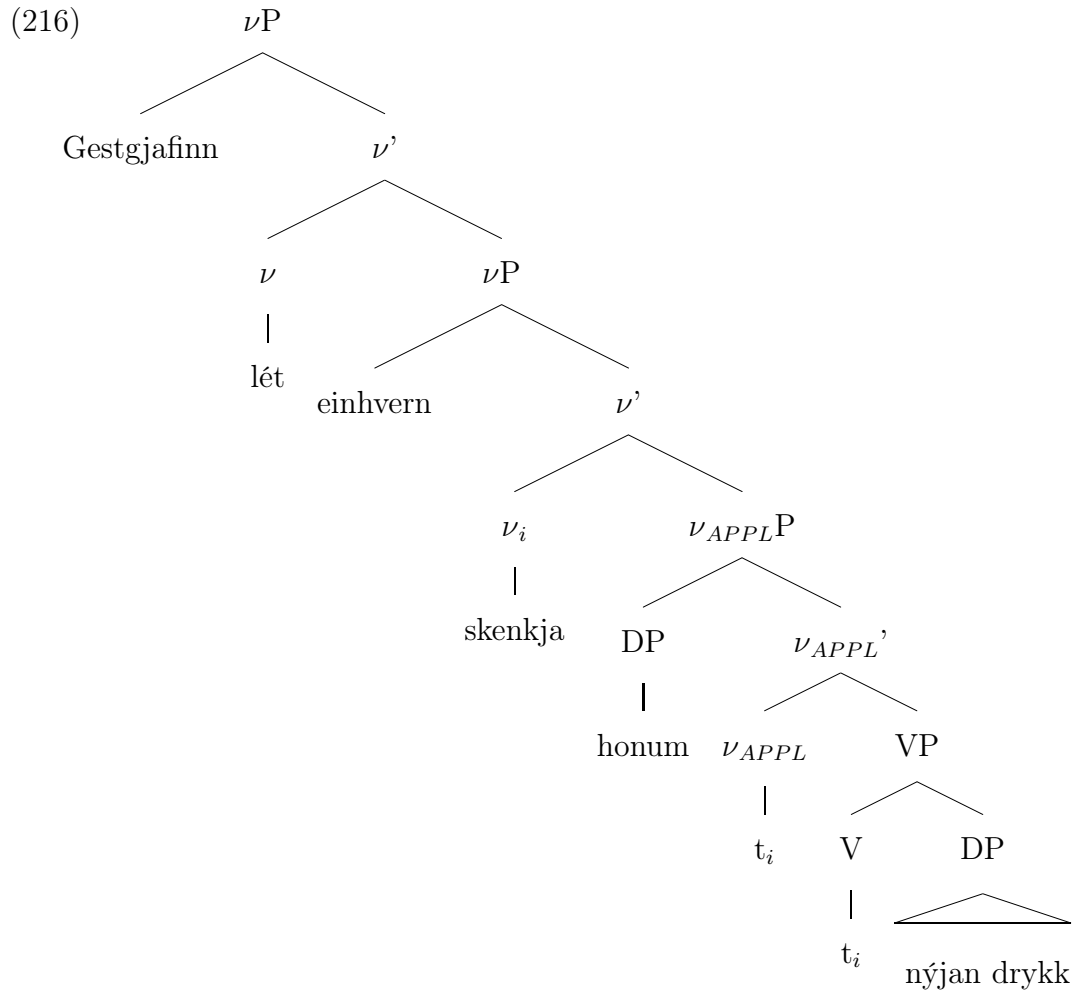
Here things work out all right. The embedded object *nýjan drykk* is contained in the same minimal νP – and thus the same phase – as the embedded subject *einhvern*, and thus properly gets accusative case. The embedded subject is technically in a different νP than the matrix subject, but since it is at the phase edge, in Spec-νP, it will

be visible to the higher phase, and is properly assigned dependent accusative. The problem is that, as we saw in 212, the embedded object gets accusative even when there is no subject in embedded Spec-νP. Since the lower νP is supposed to constitute a phase, and the embedded object is nowhere near its edge, it should not be in the same domain as the matrix subject, and thus would be predicted – incorrectly – to end up nominative.

In order to make a phase-based account work, we would need a way to ensure that the embedded ν in sentences like 212 does not count as a phase. We could not simply say that phase-hood for νP depends on whether it introduces an argument DP (or equivalently that ν is only present in clauses with an external argument). If we did, then the embedded clauses in examples like 210b and 211a would incorrectly be predicted to be in the same phase with the matrix clause, since they have no DP in Spec-νP either, and there is no intervening CP. Our definition of the case domain must be able to correctly tell apart the two types of ECM, and what distinguishes them is not a matter of νP, but of TP. There are two ways to capture this in terms of phases. One would be to grant phase status to TP, at least in those instances where it is not dominated by CP. This would amount to a direct translation of the clause-based formulation in 214. Alternatively, we could tie νP's status as a phase to the category that selects it. When appearing as the complement of T, as in most sentence-types, it would be a phase, but when appearing as the complement of a higher νP, it would not. This latter idea would amount to the claim that it is the highest head in a single extended VP delineates the phase.

I do not know of any data relevant to case-assignment that could tease apart these alternative formulations, so I will not argue for any one over the others. For the sake of concreteness, I will assume that the case domain is equivalent to the phase, but the discussion from this point on would be consistent as well with the definition of

the case domain as TP with Spec-TP as an escape hatch, and it does not distinguish the different conceptions of the phase that have been considered. These questions of detail aside, the essence of a local account of case-marking is clear. The fact that case-assignment can be determined within a single phase is crucial to the argument that it can be handled in the morphology. Consider the following two English examples, involving successive-cyclic raising of an embedded subject DP through multiple higher clauses:

(217) a. John$_i$ was believed [t$_i$ to appear [t$_i$ to have [t$_i$ drunk too much wine.]]]

b. I expected [John$_i$ to be believed [t$_i$ to appear [t$_i$ to have [t$_i$ drunk too much wine]]]].

If dependent accusative case-assignment were to depend in any way on the surface case of the higher argument, then the case-marking on the embedded object DPs in these sentences would have to see across a potentially unbounded number of intermediate clauses to determine whether *John* was going to end up getting nominative, as in 217a, or accusative, as in 217b. Given the choice between building the ability to track such unbounded dependencies into the morphological component, and just putting case-assignment in the narrow syntax, we would be unlikely to pick the former. Fortunately, it does not actually matter what case *John* ends up getting, as in languages like Icelandic *wine* will get accusative in either of these variants. The account here encodes this important fact by having dependent case-assignment determined solely by the existence of a filled Spec-νP within the same phase.

It can also be shown on the basis of ECM constructions that the dependent case account being developed here is superior to the standard view that each structural case is associated with a particular functional head in the syntax. Schütze (1997), in work that has had an important effect on Chomsky's subsequent theories of case, argues

that, while case is independent of syntactic DP licensing, it is still assigned primarily within the syntax. In particular, the highest structural argument checks nominative via what he calls Accord with Infl, while the next highest checks accusative via Accord with ν. The mechanism is set up so that an argument can only check accusative case if a higher argument checks nominative, thus deriving the dependent character of accusative case. The statement of such an approach in terms of specific functional heads has the effect of deriving a clause-bounded case domain, thus in an ECM clause, the embedded object's accusative can only depend on the embedded subject. This much is in agreement with my account, but in Schütze's theory it is not enough that the embedded subject is is a structural argument introduced in Spec-νP. Rather, it must check nominative case on embedded Infl, because otherwise it would not be possible to prevent the lower object from doing so and surfacing as nominative. But of course, both the embedded subject and the embedded object are marked accusative. Schütze is thus forced to claim that ECM subjects carry and check **two** case features, one nominative checked on embedded Infl, and one accusative checked on matrix ν. A special morphological rule must then be invoked to make sure that the right case is spelled out on the surface on the embedded subject. It happens here to be accusative, but this must be stipulated, as there is no principled reason why it could not have been the nominative that won out.

Obviously, the assumption that a single DP bears two morphological cases, of which only one actually surfaces, should be avoided if possible. This problem can be traced directly to the assumption that particular structural cases are assigned or checked by particular syntactic heads. If we abandon it, we are free to pursue the style of account developed in this section, where dependent accusative is insensitive to the actual case-marking of the higher DP, and the embedded subject in an ECM construction receives a single case predicted straightforwardly by the general principles

of structural case-marking.

Some potential issues remain, which I do not think will turn out to be truly problematic, but deserve a brief discussion. They mainly center around DPs that undergo scrambling, topicalization and other movements that take them away from the domains where their case is determined. As discussed above, their effect on the case-marking of other DPs will be handled straightforwardly without locality concerns by the fact that the unpronounced copies they leave behind are sufficient to do the necessary work. A slightly different issue (pointed out by David Embick, p.c.) is that, under recent phase-based views on locality of movement, the A'-movement of an object out of νP would have to pass through the escape hatch Spec-νP in order to escape a Phase Impenetrability Condition violation. Therefore we must make sure that, say, a topicalized dative object in a dative-nominative construction would not fool the formulation of dependent case given here and incorrectly license accusative case on the lower DP by leaving an intermediate copy in Spec-νP. What this means that the case-assignment mechanism must be sensitive to the A/A' distinction. I do not see any reason why this should not be so, but the point deserves mention.

A related matter is ensuring that a *wh*-moved or topicalized DP will itself get the right case-marking. The problem is essentially this: case-assignment must be local, involving the positions held by DPs before they undergo A'-movement, but if it takes place in the morphological portion of the derivation as I claim, then it must follow syntactic movement. For example, in a sentence like 218, it must be determined that *Hans*, as the object of the inherent dative verb *helfen*, should be marked dative, **after** the DP has topicalized out of the relevant case domain and into Spec-CP of the matrix clause.

(218) Dem Hans$_i$ scheint die Greta   t$_i$ geholfen zu haben.
       the Hans:D appears the Greta:N helped to   have

roughly 'Hans seems to have been helped by Greta.'

Of course, this just reduces to the fact that case-marking is determined on the basis of the copies of a DP that appear in A-positions. Note that even if we allow this to happen after topicalization we would not be introducing the same problems as we would if we let the case on a lower DP depend on the position of a higher one. The former is potentially non-local, but it only requires the system to remember a fact about a given DP. It does not involve the look-ahead/counter-cyclicity of the latter.

Indeed, we may even be able to avoid the non-locality if we adopt a version of multiple Spell-out. The idea would be that as soon as a phase is constructed by the narrow syntax, it is sent off to the morphological component, where each DP will have its case determined right away. The case on a topicalized DP would thus indeed be determined locally within the containing phase. While some technical issues remain, this basic idea must be correct, because on a purely descriptive level, the case on an A'-moved DP is in fact determined entirely on the basis of the clause in which it is introduced, not the one in which it ends up.

6.3   The feature composition of the case categories

Having laid out how where and under what circumstances the structural cases are assigned, we can now begin to work out the mechanics. We can start by asking what is actually 'assigned' when the case category for a particular DP is determined. I will follow precedent both within DM (Calabrese, 1996, Halle, 1997, Halle and Vaux, 1997) and earlier structuralist work (Hjelmslev, 1935, Jakobson, 1936) in assuming that categories like nominative, accusative and dative are not primitives, but shorthand for combinations of feature values. Thus when a DP is assigned dative, it does not receive the value [+dative], but rather something like [+oblique, +inferior].

The feature compositions chosen are meant to serve a dual role: primarily to allow the statement of generalizations about the syntactic distribution of the various case categories, and secondarily to capture patterns of syncretism in the inventory of case forms. In the recent literature on the feature composition of case categories, the focus has mainly been on the latter function, with the former receiving only brief, suggestive treatments (largely because the relevant work was concerned more with morpho-phonology than morpho-syntax). For example, Halle and Vaux (1997) content themselves with the following:

> The feature specification [−oblique] is assigned to nominals that are arguments of the verb; [+oblique] is assigned to nominals that are not arguments of the verb. The feature [−structural] is assigned to nominals on non-structural, semantic grounds; [+structural] is assigned to nominals on the basis of their position in the syntactic structure, exclusively. The feature [−superior] is assigned to nominals in governed positions in the syntactic structure; [+superior] is assigned to nominals in non-governed positions. [−free] is assigned to nominals with a consistent role in argument structure; [+free] is assigned to nominals whose role in argument structure varies [p. 5].

What exactly it means to be an 'argument of the verb' or 'in a governed position' is not clear. In the rest of this chapter, I will develop the suggestive syntactic side of these theories on the examples of German and Icelandic, and attempt to show that the syntactically motivated feature combinations are supported by the morpho-phonological evidence as well.

To begin with, it is clear that we need a feature to distinguish the structural cases, nominative and accusative. It is reasonable to conceive of the dependency of the accusative as a matter of markedness relative to the nominative, in that the former is restricted in a way the latter is not. If we translate this into featural terms, what distinguishes the two is an additional feature in the specification of the accusative that is lacking in the nominative. It is for this reason that the nominative is the default case in both German and Icelandic. As shown by Schütze (2001) and discussed in Chapter

2, in certain syntactic contexts either no mechanism for assigning morphological case is available, or the normal mechanism is somehow blocked. In these contexts, the default case appears. In principle, a form should appear in default contexts because it is maximally underspecified, thus I suggest that we should start from the assumption that the category of nominative case includes Vocabulary Items (henceforth VIts) that are not specified to spell out anything more specific than the feature [+case] which identifies a node as being a case marker (as opposed to an agreement marker, a determiner, a nominalizing head and so forth). Accusative VIts, then, will require a minimal additional specification. I will call this feature [+inferior], intentionally similar to the [±superior] feature of Halle (1997), Halle and Vaux (1997), but rather than claiming that it has anything to do with government, I will say that this is precisely the feature that is assigned by the dependent case mechanism.

At this point it may be helpful to say a few words about the distinction between the featural specification of nodes in the morpho-syntactic structure and that of the pieces that spell them out. We assume that, except in well-motivated instances of Impoverishment, structural nodes have a feature set that is fully specified to the extent that is necessary for the proper operation of syntactic and morphological operations. The pieces that are inserted, on the other hand, may well be underspecified for certain features. For example, we will see that in instances where a form shows syncretism between nominative and accusative, like the German neuter singular, the case node will bear the feature [+inferior], but the VIt that is inserted, with the exponent *-es*, does not.

Moving along, then, we need to account for the appearance of datives. I have argued in Chapter 4 that the vast majority of datives in German are not dative due to lexical stipulation, but because they are introduced in well-defined syntactic positions, namely in the specifier of an applicative head or in the complement of

a null preposition which is itself the complement of the verb. I have shown above that this dative case is not structural in the sense that nominative and accusative are, because it does not depend on the presence or absence of any other arguments within the phase. However, it constitutes a deep regularity in the language, and thus should be assigned by regular rule to DPs in these positions. I will call the feature that distinguishes the dative from the nominative and accusative [+oblique]. This is again taken from Halle (1997), Halle and Vaux (1997), but I ground it differently in the syntax. They suggest that the distinction has to do with being an argument of the verb, but under current theories of argument structure it is not clear what this would mean. Instead, I propose that [+oblique] is assigned by certain heads to their arguments. In particular, ν_{APPL} assigns it to DPs introduced in its specifier, and prepositions assign it to their objects.[7]

I will not deal with the genitive in detail here, but our account of German should express the idea that it is marked with respect to the dative on verbal and prepositional objects. Evidence that this is so comes from changes in the behavior of prepositions which, in the standard written language, assign genitive to their objects:

(219)   Genitive prepositions

   wegen 'because of', *während* 'during', *(an)statt* 'instead of', *trotz* 'despite'

In spoken forms of the language, the genitive is moribund, and these prepositions are generally used with the dative. In general, we can expect that a local default will emerge when more marked options are made unavailable. In the current theory, we can model this as follows: let us assume that, in the standard written language and earlier stages of the spoken language, the prepositions in 219 bore a lexical feature which assigned some feature to their complements – let us call it [+genitive] for simplicity – in addition to the feature [+oblique] which they assigned because they were members

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[7]Prepositions that assign accusative case to their objects will be discussed below.

of the category P, and this [+genitive] is what distinguished datives from genitives. The loss of the genitive then presumably consisted in the loss of morphological pieces with [+genitive] in their insertion specification. The pieces with the largest number of features specified in common with the relevant nodes would then have been those with [+oblique], i.e. the datives, and it is thus these that replaced the lost genitives. As this process went to completion, evidence for the feature [+genitive] was lost, and prepositions like *wegen* ceased to assign it to their complements.[8]

The system of cases in Icelandic is quite similar to that in German, and most of what I have said so far will apply there as well. What we have left to discuss are truly exceptional case assignments, and while these seem to be more numerous in Icelandic, they are found in both languages. To begin with, as noted above, Icelandic has a number of verbs which assign dative case an object which does not fit the normal semantic generalizations about arguments of ν_{APPL}. That is, they seem to be introduced in Comp-V, yet do not receive structural accusative. I assume that such verbs are lexically marked to assign [+oblique] to their complements, ensuring that they show up as datives. The same can be done for verbs and prepositions that assign an unpredictable genitive case to their complements.

The only remaining difficulty is to account for the instances of lexical accusative case-marking. A number of verbs, both in Icelandic and German, assign accusative

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[8]Matters are not as clear with the complements of nouns. In forms of German where the genitive is in widespread use, it is clearly the default case marking for such DPs, and is presumably assigned by virtue of the structure – not any lexical idiosyncrasy. Still, note that evidence from language change supports the view that the genitive is specified for an extra feature with respect to the dative even here. In forms of the language that have lost the genitive, dative forms now typically show up in possessor constructions:

(1) meinem Vater   sein Bruder
     my   father:D his brother
     'My father's brother.'

There are a number of syntactic questions surrounding the various constructions involving complements of nouns. I will leave these matters to further research.

to an argument which we might have expected to be dative, e.g. a class of experiencer verbs inherited from proto-Germanic. Crucially, we can tell that these accusatives is that they are non-structural, i.e. they do not depend on the presence of other arguments and do not alternate, as shown by the following German examples (Icelandic behaves the same in all relevant respects):

(220) a. Mich durstet (nach Bier).
me:A thirsts (after beer)
'I'm thirsty (for beer).'

b. Mich schwindelt, wenn ich zu schnell aufstehe.
me:A is:dizzy when I too fast up-stand
'I get dizzy when I stand up too fast.'

(221) a. Mich interessieren solche Leute.
me:A interest such people
'Such people interest me.'

b. *Ich werde von solchen Leuten interessiert.
I:N become from such people interested
intended 'I'm interested by such people.'

Note that there is no additional structural argument which could license dependent, structural accusative in the sentences in 220. In 221a there is an additional nominative-marked argument, but the badness of the passive in 221b shows that what we have is not a normal transitive construction with structural nominative and accusative. We are thus justified in assuming that these DPs are introduced in Spec-ν_{APPL}P and receive their case lexically rather than structurally. This forces us to take them as in some sense marked with respect to the dative, since we have analyzed the dative as the default – i.e. minimally specified – oblique case.

Fortunately, such a move is not lacking in independent motivation. To begin with, the vast majority of non-structural arguments in German and Icelandic are indeed marked dative. More importantly, however, there is diachronic evidence, parallel

to that presented above for the genitive prepositions in German, demonstrating the default status of the dative with respect to the accusative here. This comes from the phenomenon whereby verbs that historically take oblique accusative experiencers now appear also with datives.

(222)   a. Mig   langar að fara.
            me:A longs   to go
            'I long to go.'

        b. Mig   vantar hníf.
            me:A lacks   knife:A
            'I lack a knife.'

(223)   a. Mér   langar að fara.
            me:D longs   to go

        b. Mér   vantar hníf.
            me:D lacks   knife:A

(224)   a. Mich ekelt.
            me:A disgusts
            'I am disgusted.'

        b. Mich schaudert vor   Bären.
            me:A sudders   before bears
            'I shudder at bears.'

(225)   a. Mir   ekelt.
            me:D disgusts

        b. Mir   schaudert vor   Bären.
            me:D shudders   before bears

This is especially well documented from Icelandic, where the replacement of accusative experiencers by dative ones is apparently characteristic of younger speakers and is targeted by prescriptivists who have given it the name 'dative sickness'. Variation of this kind is found in German as well, as shown by the contrast between 224 and 225, though it gets less press, perhaps because there are so few accusative experiencer verbs in German to begin with. What is interesting here is not that children are

failing to learn the idiosyncratic accusative marking on these experiencers, but rather that they are replacing it with the oblique dative rather than the general default nominative. As Smith (1994) argues, this demonstrates quite nicely that the dative case on experiencers is not a lexical matter, but represents a pervasive pattern of these languages which kicks in as a local default when the assignment of truly lexical accusative fails.

The difficulty we face then is how to capture this markedness relationship in terms of the feature combinations we are using to model the system of cases. The problem is this: due to their introduction in Spec-ν_{APPL}P, the relevant DPs here will automatically be marked [+oblique] by general rule. However, the accusative VIts that will be inserted here can **not** be specified [+oblique], because this would block them from insertion into the standard [−oblique] structural environments. This means that, as things stand, we are going to have some difficulty getting accusative VIts to be inserted instead of dative ones. Of course, one logical possibility would be to posit a whole second set of VIts with the specification [+oblique] on top of the feature that marks the objects of verbs like *dürsten*, and which just happen to have the same exponents as the accusative VIts, but this sort of proliferation of VIts should only be undertaken as a last resort. I think a more reasonable tack is to assume that the accusatives really are a single category and to try to make things work in some different way. Now, I have posited above the feature [+inferior], which is assigned to positions due to the presence of a higher structural argument within the phase, and which distinguishes accusative VIts from nominatives to ensure that they will be inserted into such environments. If accusatives are a single category, then this same feature must be present on oblique accusatives as well. The simplest hypothesis – that verbs like *dürsten* are specified to assign a special [+inferior] to their oblique arguments – will not, however, work.

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The problem is that the way we have set things up, there is no clear marked-ness relationship between dative and accusative VIts. When presented with a node specified as [+oblique, +inferior] – what we would get if *dürsten* were simply specified to assign an extra [+inferior] to its oblique object – we would have no way to decide whether to insert a dative exponent with the specification [+oblique], or an accusatives with [+inferior]. Now, we have reason to think that the dative is in reality more marked than the accusative, since its distribution is far more restricted. This means that it should win out in an ambiguous, but highly specified environment, while the accusative should win out in an ambiguous, but less specified environment. I thus propose that dative VIts are actually specified as [+oblique, +inferior], while accusatives are simply [+inferior]. This will ensure for one thing that dative should appear on the objects of verbs like *kasta*, which are lexically specified to be assigned [+oblique], but should also regularly receive [+inferior] given their structural position as transitive objects. All of this means that objects introduced in Spec-ν_{APPL}P will need to receive [+inferior] as well, in order for the dative to be licit, but this cannot be due to the normal dependent accusative rule, because the case-marking on objects introduced in that position does not depend on the presence of an external object. We can thus either say that [+inferior] is assigned to the relevant positions in addition to [+oblique], or perhaps that it is supplied by a redundancy rule in the environment of [+oblique].

This will then allow us an account of verbs like *dürsten*. Given what we have just said, their objects should have case nodes specified as [+oblique, +inferior], which would normally be realized as dative. The appearance of the accusative amounts to the emergence of a relatively unmarked form in a more marked environment via lexical stipulation. This is the sort of situation that Impoverishment is meant to handle, whereby the featural specification of a given node is simplified by the deletion

of one or more features. We can formalize the situation here as an impoverishment rule that is triggered by a list of verbs:

(226)   [+case, +oblique, +inferior] → [+case, +inferior] / __ *dürsten, hungern, interessieren, ...*

Dative Sickness or Substitution then results quite simply from the failure to learn (or apply) the impoverishment rule for one or more verbs. The case node of the object will regularly be marked [+oblique, +inferior] due to its structural position, and will regularly be spelled out with dative forms if impoverishment does not occur.

Note finally that while the discussion to this point has focused on lexically accusative experiencer arguments of verbs like *dürsten*, the analysis extends straightforwardly to the prepositions that mark their objects accusative instead of dative. These are not particularly exceptional, and indeed there is a semantically identifiable subclass which express relative motion. Thus, e.g. *in* when meaning 'into' assigns accusative, but when meaning 'in' it assigns dative. This can be modeled by giving adding structurally defined environments to the listing of lexical environments that trigger rule 226, though something deeper may well be going on here.

A bit more difficult are the adverbial uses of the accusative, like the accusative of duration in 227:

(227)   Er hat den ganzen Tag   nur die   Zeitung gelesen.
        he has the whole   month:A the paper read
        'He did nothing the whole day but read the paper.'

These are found in a variety of mostly measuring functions in German (and similarly in Icelandic), and I argued in Chapter 3 that they are introduced by null Ps. Given the array of semantic roles that these can fulfill, one might suggest that there is a series of distinct null Ps, all of which would have to be listed in rule 226. Another

possibility, however, would be to argue that there is a single null P head with maximally underspecified semantics. This would give us a much better account of the consistently accusative case-marking than a list.

6.4 Syncretism and the featural specification of Vocabulary Items

We can ask ourselves now whether the essentially syntactic feature classification we have developed for the various case categories can also help us to deal with the morphological syncretisms that occur. My discussion will concentrate on the German facts, because here syncretism is much more widespread than in Icelandic. Nonetheless, most of what I say will apply to the latter language as well, because the syncretisms that **do** exist there largely follow the same patterns. Let us consider the inflection of the German definite determiner in Table 6.1 and of the personal pronouns in 6.2, where syncretic forms are in boldface:[9]

	m.	f.	n.	p.
N	der	**die**	**das**	**die**
A	den	**die**	**das**	**die**
D	dem	der	dem	den
G	des	der	des	der

Table 6.1: German definite determiners

	singular					plural		
	1	2	3			1	2	3
N	ich	du	er	**sie**	es	wir	ihr	**sie**
A	mich	dich	ihn	**sie**	es	**uns**	**euch**	sie
D	mir	dir	ihm	ihr	ihm	**uns**	**euch**	ihnen

Table 6.2: German personal pronouns

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[9]The pronouns lack true genitive forms in modern German.

I have given the cases in a non-standard order to highlight the patterns of syncretism. The first thing we should note is that the nominative and accusative are syncretic in all of the 3rd person forms but the masculine singular. The second is that there are **no** syncretisms between the dative and the nominative, or between the genitive and the nominative, or between the genitive and accusative. There is one dative-genitive syncretism, in the feminine singular, and two accusative-dative syncretisms, in the 1st and 2nd person plural.

Now, as has been demonstrated in great detail by Ringe (1995), many of the syncretisms that we find in the various Indo-European languages have straightforward explanations in terms of phonological change, thus we should not rush to make strong claims about the 'naturalness' of particular syncretisms on their bases. Nonetheless, we must also make sure that our synchronic theory of a particular language is not forced to jump through hoops to describe the syncretisms that the language has. That is, while the lack of a given syncretism may well be accidental and should not be necessarily be reified in the theory, our theory should not be at a loss to handle the ones that we find. Fortunately, the syncretisms of German can be handled quite well by the feature compositions for the various categories defended above. For the masculine singular, where all four cases are distinct, we have three VIts with the expected feature specifications:

(228) a. [+case, +oblique, +inferior, +genitive | −fem] ⇔ /es/

      b. [+case, +oblique, +inferior | −fem] ⇔ /e:m/

      c. [+case, +inferior | −fem, −neut] ⇔ /e:n/

      d. [+case | −fem, −neut] ⇔ /e:r/

I use the symbol | for clarity to separate the case features from the person-number feature complex. No mention of [±plural] is necessary for the singulars. The plural

VIts will all be specified [+plural], excluding them from singular contexts and keeping the singular VIts out of the plural ones.[10] Note also that the genitive and dative VIts are not specified [−neuter], precisely because the exponents *-es* and *-e:m* appear in both the masculine and the neuter. For the other gender/number combinations there is no distinct accusative VIt, i.e. no item specified [+inferior], thus the nominative will be inserted in the relevant positions. In other words, the nominative/accusative syncretism results straightforwardly in this system in instances where there is no specifically accusative VIt. Though the dative and genitive VIts are more specified, their insertion will be blocked in nominative and accusative contexts the relevant nodes will not be specified [+oblique]. The syncretism between genitive and dative in the feminine singular can be handled in the same way, by assuming that there is no VIt with the distinct [+genitive] specification:

(229)   a.   [+case, +oblique, +inferior | +fem, −neut] ⇔ /e:r/

      b.   [+case | +fem, −neut] ⇔ /i:/

For the neuters all we need to add is a nominative/accusative form, since the genitive and dative were handled by 228a and 228b.

(230)   [+case | −fem, +neut] ⇔ /as/

The plurals are similar to the feminines, with no distinct accusative form, but they do have a distinct genitive. As German does not distinguish gender in the plural, they are underspecified for the gender features:

(231)   a.   [+case, +oblique, +inferior, +genitive | +pl] ⇔ /e:r/

      b.   [+case, +oblique, inferior | +pl] ⇔ /e:n/

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[10]In fact, it is conceivable that 228c will need to be specified [−pl] to keep it out of accusative plural masculine contexts, because [+case, +inferior] and [+case, +pl] are both consistent with the feature specification of such nodes, and neither feature bundle will automatically win out in competition by constituting a superset of the other.

c. $[+\text{case} \mid +\text{pl}] \Leftrightarrow /\text{i:}/$

The 3rd person pronouns are essentially the same as the determiner, and the 1st and 2nd person singular pronouns make the same distinctions as the masculine singular determiner (with the exception, of course, that neither have real genitives), thus what I have said above can be straightforwardly adapted to them. Where we find something new is in the 1st and 2nd plurals, where accusative and dative are syncretic, but distinct from the nominative. Again, however, this syncretism can be handled in just the same fashion as the others, by assuming that there is no distinct VIt with the [+oblique] specification. A VIt with the specification [+inferior] will then be the most specific one consistent with the features on nodes in both accusative and dative environments, and thus will be inserted in both. I.e. we have the following for the first person:[11]

(232)   a. $[+\text{inferior} \mid +1, +\text{pl}] \Leftrightarrow /\text{uns}/$

b. $[+1, +\text{pl}] \Leftrightarrow /\text{vi:r}/$

So all of the syncretisms that are found in German can be handled quite simply in this system, by assuming that a VIt with a particular marked feature is lacking for some person/number/gender combination, with the result that the next less marked form surfaces in a more marked context. Note that there is some content to this idea, i.e. it is not the case that this strategy could derive any imaginable syncretism. Recall that there are no nominative-dative, nominative-genitive or accusative-genitive syncretisms, and in fact these would be hard to derive. For example, in order to get the same VIt inserted both in nodes specified as [+case] and [+case, +oblique, +inferior], it would itself have to have the unmarked specification [+case], and there would have to be no [+case, +inferior] form. In other words, the only way to get

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[11]Note that these VIts are not specified as [+case], because the nodes that they spell out are not case nodes, but the actual syntactic pronominal node.

nominative and dative to be syncretic is if the syncretism extends to the accusative as well. Similar reasoning applies to the other missing syncretisms, all of which would involve skipping one or more intermediate cases on the scale of markedness defined by feature specification.

6.5   Formalizing case-assignment

We are now ready to bring everything together and formalize the mechanisms that assign case to DPs. Since I have argued that case is a purely morphological phenomenon, there is no case head or anything of the kind provided by the syntax. Rather, the nodes where case is realized on the elements of a DP must themselves be inserted within the morphological derivation, being what are called Dissociated Morphemes within the DM framework. Now, in strongly agglutinative languages without concord, like e.g. Mordvin and Mari, it makes sense to say that there is a single case node that is inserted on the DP, provided with case features and spelled out. In German and Icelandic, however, where case is fusional with things like number and gender and can appear on multiple agreeing elements across the DP, this is less workable. One could assume that there is a single case node inserted on the DP, which is associated with the correct case features, and that these features are then copied to additional nodes throughout the DP. The problem with this, however, is that we would expect that original case node to be spelled out as well. There is no evidence for this, however. I will thus suggest, instead, that the process of case-assignment consists in the addition of case features to an existing head in the DP, presumably the D head itself. This is strictly separate from the actual morphological realization which takes place elsewhere. A well-formedness principle will insert nodes to host inflectional material on all heads that require it, including at least N and A, and the case features assigned to

D (along with gender and number features) will be copied by a concord operation to these nodes. The nodes will then be spelled out by VIts like those described above, supplying exponents appropriate to their feature specifications.

The grammar of a language with morphological case will thus have a number of case-assignment rules applying in the morphological component. Case-assignment will presumably just be one of a series of such rule types, all of which add features to the relevant nodes based on the output of the syntax in order to prepare them for the insertion of morpho-phonological material. As such they will have to occur between Spell-out and Vocabulary Insertion, and they will of course need to be constrained, since feature-adding is potentially a very powerful mechanism.[12] The central rule for case-assignment is the one that assigns structural, dependent accusative. Bringing together all that we have discussed above, this can be formalized as 233, where PH stands for phase:

(233) $[+\text{case}] \Leftrightarrow [+\text{case}, +\text{inferior}] \; / \; [_{PH_i} \; [_{\nu P} \; \text{DP} \; [_{\nu'} \; \nu \; \ldots [_{DP_j} \; \underline{\quad} \; \ldots]]]]]$

where there is no additional PH_k which contains DP_i and is contained by PH_i

The rule that assigns dative to arguments with copies in Spec-ν_{APPL}P can be formalized as 234:

(234) $[+\text{case}] \Leftrightarrow [+\text{case}, +\text{oblique}, +\text{inferior}] \; / \; [_{\nu_{APPL}P} \; \text{DP} \; [_{\nu_{APPL'}} \; \ldots] \;]$

To demonstrate the workings of the theory, we can run through some sample derivations. Let us start with a normal ditransitive construction, as in 235:

(235) Der Sepp hat seiner Freundin   einen Blumenstrauß gekauft.
       the Joe:N has his   girlfriend:D a   bouquet:A   bought

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[12]One reasonable hypothesis would be that only purely morphological features can be added. That is, any feature that could in principle have come from the narrow syntax cannot be assigned by morphological rule.

'Joe bought his girlfriend a bouquet.'

The morphology considers the direct object first. It is determined that there is indeed a DP in Spec-νP (in this instance an unpronounced copy of *der Sepp*, which itself has raised to Spec-CP in the syntax), thus the feature [+inferior] is added to the specification of the object by rule 233. The relevant node is thus [+case, +inferior | −fem, −neut]. The VIts in 228 compete for insertion, with 228b ruled out because it is [+oblique], leaving 228c to apply. 228d is featurally consistent, but less specified, and thus loses out. We then come to the indirect object. Having a copy in Spec-ν_{APPL}P, it is assigned the features [+oblique, +inferior] by rule 234, and since there is no special feature on the lexical verb, nothing more happens. The feature specification [+case, +oblique, +inferior | +fem, −neut] triggers insertion of the VIt in 229a, and all is well. Finally, for the subject, there are no lexical or categorial feature assignments, and the dependent accusative rule cannot apply, there being no higher DPs in the clause whatsoever. So we end up with the simple specification [+case | −fem, −neut], which can only trigger the insertion of 228d. The other VIts all specify features that are not matched here, and are thus ruled out. For an analogous Icelandic sentence, the process would be precisely the same (of course with different VIts).

Let us move on then to consider the slightly more complicated instance of a normal ECM construction. I have noted above that German does not have true bi-clausal ECM with verbs like *believe*, so we must turn instead to Icelandic:

(236) Við töldum hana   elska Harald.
       we:N   believed her:A love   Harald:A
       'We believed her to love Harald.' (Taraldsen, 1995)

The direct object is handled essentially the same as in the previous example. Rule 233 determines that there is something in Spec-νP, again, a copy of the subject that has raised in the syntax to Spec-TP. On this basis, the object DP is assigned the feature

[+inferior], triggering insertion of an accusative VIt. The morphology then goes on to consider the embedded subject. Having raised to out of the embedded νP to Spec-TP, it will be in the phase defined by the matrix νP, thus the presence of an external subject in the specifier of that phrase triggers rule 233 and ultimately the insertion of another accusative item. The matrix subject is then handled as above.

Finally, let us consider the most complex and probative example, where we have a dative-nominative structure embedded under ECM, repeated here as 237:

(237) Ég taldi   henni leiðast Haraldur/*Harald.
       I:N believed her:D bore   Harald:N/*A
       'I believed her to be bored by Harald.'

When we consider the lower object here, matters are different than in the previous two examples. While a higher DP is indeed present within the phase, the condition for rule 233 is not met as there is nothing whatsoever in the embedded Spec-νP. The dative argument raises to embedded Spec-TP, meaning that the lower object cannot, so it remains insensitive to anything in the higher phase. That is, it cannot see as far as the matrix subject, and so it remains without a [+inferior] feature. There is also no categorial or lexical [+oblique] feature to assign to it, so in the end it remains [+case], and only nominative VIts are underspecified enough to be inserted into the node. Though the dative DP raises into a position where it is in the same phase as the matrix subject, this can have no discernible effect. Rule 233 may apply, but if so, then vacuously, since the DP will already be specified [+inferior] by rule 234. The external subject is handled like all the others so far, and all is well.

Chapter 7

The post-syntactic treatment of case-markers: A Finno-Ugric case-study

7.1 Introduction

In Chapter 6, I began my discussion of morphological case-marking itself with a theory of how it is introduced in the morphological component.[1] In this chapter I will be concerned with how the case-markers (rather than the DPs they are associated with) can themselves undergo movement and be reordered relative to other elements in the extended nominal projection. One of the implications of the thesis that case-markers are not active in the derivation until after Spell-out is that they should not be able to participate in processes that occur within the narrow syntax. In

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[1] An early version of this chapter was presented as McFadden (2002b) at NELS 32 in New York, and I would like to thank to the audience there for helpful comments and criticisms. This work also owes a considerable debt to Rolf Noyer. The original ideas, out of which I developed the analysis of Mordvin presented here, are from unpublished work of his (Noyer, 1998), and my own work on the topic has benefited greatly from his discussion and guidance.

particular, just as they cannot block syntactic raising of the DPs they mark, they should not undergo syntactic raising themselves. Now, the instances where one can say for certain that a case-marker has moved are relatively rare, and those where circumstances allow us to tell what kind of movement is involved are extremely rare, so this prediction will be rather difficult to test. For example, the familiar case-marking Indo-European languages offer us little insight on the matter because they mark case in fusional affixes that also express number and the inflectional class of the noun. When everything has been mashed together in this way, it is difficult to tell just what sort structural configuration is underlying. However, information of the relevant type can be gleaned from more agglutinative languages which have case-markers that can be isolated and observed in their behavior with respect to ordering and allomorphy relative to other nominal affixes. In particular, there are two Finno-Ugric languages, Mordvin and Mari, which display rather interesting affix ordering facts of the relevant type. This chapter will mostly be dedicated to detailed analyses of the facts of these two languages and their various dialects from the perspective of a theory of post-syntactic movement developed within the Distributed Morphology framework by Embick and Noyer (2001). I will argue that the data are incompatible with any analysis according to which the reordering of the case-markers is due to syntactic raising. While data of this sort cannot prove my thesis, it is precisely what the thesis predicts, and thus can be counted in its favor.

7.2 Theoretical Background

In this section I will lay out the theory developed by Embick and Noyer (2001) and discuss some of the predictions it makes that will be relevant to my examination of the Finno-Ugric data. I will then motivate some assumptions about the structure of

the DP and the position of case within it.

7.2.1   Post-syntactic movement within DM

Recall that in DM, the narrow syntax manipulates nodes consisting solely of feature bundles, and phonological material is only inserted into these nodes at a late stage in the derivation, following Spell-Out. This operation is called Vocabulary Insertion (henceforth VI), and is argued by Embick and Noyer to occur at the point in the derivation where the strictly hierarchical structure output by the syntax is linearized. They reason that such a model of the grammar defines three distinct stages of the derivation leading up to PF, each with its own restrictions on movement. This is shown in Figure 1 below, where the three movement operations they propose are indicated in italics at the stages where they are assumed to occur:

Figure 1: A model of the grammar
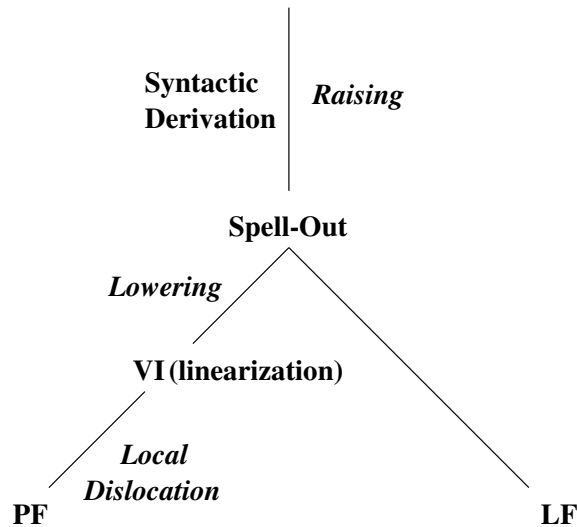
The familiar operation of Raising takes place before Spell-out in the narrow syntax. However, there are also movement operations which occur after Spell-out on the PF branch in order to resolve morpho-phonological dependencies, like the requirement that some element be an affix or a clitic (see e.g. Marantz, 1984a). Being on the PF

branch, such movement can have no effect on the LF semantics. Now, the PF branch can itself be divided into stages before and after VI. Embick and Noyer (2001) call movement after Spell-out but before VI Lowering, which they define as adjunction of a head to the head of its complement. Movement after VI, called Local Dislocation (henceforth LD), differs from Lowering only in that, coming after Linearization, it operates on a linear, rather than hierarchical structure.

Embick and Noyer (2001) cite the following two examples to motivate this distinction. We can tell that T gets onto V in English by Lowering, because it is not blocked by adverbial adjuncts, as in 238, but it **is** blocked by an intervening negative head, triggering do-support, as in 239b:

(238)   John often eats apples.

(239)   a.   * John not eats apples.

          b.   John does not eat apples.

Since Lowering is defined on a hierarchical structure, it can in principle distinguish adjuncts from specifiers and complements, and thus can skip over them. In 238, the complement of T is the VP, of which *eat* is the head, and the adverb *often* does not count. The negative element *not*, however, seems to be a head in English, and therefore counts as the head of the complement of T in 239b. T therefore cannot skip Neg to lower to V, due to some version of the head movement constraint (Travis, 1984, Baker, 1988, Rizzi, 1990). Of course, Raising is like Lowering in its ability to skip over adjuncts, but we can tell here (as standardly assumed since Pollock, 1989) that V does not Raise to T, specifically because the V+T complex shows up below adverbs like *often*. In contrast, the English superlative suffix adjoins to adjective heads by LD. In the first place, such adjunction is sensitive to the lexical and phonological properties of the adjective, as we can see from the comparison between 240a and 240b.

It must thus occur after VI, because it is only after VI that phonological and lexical information is present in the structure. In the second place, unlike Lowering of T, it is blocked by adverbial adjuncts, as shown by 240c.[2] If the adjunction fails for either reason, the stem *mo-* must be inserted to host the affix left in situ as in 241:

(240)   a.   * minusculest

       b.   smallest

       c.   * the amazingly smallest elephant

(241)   a.   most minuscule

       b.   the most amazingly small elephant

Because LD is defined on a linear rather than a hierarchical structure, all it can do is permute adjacent elements. It has no sensitivity to the distinction between adjuncts and non-adjuncts, so adverbial material is sufficient to block it.

Now, all other things being equal, a grammar with a single type of movement would be simpler. It must thus be shown that Lowering and LD are necessary in addition to the generally assumed Raising. We have just seen some diagnostics for distinguishing the two types of post-Spell-out movement from one another, but how can we motivate the difference between them and standard Raising? The adverb ordering facts used to argue for T-to-V Lowering rather than V-to-T Raising in English are useful in their place, but will be of less use to us for our investigations of the extended nominal projection, partly because the proper analysis of adjectives within the DP is, if anything, more controversial than that of adverbs within the extended verbal projection.[3] What we would like is to work out how the effects of Lowering

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[2]As Embick and Noyer (2001) point out, 240c is grammatical, but only under the irrelevant interpretation where the adverb has scope over the superlative, i.e. it is amazing that the particular elephant is the smallest. In other words, the adverb starts out above the superlative and thus does not intervene to block its LD to the adjective head.

[3]For the rest of this section I will discuss Lowering as a stand-in for both types of post-Spell-out movement. LD has the same relevant abstract properties, and the Finno-Ugric phenomena I examine

and Raising could be distinguished in general under Embick and Noyer's theory. One clear distinction is that Raising feeds both PF and LF, whereas Lowering feeds only PF, thus we might hope to distinguish the two based on the presence or absence of effects on the semantics. However, an instance of Raising is not actually required to have a notable affect the semantics. Indeed, for most examples of head Raising we would be hard pressed to find semantic correlates. Thus the lack of semantic effect is not enough to identify a particular instance of movement as occurring after Spell-out.

Instead, we must turn to the structural properties of the two types of movement to see how we can tease apart their effects. The following trees represent head Raising and Lowering, respectively:[4]

(242)   a. Raising   b. Lowering
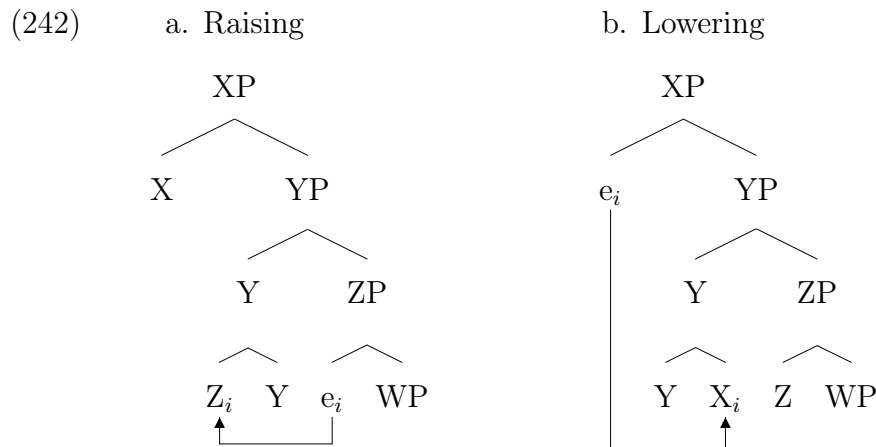
As noted above, both types of movement are subject to some form of the head movement constraint, which includes a ban on the skipping of intermediate heads, and reduces to a form of Relativized Minimality (henceforth RM). For example, in 242a., Z would not be able to skip Y and Raise to X, just as in 242b., X would not be able to Lower directly to Z, due to the intervention of Y. Raising and Lowering differ, of course, in the direction of displacement, which has important consequences. Accord-

below turn out to be Lowering operations, so we will not lose anything by restricting our discussion in this way.

[4]I restrict my attention here to head-movement, since there is no post-Spell-out counterpart of XP movement.

ing to the standard assumption of a cyclic, bottom-up derivation, operations apply first to nodes lower in the tree. This means that a given head X will Raise before any movement process can apply to the target of its Raising Y, because Raising is the first movement process in the derivation, and by cyclicity Raising itself will displace a lower head X before it can displace the higher head Y. Thus nothing but RM should be able to block a Raising operation that would otherwise occur, not even another instance of Raising.

However, the situation is different for Lowering, because the target node is lower than the moving node, and because Lowering occurs later in the derivation than Raising. Thus an instance of Lowering that would otherwise have taken place can in principle be blocked by earlier displacement of the target node. This is demonstrated in 243:

(243)   a. Y-to-Z   b. X-to-Y blocked
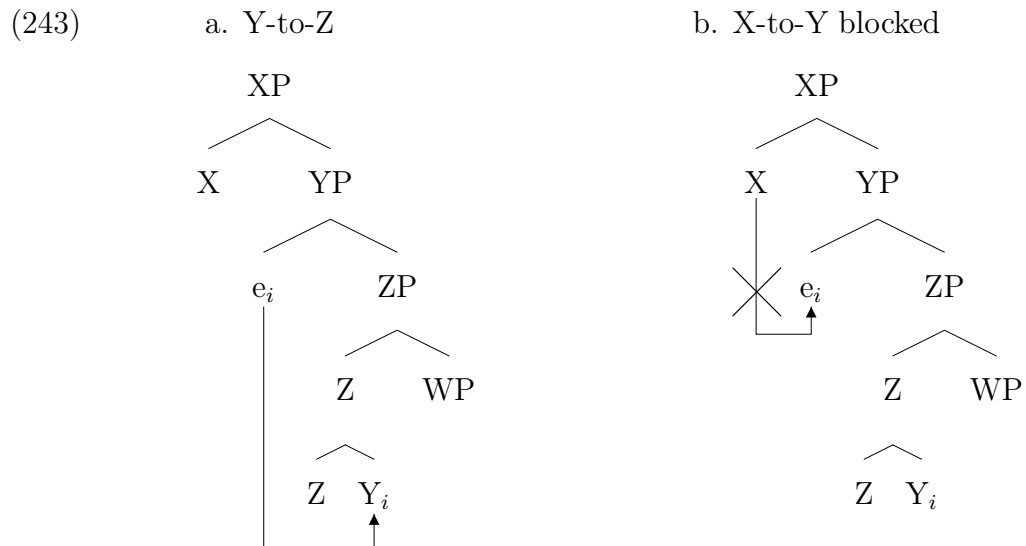
By cyclicity, Y will move before X does, so if Y does lower, subsequent lowering of X to Y will effectively be blocked. Either the Lowering fails because Y is no longer in the relevant position, or X actually does lower to the position vacated by Y, but the movement is string vacuous assuming that no specifiers or adjuncts intervene.

Consider now what happens in an analogous situation with raising:

(244)

Z-to-Y

```
              XP
             /  \
            X    YP
                /  \
               Y    ZP
              / \   / \
            Z_i  Y e_i  WP
```

Y-to-X

```
              XP
             /  \
            X    YP
                /  \
              / \   / \
           Y_j X e_j  ZP
          / \       / \
        Z_i  Y    e_i  WP
```
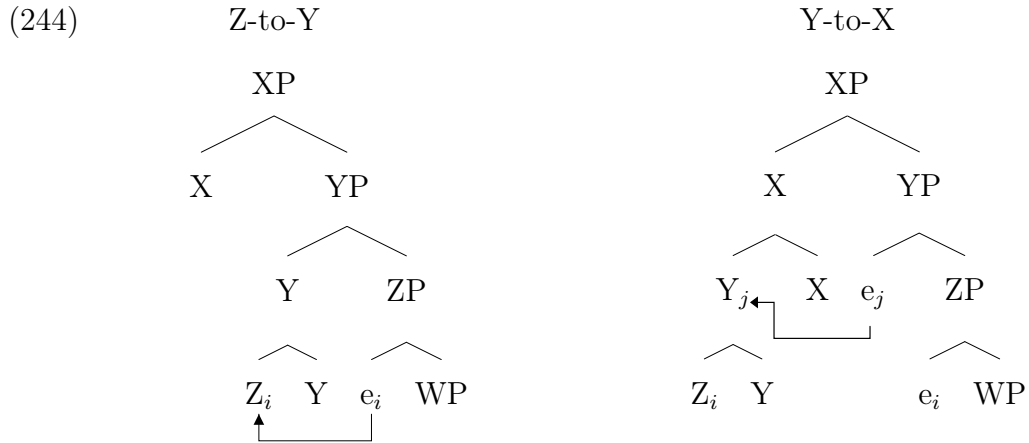
Again by cyclicity, Z will move before Y, but here Raising of Z to Y does not block subsequent raising of Y to X. This is because it does not affect the target X of that later movement, nor does it affect the relevant properties of the moving element Y, which continues to be the head of the Y+Z adjunction structure and in that capacity continues to be the head of the complement of XP. Rather, we get the pattern of successive raising familiar from verb raising through the functional heads of an articulated Infl. Thus Raising is not blocked by the Raising of a lower node. This is quite nice, because it gives us a diagnostic for distinguishing Lowering (and LD) from Raising:

(245)   Lowering of X can be blocked by processes affecting nodes below X. Raising of X cannot.

Therefore, if we find phenomena in language where the movement of a node is bled by movement of a node lower in the structure, we must analyze that movement as Lowering (or LD). In the Sections 7.3 and 7.4 I will argue that just such a pattern exists in the placement of case-markers in two Finno-Ugric languages, Mordvin and Mari.

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7.2.2 The structure of the extended nominal projection

Before we move on to the Finno-Ugric data we must consider how case-marking fits into the structure of the extended DP. In 246 I give the structure I am assuming, adapted from Alexiadou and Wilder (1998a) with the addition of a K head.

(246)

```
              ?
            /   \
          K       DP
                 /  \
               D      PossP
                     /    \
                  Poss      NumP
                           /   \
                        Num     NP
```
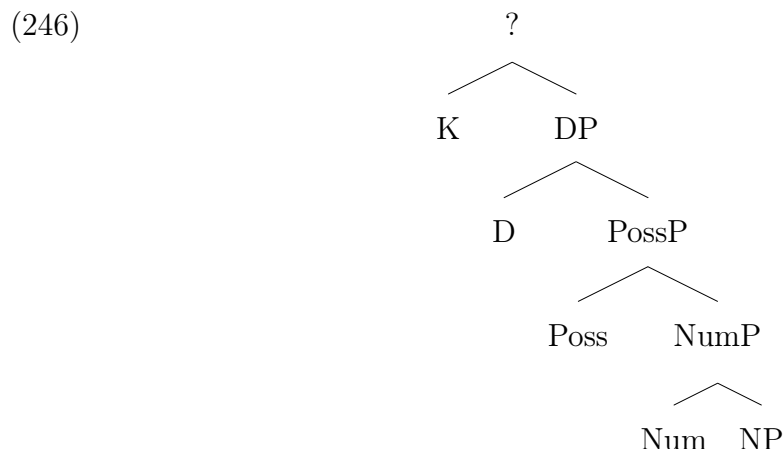
Some discussion is of course necessary for the assumption of a K head, given the central hypothesis of this dissertation that case-markers are purely morphological. First, as regards the easier question of where K belongs within the extended nominal projection, note that case expresses relationships between the full DP and the remainder of the clause (or other dominating structure), not a relationship among individual elements of the DP or a relationship between some subpart of the DP (like the head N or D) with the remainder of the clause. The null hypothesis is thus that K takes the entire DP as its complement. Affix ordering facts from a number of agglutinative languages support this view. In Turkish, for example, case-markers are easily separable from number markers and always occur outside of them on the word, as exemplified by the well-known pattern in 247:

(247) ev,   ev-den,   ev-ler,   ev-ler-den
      house, house-ABL, house-PL, house-PL-ABL
      'house, from the house, houses, from the houses'

Indeed, this seems to be the most common pattern cross-linguistically, but it is only of limited probity because exceptions are not terribly hard to find. In Finnish, for example, case-markers do appear outside plural markers, but inside possessive affixes, and similar (but more complicated phenomena) will be the focus of my investigation of Mordvin and Mari. Indeed, the point is that a certain amount of surface readjustment of affixes is possible, thus surface ordering can be suggestive of the underlying order, but not a completely reliable guide.

Somewhat more reliable tests of the dominance relationships among the various heads in the extended nominal projection are available from conjunction facts. The examples presented here are from German, but I think it will be clear that what they demonstrate are very general principles that have nothing to do with specifically German grammar. Consider the following sentence:

(248) Der Mann hat deinen Eltern   und meinem Bruder   eine Geschichte
      the man has your   parents:D and my   brother:D a   story
      erzählt.
      told
      'The man told your parents and my brother a story.'

In 248 we have two PossPs conjoined under a single case.[5] It is impossible for two PossPs to be conjoined receiving distinct cases, or to have two Cases conjoined under a single Possessor. In fact, it is difficult to imagine how to construct examples of these types to demonstrate that they would be ungrammatical. This indicates that K dominates PossP. In the same way, it is possible for two DPs to be conjoined under a single case, as in sentence 249, while the inverse is impossible:

(249) Dieter hat dem Studenten und dem Arbeiter seine Bücher gezeigt.
      Dieter has the student:D and the worker:D his   books   shown
      'Dieter showed his books to the student and the worker.'

---

[5] Presumably these are actually DPs, but the point is that we can see case scoping over two overt conjoined possessives.

In order to have the inverse, we would need two NPs to be conjoined under a single determiner but receiving distinct cases. As far as I can tell, such examples are not just ungrammatical, but impossible to formulate. This is easily explained if case obligatorily dominates PossP and DP, under normal assumptions of syntactic structure. Since it is impossible for two branches of a tree to unite (i.e. to immediately dominate the same node), there is no way to conjoin two cases over a single DP or PossP. If K were located below them, we would be unable to explain this.

The second issue of how K gets where it is and what its structural status is, is a bit more difficult. What I have assumed to this point, without being terribly explicit, is that case-markers are inserted into the structure at some point at or after Spell-out. Marantz (1984a), Noyer (1997) and Embick (1998) have argued for the existence of such elements inserted for purely morphological reasons at a late stage in the derivation, which they call dissociated morphemes. The details of dissociated morphemes remain rather sketchy, so my account here will necessarily be preliminary. Still, in order to be spelled-out overtly, dissociated nodes will have to be inserted into the structure at an early stage of the PF branch, before VI and linearization. Thus it will operate on what is still a hierarchical structure, so it is reasonable to assume that it will essentially add an additional structural level to the extended nominal projection. This will not constitute a real syntactic phrase, because it is not present outside the PF branch, a point which I reinforce by not calling it KP, leaving the label for the phrase unspecified for the time being. Now, the assumption of elements with no syntactico-semantic reality, which can be inserted freely at a late stage in the derivation, clearly has the danger of making our theory of grammar too powerful. The development of a theory of dissociated morphemes will have to consist largely in the establishment of tight restrictions on their insertion. One strong, plausible and perhaps unavoidable restriction would be a simple statement of locality or minimality

as in 250:

(250)   A dissociated morpheme must be inserted as the sister of the node which triggers its insertion.

For case, this means that K must be inserted as the sister of DP. A K inserted somewhere inside DP, or further up outside the DP – say on V – would be ruled out as a locality violation. This not only makes the dissociated morpheme analysis more attractive by making it more restrictive, it also provides an additional way to think about the issue of where in the extended nominal projection K will be inserted. Of course, the larger purpose of this chapter is to provide additional argumentation that K need not be present before Spell-out.

Regarding the rest of the nominal projection, I will assume that the possessive suffixes (henceforth Pxs) in Mordvin and Mari are actually located in the D head rather than in a separate Poss head (possibly agreeing with possessors located in Spec DP). While there is evidence for distinct Poss and D projections in languages like Hungarian which allow a Px and a determiner to co-occur in a single DP, there does not seem to be any evidence supporting such a separation for the two languages at hand. Indeed, a number of facts argue against it. For one thing, Pxs are in complementary distribution with, and occupy the same surface position as definiteness markers in Mordvin, and in Mari. For another, definiteness on non-possessed nouns is expressed by default 3SG Pxs.[6]

---

[6]See the papers in Alexiadou and Wilder (1998b) for discussion of where possessive affixes belong within DP. We could say, alternatively, that Pxs do appear in PossP, but that in these languages D and Pos are in complementary distribution, and either D is not projected when empty, or other heads are able to move string-vacuously through it. However, this would not affect the arguments to be made here, so I will stick to the simpler structure.

7.3　Mordvin

Nouns in Mordvin can be marked for case, number, definiteness and possession.[7] Curiously, the case-markers fall into two positionally-defined groups. Those in the K1 group, including the ablative, inessive, elative and illative markers, precede the possessive and definiteness markers, while those in the K2 group, including the genitive[8] and allative[9] markers follow. Consider for example the forms from the Mokša dialect in 251:[10]

(251)　a.　alaša-do-n
　　　　　horse-ABL-1SG.Px
　　　　　'from my horse(s)'

　　　　b.　alaša-nä-ńd́i
　　　　　horse-1SG.Px-ALL
　　　　　'to my horses'(Ć=palatalized C)

　　Given the assumptions on the structure of DP laid out in Section 7.2.2, we expect K to be outside D, so we need to explain how K1 affixes get inside the Pxs and definiteness markers in D or alternatively how the markers in D get outside the K1 markers. Data from the definite declension given in Table 7.1 (p. 241) present clear evidence for an analysis involving Lowering.[11] A few comments on the morphophonology of Erźa Mordvin are necessary to properly interpret this paradigm. First,

---

[7]My analysis of Mordvin is based on Noyer (1998), but the arguments presented against a Raising analysis are original.

[8]The genitive also serves the function of an accusative. This is apparently the result of a sound change by which place distinctions were lost in final nasals, leading to syncretism of Proto-Finno-Ugric genitive *-n and accusative *-m.

[9]This case also serves the function of the dative and is sometimes referred to as such.

[10]The forms here are taken from Feoktistov (1966), which is in the Cyrillic-based standard orthography. I use Raun's (1988) transliteration.

[11]The forms in this paradigm are taken from Raun (1988) and Zaicz (1998) normalized to Raun's transliteration. The Mokša dialect differs here in crucial respects. In the K1 ablative and inessive, Mokša has independent postpositions in place of the normal case-markers in the definite declension (Raun, 1988). As we will see, these are precisely the paradigm slots where the action is, so we restrict our attention here to the Erźa dialect.

Table 7.1: Mordvin Definite Declension (Erźa dialect)

	'the house'	'the houses'
N	kudo-**ś**	kudo-**t́ńe**
G	kudo-**ńt́**	kudo-**t́ńe**-ń
ALL	kudo-**ńt́**-eń	kudo-**t́ńe**-ńeń
ABL.	kudo-do-**ńt́**	kudo-**t́ńe**-de
INE	kudo-so-**ńt́**	kudo-**t́ńe**-se

the definiteness marker (in boldface) has two allomorphs in the singular, *ś* for the nominative and *ńt́* for the remaining cases. Second, in the plural, there is a fusional marker *t́ńe* for number and definiteness. Third, a phonological rule deletes an *ń* following the *ńt́* cluster of the definiteness marker in the genitive and allative singular. Finally, the variation in the ablative and inessive markers *-do-* and *-so-* versus *-de-* and *-se-* is due to vowel harmony.

Given all of this, we see the expected variation in affix orders in the singular. K1 ablative and inessive precede D, while K2 allative follows it.[12] However, in the plural, both K1 and K2 follow the fused definite plural marker. It would seem, then, that the movement that gets K1 inside D or D outside K1 is blocked by the association of plural # with definite D. In other words, a process involving the # head blocks movement involving the D and K heads, which start out higher in the tree. This is precisely the sort of situation described in the diagnostic in 245, thus we can conclude that the reordering of K1 and D elements occurs by Lowering of K1 to D.

This is demonstrated in the derivation in 7.1 on p. 242 (note that both Mordvin and Mari are consistently head-final). If we then assume that the environment for the insertion of the fusional definite plural marker is created by Lowering and adjoining D to plural #, we properly predict that subsequent Lowering of K1 to D will be blocked, as shown in the derivation in Figure 7.2.

---

[12]Presumably the genitive does as well, although it is impossible to tell since its exponent is deleted by the phonological rule noted above.

Figure 7.1: Ablative singular definite, *kudodońť* 'from the house' (Erźa dialect)
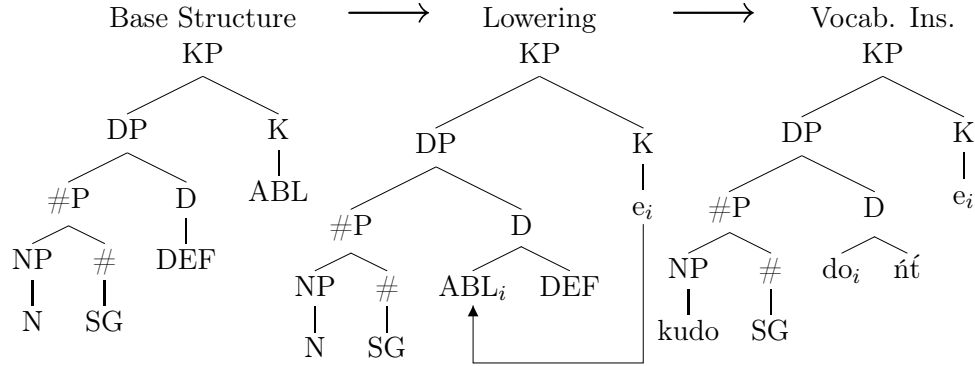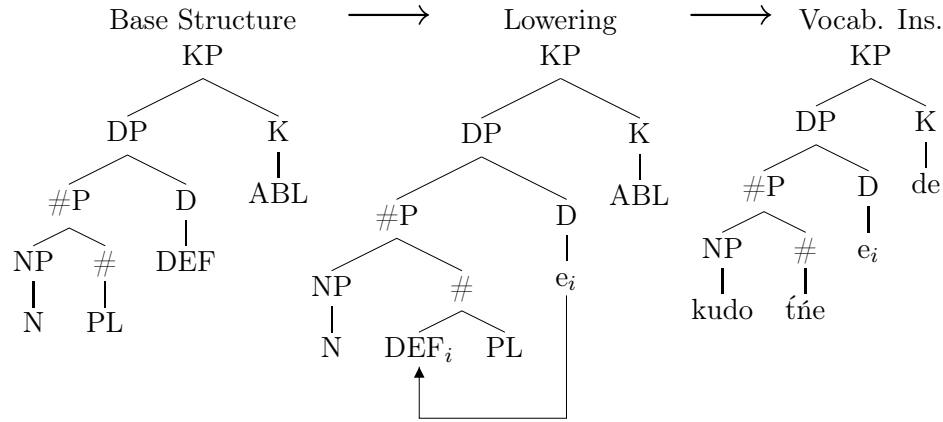
Base Structure $\longrightarrow$ Lowering $\longrightarrow$ Vocab. Ins.

```
Base Structure:
        KP
       /  \
      DP    K
     /  \   |
   #P    D  ABL
  /  \   |
 NP   #  DEF
 |    |
 N    SG

Lowering:
          KP
         /  \
        DP    K
       /  \   |
     #P    D  e_i
    /  \   /  \
  NP   # ABL_i DEF
  |    |   ↑
  N    SG  |_____
                      |

Vocab. Ins.:
          KP
         /  \
        DP    K
       /  \   |
     #P    D  e_i
    /  \   / \
  NP   # do_i ńť
  |    |
 kudo  SG
```

Figure 7.2: Ablative plural definite, *kudotńede* 'from the houses' (Erźa dialect)

Base Structure $\longrightarrow$ Lowering $\longrightarrow$ Vocab. Ins.

```
Base Structure:
        KP
       /  \
      DP    K
     /  \   |
   #P    D  ABL
  /  \   |
 NP   #  DEF
 |    |
 N    PL

Lowering:
          KP
         /  \
        DP    K
       /  \   |
     #P    D  ABL
    /  \   |
  NP    #  e_i
  |    / \
  N DEF_i PL
      ↑
      |_____
                 |

Vocab. Ins.:
          KP
         /  \
        DP    K
       /  \   |
     #P    D  de
    /  \   |
  NP    #  e_i
  |     |
 kudo  tńe
```

Of course, this really just shows us that the movement operation getting K1 inside D is downward, not whether it is Lowering or Local Dislocation. Evidence that it is the former comes from the possessive declension, shown in Table 7.2 (Pxs in boldface). In the nominative and K2 cases in the Mokša dialect, the number of

Table 7.2: Mordvin Possessive Declension (Mokša dialect)

	'my horse'		'my horses'
N	alaša-**zä**		alaša-**nä**
G	alaša-**zä**-ń		alaša-**nä**-ń
ALL	alaša-**zä**-ńďi		alaša-**nä**-ńďi
ABL		alaša-do-**n**	
INE		alaša-so-**n**	

the head noun is marked by allomorphy in the Px (here *-zä* in the singular versus *-nä* in the plural), but when a K1 marker intervenes between the stem and Px, the Px

surfaces in a default form corresponding to the plural (here -*n*, and the number of the head noun is ambiguous.[13] This blocking of allomorphy is easily understood given the base order of heads assumed in 246. The conditioning of allomorphy is apparently subject to a locality constraint, such that # can condition allomorphy in D as long as they are adjacent, but if K comes to intervene between them, the relationship is disrupted, and allomorphy is blocked. Crucially, since allomorphy involves the insertion of phonological material, this intervention must take place by VI at the latest. This rules out LD, which occurs after VI. This analysis is demonstrated in the derivations in 7.3 (below) and 7.4 (p. 244), where angled arrows indicate movement, and curved arrows indicate the conditioning of allomorphy.

Figure 7.3: Genitive singular, 1st singular possessor, *alašazäń* 'of my horse' (Mokša dialect)
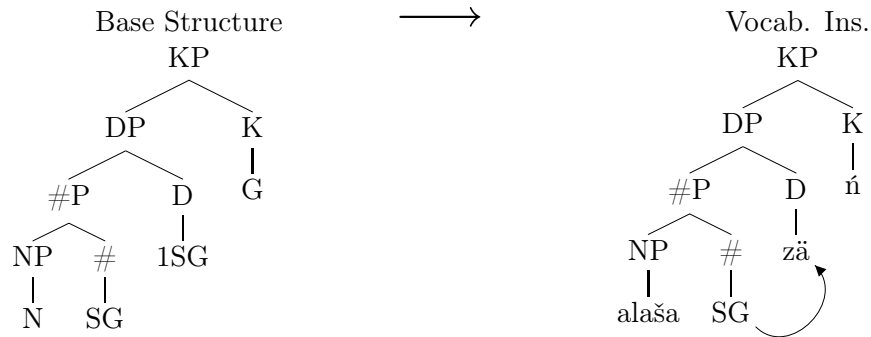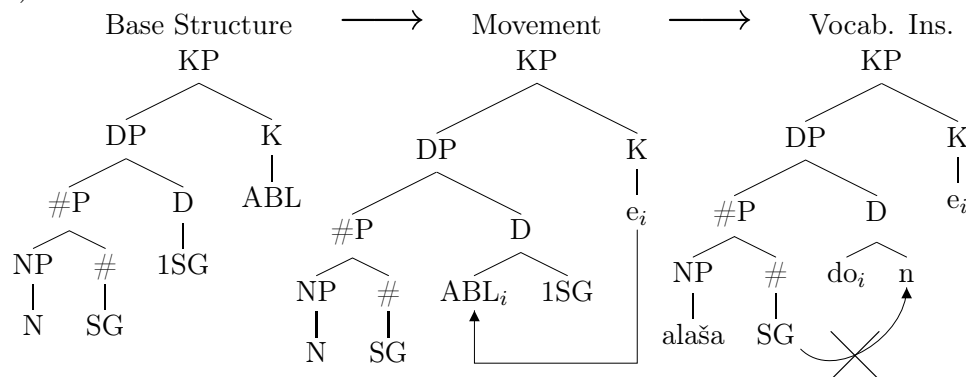

7.4 Mari

Mari (formerly called Cheremis) lacks the fusional markers that came in so handy in my analysis of Mordvin, but it shows types of variation in affix orderings both within

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[13]In the standard version of the Erźa dialect, the reflection of the number of the head noun in the Px has been lost outside of the nominative. Everywhere else, the default form is always used, thus obscuring the phenomenon that is relevant here (Noyer, 1998). This puts us in a less than ideal situation, because the demonstration that the movement involved is not Raising came from the Erźa, while the demonstration that it is not LD comes from Mokša, and we cannot be certain that what applies for the one necessarily applies for the other. Nonetheless, there is no evidence in favor of either a raising or a LD analysis from either dialect.

Figure 7.4: Ablative singular, 1st singular possessor, *alašadon* 'from my horse' (Mokša dialect)

Base Structure $\longrightarrow$ Movement $\longrightarrow$ Vocab. Ins.

```
        KP                          KP                          KP
       /  \                        /  \                        /  \
     DP    K                     DP    K                     DP    K
    /  \   |                    /  \   |                    /  \   |
  #P    D  ABL               #P      D  e_i              #P      D  e_i
 /  \   |                   /  \    /  \                /  \    /  \
NP   #  1SG               NP    # ABL_i 1SG           NP    #  do_i  n
|    |                    |     |                     |     |
N    SG                   N     SG                    alaša SG
```

and across dialects that are just as instructive. I will be concerned here mainly with three dialects: the Hill (or Western) literary dialect and the Meadow and Eastern spoken dialects, because the data available for them are the most reliable. At the end of the section I will also discuss the Northwestern dialect and the Eastern literary dialect, but the discussion will be somewhat less definitive due to certain difficulties regarding the reliability and consistency of the data that have been reported for them. As in Mordvin, the Mari case-markers are divided into two groups based on their order relative to Px.[14] Thus the K1 lative, illative, inessive and comitative precede the Px while the K2 accusative and genitive follow.[15] The dative varies between K1 and K2.[16]

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[14] The information about which affix-ordering patterns are available in the various Mari dialects is from Luutonen (1997), a thorough investigation of the patterns based on both corpus studies and extensive surveys of native-speaker judgments. The forms cited are taken from Kangasmaa-Minn (1998).

[15] As noted in Chapter 3. in both Mordvin and Mari the distinction between K1 and K2 seems to correspond to a local/semantic vs. grammatical distinction. However, contrary to what we would expect if this were because of the local cases realize syntactic P heads, in both Mordvin and Mari the K1 local cases are inside the K2 grammatical ones. The ultimate source of the ordering variation has been the subject of controversy within the Finno-Ugricist and Uralicist literature. For a taste of the debate see Tauli (1953), Nichols (1973), Comrie (1980) and Korhonen (1991).

[16] This could be an instance of grammar competition characterizing a change in progress (see Kroch, 2000), or it could reflect the fact that the dative serves both the local allative function and the grammatical dative function. I have found no data on how or whether the ordering behavior of this suffix correlates with which of these roles it is playing.

The interesting variation comes when a plural marker is present.[17] The situation in the three dialects being discussed here is shown in Table 7.3. The dialects agree

Table 7.3: Affix ordering in the Mari dialects

Hill Mari	Meadow Mari	Eastern Mari
	K1 Px	
	Px K2	
	PL K1	
	PL K2	
PL Px	PL Px $\sim$ Px PL	Px PL
PL K1 Px	PL K1 Px $\sim$ Px PL K1	Px PL K1
PL Px K2	PL Px K2 $\sim$ Px PL K2	Px PL K2

on the K1-K2 distinction next to Px, and on the ordering of PL before case, but they disagree on the order of PL and Px. Hill Mari places PL before Px, leaving case free to pattern with Px in the three suffix forms as it would in the absence of PL. In contrast, Eastern Mari places Px before PL, which blocks K1 from getting inside Px when all three suffixes are present. Meadow Mari shows variation between these two types, allowing both orderings.

For the purposes of my analysis, the key dialect is Eastern Mari. Note that it shows exactly the same pattern as Mordvin, with the sole difference being that Px+PL are spelled out independently rather than showing up in a single fusional marker. The same analysis is thus in order. Specifically, K1 lowers to D, but D lowers to PL first, blocking the lowering of K1 when PL is present.[18] This analysis is demonstrated in two derivations. First, Figure 7.5 (on p. 246) shows the unimpeded Lowering of K1 in the singular. Second, Figure 7.6 (on p. 246) shows the Lowering of Px to PL, leaving K1 nowhere to lower to. In Hill Mari, on the other hand, we can see from surface

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[17]Mari has lost the older Finno-Ugric plural markers and is in the process of recruiting and grammaticalizing new ones from various sources. This is a change in progress and is proceeding independently in the different dialects, hence the attested variation.

[18]That is, either D always lowers to #, with # only projected when it is plural, or D only lowers to plural #.

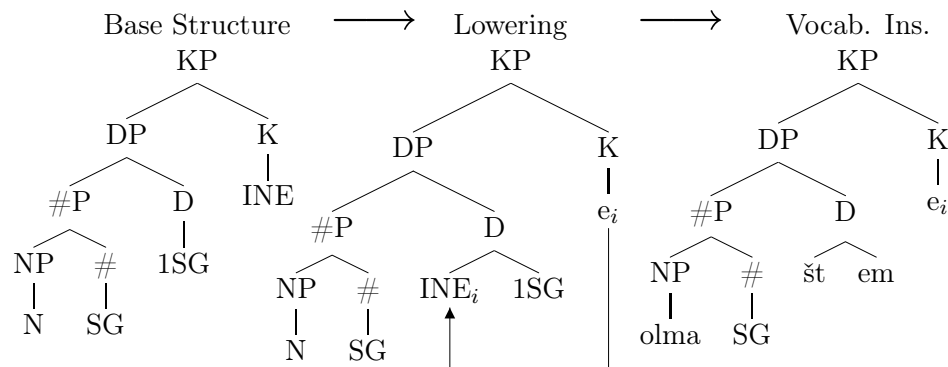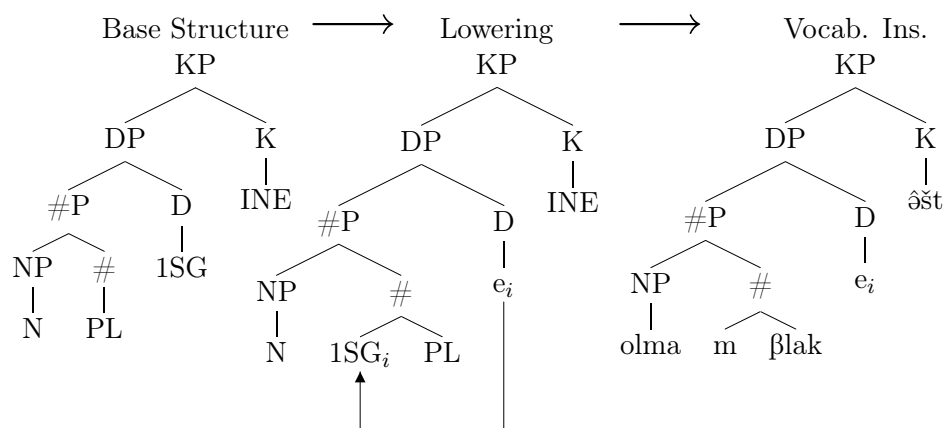Figure 7.5: Eastern Mari, Inessive singular, 1st singular possessor, *olmaštem* 'in my apple'

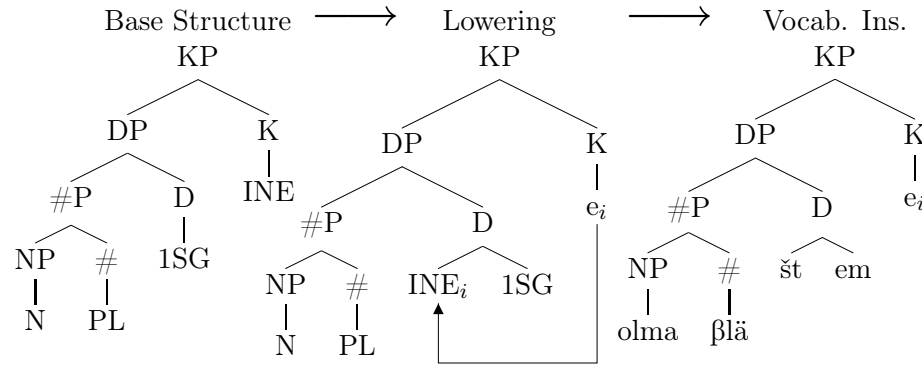Figure 7.6: Eastern Mari, Inessive plural, 1st singular possessor, *olmamβlakâšt* 'in my apples'

order that, unlike in Mordvin and Eastern Mari, D does not Lower to plural #. As expected, Lowering of K1 is thus never blocked. Figure 7.7 (on p. 247) shows the relevant example.

Now, in Meadow Mari, either ordering of PL and Px is admissible.[19] This can be analyzed as grammar competition (see e.g. Kroch, 2000), between an Eastern Mari-like grammar that has Lowering of D to PL, and a Hill Mari-like grammar that does not. Crucially, as expected under the analysis being developed, the choice between these two variants determines what order will surface when three suffixes are present.

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[19]In fact both Hill and Eastern Mari show this variation as well. The difference is that in Hill PL Px is clearly preferred and in Eastern Px PL is clearly preferred, while in Meadow neither is clearly preferred. See Luutonen (1997) for data and discussion.

Figure 7.7: Hill Mari, Inessive plural, 1st singular possessor, *olmaβläštem* 'in my apples'

Base Structure ⟶ Lowering ⟶ Vocab. Ins.

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   Base Structure                    Lowering                        Vocab. Ins.
        KP                              KP                               KP
       /  \                           /    \                           /    \
     DP    K                        DP      K                        DP      K
    /  \   |                       /  \     |                       /  \     |
  #P    D  INE                    #P    D   e_i                    #P    D    e_i
 /  \   |                        /  \  /  \                       /  \  /  \
NP   #  1SG                     NP  # INE_i 1SG                   NP  # št  em
 |   |                           |  |                             |   |
 N   PL                          N  PL                          olma βlä
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In other words, K1 will lower to D if and only if D does not lower to PL. Two orders are thus predicted to be impossible: PL-Px-K1, with neither head Lowering, and K1-Px-PL, with both heads Lowering. Luutonen (1997) actually tests the acceptability of a number of orderings, and PL-Px-K1 is in fact judged the most ungrammatical of all of them. While he does not test for K1-Px-PL, it is not reported as a possible order in any of the sources.

Of course, since grammar competition is frequently a mark of change in progress, this fits in well with the fact that the Mari plural markers are in the process of being grammaticalized. The geographical facts also support this account in that Meadow Mari is spoken in an area between those of Hill and Eastern Mari, thus it is reasonable that it should have a grammar which is, in a sense, intermediate between them. It is clear that the Mari plural markers were independent modifiers until recently. We can imagine then that Eastern Mari is fairly conservative in its ordering, in that it still has the plural marker outside the Px. At the point when the marker went from being an independent modifier to an instantiation of the # category, it became necessary for language learners to posit some sort of movement process to account for the surface ordering, since by rights a # head ought to be inside a D head. This would have been the genesis of the Lowering operation. In Hill Mari, on the

other hand, the grammaticalization has in a sense progressed further, such that the Lowering operation has been abandoned in favor of a more transparent relationship between base and surface orders. This allows us to understand the dialect variation as variation in the spread of an innovation. It has gone nearly to completion in Hill Mari, is at an intermediate stage in Meadow Mari, and has just begun in Eastern Mari.

Relevant data for two more Mari dialects have been reported in the literature but, as noted above, are somewhat less reliable. These are Northwestern Mari, as described by Comrie (1980) and Eastern Literary Mari (aka Meadow-Eastern Literary Mari) as described by Alhoniemi (1988). The reported orderings are given in Table 7.4. As

Table 7.4: Affix ordering in Northwestern and Eastern Literary Mari

Northwestern Mari	Eastern Literary Mari
K1 Px	
Px K2	
Px PL	PL Px
K1 PL	PL K1
K2 PL	PL K2
K1 Px PL	PL K1 Px
Px K2 PL	Px PL K2

discussed above, Luutonen (1997) presents data which are reliable because they are based on actual corpus studies and native speaker intuition tests, both of which are described in detail. Such reliability cannot be claimed for all other sources, which generally report the ordering variation but do not describe it in sufficient detail for the crucial patterns to be clear. What is relevant here is that Luutonen gives no information on NW Mari, so that the somewhat surprising pattern given by Comrie cannot be confirmed, and that what Luutonen reports for EL Mari actually contradicts Alhoniemi (1988) in some forms, and gives further detail that allows us to better understand the other forms.

If the data given for NW Mari are correct, and the PL marker follows everything, then we are forced to suppose that it is actually not generated in the # head. If it were, there would probably be no way to get it outside both the D and the K head without disrupting their order relative to each other (which we would get from successive head Raising). Instead we might suggest that this plural marker is actually a modifier, generated in some adjunct position on DP. As an adjunct, it would not block the Lowering of K. In terms of the hypothesis suggested above on the change in progress in Hill, Meadow and Eastern Mari, NW Mari would then be the most conservative, not yet having reached the point where the independent plural modifier has been reanalyzed as an instantiation of the # head. Again, however, given the lack of confirmation of these data from a more thorough study, this must remain speculation.

The data reported by Alhoniemi (1988) for EL Mari would be problematic for any analysis. Specifically, why should Px get inside of PL only in the presence of a K2 marker higher up in the structure? There is no attractive way to drive such a movement, but in fact Alhoniemi's claims appear to be incorrect. According to Luutonen (1997), while PL Px is a possible variant in EL Mari, as in most dialects, Px PL is the order actually found 89% of the time in his corpus. Furthermore, the variation in the orders with three affixes is not as simple as the chart suggests. EL Mari is a written language based on a disparate group of spoken dialects. It has adopted two different plural markers from two different dialects, each with its own ordering pattern: *βlak*, which follows Px, and *la*, which precedes it.[20] As it happens, *la* tends to co-occur with K1 affixes, *βlak* with K2 affixes, yielding the pattern *la* K1

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[20] Apparently the two suffixes have the same ultimate etymological source. The fact that *la* is more reduced phonologically than *βlak* would seem to go along with its position closer in to the expected location of a # head as indicators that it is generally further along in the process of grammaticalization.

Px, but Px *βlak* K2. Rendering this as PL K1 Px versus Px PL K2 is thus actually a misleading oversimplification. Rather, the strange pattern we find here is attributable to an odd sort of variation peculiar to an artificial literary language that has adopted mutually inconsistent patterns from two different spoken dialects.

7.5   Summary

In sum, then, the Mari dialects also indicate that the only movement processes involving case-markers are ones that occur after Spell-out. The reordering of K1 and Px markers must be due to Lowering of K1 and not Raising of Px, because the previous reordering of PL and Px lower in the structure can block it. Just as in the analogous situation in Mordvin, this is the sort of behavior which, according to 245 is diagnostic of post-Spell-out movement. For Mari it is less clear than for Mordvin whether the relevant movement is actually Lowering or Local Dislocation, because there do no seem to be any relevant facts relating to allomorphy or phonological effects. If one assumes that adjectives are adjuncts which start out somewhere within DP, i.e. below the base-position of K, which seems reasonable, then one could argue that, since the presence of such elements does not seem to block the movement, it must be Lowering and not LD. Still, for the larger purposes of this chapter and this dissertation, the relevant point is that the movement in question cannot be Raising, and thus we continue to have no need to posit a narrow-syntactic reality for case-markers. Of course, this does not constitute direct evidence in favor of the hypothesis that case-markers are not active in the derivation until after Spell-out. There is after all nothing preventing a head that is present in the narrow syntax from waiting to move until after Spell-out. Still, the discussion in this chapter has clarified many of the issues involved in determining at what stage of the derivation head-movement operations take place and

has demonstrated that, at least for two languages that offer evidence on the matter, case-markers do not undergo syntactic Raising.

Chapter 8

Syntactic Case, the EPP and the subjects of embedded clauses

Throughout this dissertation, I have been investigating the idea that morphological case is only active after Spell-out in the morphological portion of the derivation and thus should be divorced from the syntactic licensing of DPs.[1] In previous chapters I was mainly concerned with morphological case, either its purported effects on syntactic processes (Chapters 3, 4 and 5), or its own post-syntactic behavior (Chapters 6 and 7). In this final chapter, however, I will change gears and consider what it means for the standard notion of syntactic Case, in the sense of DP-licensing, to be cut loose from m-case in the way that I have been arguing. Namely, I will re-examine the role of syntactic Case in the grammar, in particular with respect to its overlap with the EPP, exploring how a move to reduce the redundancy inherent in a grammar with both principles can be informed by the realization that the assumption of syntactic Case cannot be supported by the existence of morphological case. I will then examine the feasibility of a grammar without syntactic Case, tackling the distribution of subjects

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[1] Previous incarnations of the work in the chapter were presented at the 26th and 28th annual Penn Linguistics Colloquia. Thanks are due to the audiences there for their comments and discussion.

in embedded clauses, where Case has hitherto done its most important work.

8.1 Introduction

In standard GB and Minimalist theories of syntax, there are two main principles which work to regulate the surface distribution of DPs: syntactic Case and the EPP. It is well known that, under common formulations, the two are largely redundant. This is especially clear in instances of raising to subject:

(252)　a.　*Seems to be John sick.

　　　　b.　John seems to be sick.

Sentence 252a can be ruled out because *John* is not in a position where Case can be assigned or checked, but it can just as easily be ruled out because there is no subject to satisfy the EPP in the matrix clause. Similarly, both deficiencies are satisfied by raising *John* to the matrix subject position, as in 252b. A grammar that assumes both of these two principles is thus at least potentially more complicated than necessary, and we are lead to wonder whether it would be possible to simplify it by reducing this redundancy. In this chapter I will consider this problem in detail, arguing that we can do without syntactic Case.

8.2 Case vs. the EPP

In order to reduce the redundancy between Case and the EPP we need to consider the independent motivation for each principle, the issues surrounding their implementation, and what work each does for us in the theory. Ultimately, both are intended as ways to capture the fact that Chomsky calls displacement, i.e. that DPs (frequently) surface in positions removed from where they receive their semantic interpretation.

Syntactic Case embodies the idea that this happens, at least in part, in order to meet the needs of the DP. Specifically, it is assumed that DPs are initially defective in some sense and need to get into a licensing relationship with some functional element in the clause. How this occurs and what the specific restrictions are differs from theory to theory, but what is constant is the assumption that there are structural configurations where a DP cannot be licensed properly, which are thereby ruled out. The EPP embodies essentially the opposite idea, that displacement is at least partially driven by the needs of the functional elements of the clause, of the heads that provide the derived positions for subjects, objects and so forth. This rules out configurations where the needs of some functional head are not met by a DP in a sufficiently local relationship. Of course, the two ideas are not mutually exclusive, and indeed Chomsky and many others have consistently adopted some combination of both. Furthermore, there is no a priori reason to prefer either idea over the other. Being roughly mirror images of each other, there is no obvious difference between the two in terms of simplicity or elegance.

It has been argued recently by a number of researchers (Martin, 1999, Epstein and Seely, 1999, Grohmann, Drury, and Castillo, 2000, Boeckx, 2000, Bošković, 2002) that there **are** reasons to prefer Case over the EPP on a conceptual level, and thus that we should attempt to eliminate the latter. However, their arguments do not go through, and it will be instructive to see why. To begin with, it is posited that syntactic Case is indispensable and well-motivated in ways that the EPP is not. Yet, beside the claim that the EPP is stipulative, poorly understood and lacking in conceptual motivation, there is conspicuously little discussion of how syntactic Case might be any different. Martin (1999) suggests that Case features might be a way for the computational system to distinguish between otherwise identical DPs at LF after uninterpretable features have been deleted. As he notes himself, this idea depends on a number of

non-trivial assumptions, and it is difficult to see why such a mechanism should be necessary, since the relevant DPs, e.g. the pronouns in *He likes him*, should be readily distinguishable on the basis of positional information which must be preserved at LF in order for things like binding and scopal relationships to be computed.

An idea that has been entertained by Chomsky on a number of occasions is that Case is an optimal solution to the need for the displacement property. This essentially amounts to reinterpreting the empirical justification discussed above as a conceptual necessity. That is, rather than saying that displacement is an empirical fact and Case is a way to capture it in the theory, the claim is that displacement is somehow necessary (presumably for the conceptual-intentional interface) and Case is a way to implement it in the human language faculty. Note, however, that even if this reasoning is plausible, it can be used just as easily as a motivation for the EPP as for syntactic Case. Either one will suffice to implement displacement.

If we attempt to pursue this idea further and ask in what sense the C-I interface should require the displacement property, we are led to considerations of things like topicality and the theme-rheme distinction. We could imagine, for example, that the latter distinction is an integral part of interpretation, and displacement is needed in order to get DPs into positions associated with thematic and rhematic interpretation. Martin (1999) considers this possibility as well, but as he points out, this again would provide at least as good of a motivation for the EPP as Case, since the theme-rheme distinction is usually considered in terms of each sentence (or clause) needing a theme and a rheme, rather than each DP requiring interpretation as one or the other. Indeed, this idea is closely related to the attempts by e.g. Rothstein (1983) and Heycock (1991) to motivate the EPP as a general requirement that syntactic predicates have subjects. The standard objection against stories of this type, repeated by many of the authors cited above, is that the EPP can be satisfied by expletives, which

cannot unobjectionably be regarded as themes or subjects of predication. However, since the EPP is explicitly a syntactic and not a semantic principle, perhaps this is precisely the sort of behavior we should expect. It is reasonable to think with Martin (1999) that "a dumb computational system cannot tell apart those instances where something attracted to [Spec, TP] is a theme from those where it is not" [p. 19].[2] Again, considerations of this type do not lead to any clear conceptual advantage for Case over the EPP.

Of course, it is also possible to take seriously the idea that DPs quite literally need licensing because they are defective on their own. Such a claim is often situated within the larger hypothesis that all syntactic elements require licensing by something else, either via selection, feature checking or some other mechanism. However, there is no obvious reason why this should be so. It is clear that DPs (like all other elements) will ultimately need to be incorporated into the semantic interpretation of their clausal environment, but we already have a system of θ-roles to handle this. Indeed, the role of syntactic Case is generally to explain why DPs show up **outside** their thematic positions. The proposal of a general requirement for syntactic licensing is nothing more than an attempt to justify the assumption of syntactic Case after the fact. Of course, at a certain level, all conceptual arguments are susceptible to this criticism. In the end, what really matters is not what sort of conceptual motivation we can devise for Case or the EPP, but rather what sort of theory can best handle the empirical data on displacement.

Before we begin the discussion of these data, however, we must put to rest the potential empirical argument for adopting syntactic Case over the EPP. If we are looking for a set of facts beyond displacement and the overt distribution of DPs that could

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[2]Along similar lines, Tony Kroch (p.c.) suggests that the Rothstein/Heycock explanation of the EPP could be understood as the encoding within the syntactic computational system of an originally semantic requirement. Under such circumstances, such mismatches are predicted.

indicate the reality of one of the two, the obvious candidate is morphological case. That m-case exists in many languages of the world is simply a fact. If it is true that m-case is just a language-specific morphological manifestation of universal syntactic Case, then syntactic Case is indeed empirically indispensable. Indeed, this train of reasoning seems to be part of the motivation for the attempts to preserve syntactic Case at the expense of the EPP. However, I have argued throughout this dissertation that this view of Case/case is incorrect, that m-case and the conditions on the structural positioning of DPs are independent of one another (again, see especially 2 and Yip et al., 1987, Marantz, 1991, Harley, 1995a, Schütze, 1997, Sigurðsson, 2001, for detailed on argumentation this issue). Of course, this does not mean that there is no such thing as DP licensing/syntactic Case, but it does mean that we cannot make displacement operations dependent on some morphological requirement of the DPs themselves. That is, the existence of m-case cannot be used to justify the assumption of syntactic Case. Our investigation of syntactic Case and the EPP must thus come down to how each can handle the facts of DP positioning and displacement.

8.2.1 A subject/object asymmetry

To begin with, there is abundant evidence that it is only the highest underlying argument in a clause that is required to move in languages like English. Consider e.g. the well-known fact that extraction is possible out of objects but not out of subjects (from Lasnik, 2001):

(253)   a.   ?* Who$_i$ was a picture of t$_i$ selected?

    b.   Who$_i$ did you select a picture of t$_i$?

This is standardly taken to indicate that the entire subject DP has raised from its base position, while the object DP has not, given the generalization that moved elements

are extraction islands.

The question is why this asymmetry should obtain. If the driving force for movement out of the VP is a DP's need for licensing, then there is no obvious reason why objects and subjects should behave differently, since both should need to be licensed equally. In order to maintain the idea that movement is for the needs of the DP, one would have to stipulate that the first-merge position of objects is a Case-licensing position, while that of subjects is not. This is not terribly attractive to begin with, but even as such it runs afoul of data from ECM constructions. Specifically, the embedded subject *John* must appear before *to* in 254b and not in either of the lower positions indicated in 254a, one of which is presumably where it is first-merged:

(254) a.   *I expect to (John) be (John) late.

      b.   I expect John$_i$ to t$_i$ be t$_i$ late.

In order to explain this in terms of movement for Case, one must claim that the embedded subject raises overtly to its Case-licensing position in the higher clause. Of course, just this analysis has been proposed at various times (see e.g. Postal, 1974, Johnson, 1991, Lasnik, 2001). Consider e.g. the following from Lasnik (2001):

(255) a.   The DA proved two men to have been at the scene of the crime during each other's trials.

      b. ?*The DA proved that two men were at the scene of the crime during each other's trials.

(256) a.   The DA proved no suspect$_i$ to have been at the scene during his$_i$ trial.

      b. ?*The DA proved that no suspect was at the scene during his trial.

(257) a.   The DA proved no one to have been at the scene during any of the trials.

      b. ?*The DA proved that no one had been at the scene during any of the

trials.

For each of the examples, the interpretation that is relevant is where the adverbial PP *during...* is in the matrix clause, i.e. referring to the time when the DA proved something. What the a. example of each pair is meant to is show is that, according to the standard tests of reciprocal, variable and NPI binding, the subject of an embedded ECM clause can bind an element in the matrix clause. Assuming that binding requires c-command, this indicates then that the subject must have itself raised into the matrix clause. The b. example of each pair is the control, showing that the subject of an embedded finite clause cannot bind into the adverb in the matrix clause.

If the argumentation from these data is correct, we could then potentially explain the facts in 254 by saying that the embedded subject in an ECM construction must raise to a position in the higher clause in order to have its Case checked. However, this would force a further lack of parallelism in the analysis. The reason why the raising-to-object analysis of ECM became attractive again in the early 90s is because of the postulation of a derived position for object licensing parallel to that for subjects. If such a position exists in normal transitive clauses, then we can use it as a landing site for ECM subjects, avoiding the issues of movement to a θ-position that arose on earlier analyses. However, if we claim that objects remain in situ – at least optionally – in order to explain the facts in 253, then ECM subjects should also – at least optionally – remain in situ, since the same functional head is responsible for their licensing. Indeed, Lasnik (2001) presents evidence that this is the case. Following Johnson (1991), he suggests that the variation in ordering between objects and verbal particles reflects variation in the application of overt OS. In support, he notes that the different word orders correspond to differences in scopal interpretation. For example, when the embedded subject occurs before a matrix verbal particle, and thus has apparently raised into the matrix clause, it cannot take low scope with

respect to negation in the embedded clause. Thus 258a only has the counter-factual interpretation that there are no hockey players from Canada. On the other hand, when the embedded subject occurs after the particle, as in 258b, it **can** take scope below embedded negation, here yielding the reasonable interpretation that it is not the case that every hockey player is from Canada.[3]

(258)   a. The announcer made every hockey player out not to be from Canada.

        b. The announcer made out every hockey player not to be from Canada.

(259)   a. Every hockey player seems not to be from Canada.

        b. It seems that every hockey player isn't from Canada.

This behavior parallels that in 259 with uncontroversial raising and non-raising of the subject.

So even if it is possible for an ECM subject to raise into the higher clause in English, it is not obligatory. However, even when there is evidence that this shift has not occurred, as in 258bthe embedded subject cannot remain in its thematic position, i.e. it **must** raise past the *to*. That is, the order in 254a is out no matter what. We are thus at a loss to explain the movement responsible for this solely on the basis of the licensing requirements of the DP involved. The fact is that underlying subjects are consistently forced to raise to the derived subject position, whether it can be taken to be a licensing position or not. Underlying objects, on the other hand, are not forced to raise to a derived object position, again, as shown by the extraction facts. The only instance when an object is forced to raise is when the clause has no underlying subject, as in a passive or unaccusative. It must then move to the derived subject position, again independent of whether that position would be considered a Case-licensing position:

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[3]I have changed the content of Lasnik's examples from the properties of prime numbers to the national origins of hockey players in order to make the context interpretable to a wider audience.

(260)   a. [The Packers]$_i$ were defeated t$_i$.

      b. [The Packers]$_i$ fell t$_i$ in defeat.

      c. Andy Reid knew [the Packers]$_i$ to have been defeated t$_i$.

The Case-licensing story for 260a and 260b is that passive and unaccusative verbs do not allow object Case to be checked, thus the objects must raise to the empty derived subject position for licensing. As it is, this is a stipulation, so normally Burzio's Generalization is called on, according to which object Case is explicitly tied to the assignment of an external θ-role. Since passives and unaccusatives do not have underlying subjects, they do not assign an external θ-role, and the lack of Case-licensing for the objects is predicted. However, as I have argued in Chapter 2, following Marantz (1991) and Burzio (2000) among others, Burzio's Generalization is itself just a descriptive generalization, not an explanation. A real explanation for data like these **can** be framed, however, if we are thinking about the needs of the clause rather than those of the DPs, i.e. in terms of the EPP instead of Case. The factor that underlying subjects in passive and unaccusative clauses have in common with underlying subjects in transitives and unergatives is that they are the highest underlying DP in the clause. If movement to the derived subject position is to satisfy the EPP and is sensitive to Relativized Minimality, then it will always apply to just these DPs. The underlying object in transitive clauses will be allowed to remain in situ because the subject, being higher than it, will satisfy the EPP instead. What forces the object to raise to subject in passives and unaccusatives is not that the verb has inexplicably lost its ability to license it, but rather that the absence of an underlying subject leaves it as the highest DP available to satisfy the EPP.

Note that this account can be extended straightforwardly to the ECM clauses. There is no reason a priori to expect that nonfinite T would lack an EPP feature, so obligatory raising past *to* is simply parallel to obligatory raising to the subject

position of any other clause. What to say about the apparently optional further raising of the embedded subject into the matrix clause (and the similar optional raising of normal transitive objects to an analogous position in their own clause) is somewhat less obvious. One possibility is to attribute it to an optional EPP feature on the functional head to which such DPs move. This may not seem terribly attractive, but in the end the asymmetry between subjects and objects and the optionality involved are simply facts, and they have to be encoded somewhere. Since the derived positions of subjects and objects involve different heads, T and ν vel sim., it is not implausible that these heads would differ in their requirements for a filled specifier. It is far less plausible that subjects and objects would differ in their licensing needs, since in the end both are just DPs. Indeed, this is precisely the view adopted by Lasnik (2001).[4] Another possibility, suggested by Tony Kroch (p.c.), is to say that such movement is more like scrambling, in that it is not driven by general formal requirements on the categories involved, but rather by factors related to discourse, definiteness and heaviness. This would be preferable if we wanted to interpret the EPP as a subject requirement rather than a general movement-driving device.

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[4]Consider in this light the development of standard Minimalist accounts of subject and object raising and licensing. The desire for symmetry between subjects and objects led to the original postulation of Agr_O beside Agr_S. If subjects have to raise to get Case, the reasoning went, then so should objects. The fact that objects do **not** appear to raise in languages like English forced the assumption that movement to Agr_O for Case-checking is covert. But again, concerns of symmetry would imply that this should be so for raising to Agr_S as well, since both are instantiations of the same category. This led to the conclusion that Case features in English are universally weak, but the EPP feature on T is strong. Thus Case can be checked by covert movement, the default situation which generally obtains for objects, but subjects are forced to raise overtly to satisfy the EPP. More recently, as covert movement has been replaced first by feature movement and then Agree in situ, this has led to the stage in Chomsky (2000, 2001), where all movement is driven by the EPP, but depends on the checking of Case features associated with Agree. In this system as well, then, different functional heads can differ in whether or not they have an EPP feature, and this is what drives DP displacement. The conditions on licensing, on the other hand must be consistent for all DPs.

8.2.2 Expletive associates

The EPP account also extends nicely to handle clauses with expletive subjects, side-stepping a number of complications that arise for theories based on DP licensing. The basic idea is that a DP must raise to the derived subject position when it is the highest element eligible to satisfy the EPP requirement, as e.g. *someone* in 261a. When a *there*-type expletive is present, as in 261b, it can satisfy the EPP, and thus it is unproblematic that the associate DP is able to remain in situ:

(261)   a. Someone$_i$ seems to be t$_i$ in the room.

          b. There seems to be someone in the room.

If we wanted to adopt the DP-licensing approach, however, claiming that the raising in 261a is driven (at least in part) by the needs of *someone*, then we would need an explanation for how those needs are fulfilled without movement in 261b. Of course, a number of explanations have been offered, involving either mediated Case-assignment/licensing through the expletive, direct licensing by covert raising of the DP to an expletive-adjoined position in Spec-TP, or raising of the formal features of the subject to T. However, it is well known (see e.g. Chomsky, 1991, Lasnik, 1995) that evidence from scope facts argues against any sort of covert movement of the associate:

(262)   a. There are not many students here.

          b. Many students aren't here.

If *many students* raised to the position occupied by *there* at LF, we would expect the quantifier *many* to scope over negation, i.e. for 262a to have the same scopal reading as 262b, where the raising is overt. However, it does not.

In Chomsky's current system, this has been addressed by saying that the Case feature on the expletive can be checked off in situ by Agree with T, but there does not

seem to be any convincing evidence arguing in favor of such abstract Agreement. It has no direct effect on the overt syntax nor any interpretive consequences whatsoever. The only apparent reflexes of this purportedly syntactic relationship are morphological ones, with the DP receiving nominative case and triggering verb agreement. Of course, the whole point of this dissertation is that these morphological matters are best handled in the post-Spell-Out component, after the syntax, because they do not affect the syntactic derivation in any way. It is clear that an agreement relationship is established between the verb and the associate of an expletive subject, but if this relationship has no syntactic reflexes, then we have no reason to put it in the syntax. In this particular example, assuming a syntactic side to the relationship does not help us to explain any of the syntactic facts. Indeed, the series of proposals for the relationship between the associate and the subject position described above receive a very interesting interpretation when considered in this light. The assumption of a general requirement for DP licensing forced the assumption of a syntactic relationship, but the formalization of this relationship has been gradually altered so that it would not actually have any syntactic consequences. The ultimate point here is that the assumption of a general licensing requirement on DPs does not help us to account for the patterns with expletives, and in fact it forces us to make questionable assumptions about the nature of syntactic relations. An account based solely on the needs of functional heads, on the other hand, accounts for the data straightforwardly.

8.2.3 Objects of Ps

There are additional classes of DPs which systematically fail to undergo A-movement in ways that have forced Case theory to jump through hoops. For example, objects of prepositions and adverbial DPs like those discussed in Chapter 3 quite generally do not seem to move out of their base positions. This is somewhat unexpected if

Case-licensing is a universal requirement on DPs. Again, why should subjects have to move to get their licensing when objects of prepositions do not? The standard assumption is that these types of DPs have their Case-licensing properties taken care of in situ by the P head, but it is not clear why P should be special in this way. This is, why is Case-licensing by V subject to something like BG while that by P is not? Fortunately, a better explanation is available. There is simply a ban on movement out of PPs in most languages – not just A-movement, but A'-movement as well, as shown by the German examples in 263 and 264:

(263) a. Sie hat mit ihm gesprochen.
           she has with him spoken
           'She has spoken with him.'

       b. * Er_i/Ihm_i ist mit t_i gesprochen worden.
           he_i is with t_i spoken   become
           intended: 'He was spoken with.'

(264) a. Mit wem hast du gesprochen?
           with whom have you spoken
           'With whom have you spoken?'

       b. * Wem_i hast du mit t_i gesprochen?
           $whom_i$ have you with t_i spoken
           intended 'Who have you spoken with.'

One could explain the ungrammaticality of 263b as resulting from the fact that the prepositional object gets Case in its base position and thus has no motivation to A-raise to subject position. But the same cannot be said for the ungrammaticality of 264b with P-stranding next to the grammaticality of 264a with pied-piping of the P. The wh-movement involved has nothing to do with Case and is normally totally acceptable out of Case-checked positions. PPs just seem to be barriers to movement (see Abels, 2003, for a recent account of these facts in terms of Phase Impenetrability). Given this, a specific Case-based account of the ban on A-movement out of them does

nothing for us. If we assume that movement is driven solely by the needs of the clause, then we need say nothing more. The fact that DPs cannot move out of PPs raises no problems, because they have no Case-licensing needs that this would interfere with.

Further evidence that it is the barrier-hood of PPs that is at work here rather than issues of DP licensing comes from languages like English where PPs are **not** barriers. Consider the sentences in 265. If the DP *this chair* has its Case-licensing needs taken care of in situ by the P *on* in 265a, then why does it raise to subject position in 265b?

(265)   a.   John has never sat [$_{PP}$ on this chair].

        b.   This chair has never been sat on.

According to all standard versions of Case theory, DPs are blocked from A-raising out of Case positions. Indeed, this is the basis of the Case-theoretic account of the ungrammaticality of 263b above. Now, while it is plausible to think that passivization could affect the Case-checking properties of the verb (since it affects the verb's argument-structural and morphological properties), it is hard to see why it should take away the ability of the P to license Case in 265b. In order to deal with this, it has been proposed that in such sentences the P incorporates abstractly into the verb, eliminating its ability to check Case and freeing the object to raise to subject position. However, this abstract incorporation lacks independent motivation and amounts to little more than a restatement of the fact A-movement is not blocked as expected. Furthermore, the facts from A'-movement again militate against such an analysis. Consider that A-movement out of a PP in English – the so-called pseudo-passive – is restricted such that the PP must be interpretable in some way as an argument of the verb rather than an adjunct. Thus 266b is not very good:

(266)   a.   John slept next to Mary.

b. ?* Mary was slept next to.

c.   Who did John sleep next to?

The P incorporation story can say that adjunct Ps are not able to incorporate into the V, presumably due to some locality condition that is sensitive to the difference in attachment of complements and adjuncts. However, P-stranding via A'-movement is just fine out of adjuncts, as shown by 266c. Now, if abstract P incorporation is impossible in 266b, then it should be impossible in 266c as well. Of course we could propose some other mechanism that voids the barrier-hood of the PP in A'-movement contexts, but this would miss the fact that A- and A'-movement pattern together from language to language in whether they are allowed from a PP. If we drop the assumption of Case-licensing, then this issue does not arise. For language-specific reasons, PPs is not a barrier in English, thus both A- and A'-movement are fine out of them unless independently blocked. The reason why raising to subject from an adjunct PP is blocked is simply because these are not arguments of the extended verbal projection. Movement from an adjunct to subject position would constitute something like improper movement from an A' to an A-position. Wh-movement from an adjunct to Spec-CP, on the other hand, is fine, being essentially movement from one A'-position to another. I will have more to say about objects of prepositions and P-stranding in Section 8.6.1

8.2.4   V2 topics and the EPP

Another potential advantage of an approach to DP movement that depends on the needs of the targeted functional heads rather than the moving DPs is that it can be extended to handle phenomena like V2. In V2 languages of the German type there is a requirement that some XP move to an initial position in matrix clauses, which is

similar to the English-style EPP, but is not limited to DPs. Rather, any constituent can move to the so-called V2 topic position. What is important for our purposes is that once one element has raised to this position, nothing else in the clause is forced to raise. It is clear and uncontroversial that this movement is driven by the requirements of a functional head in the upper regions of the clause (frequently assumed to be CP) and not by the needs of the moving XPs, precisely because one and only one XP must move, and any XP can do it.

What is interesting is that there is no convincing evidence that any other DP displacement is required in German clauses beyond this V2-driven movement. In the default instance, it is the subject that raises to Spec-CP, but if some other XP does so, the subject can remain in situ. It has frequently been assumed that German has raising of the subject to Spec-TP as English does, largely in order to maintain parallels with languages like English. However, Hubert Haider has repeatedly provided explicit evidence against this assumption (1993, 1997b, 2000a, 2000b). Recall, as discussed above, that the possibility of extraction from a DP can be used as a diagnostic of whether it has undergone prior movement. Specifically, there is an asymmetry in English between subjects, which are barriers for extraction, and objects, which are not. In this connection, Haider (1997b) notes that there is no such asymmetry in German. Instead, extraction is licit out of both subjects and objects. The English examples in 267 show that extraction from a clause is blocked when it has raised to subject position as in 267b, but is licit if the clause remains in situ as in 267c. However, if we construct a German sentence analogous to 267a, as in 268a, we find that extraction **is** possible out of the embedded clause even when, as in 268b, it is the subject of the matrix clause.

(267)   a.   To discuss that with him would be worthwhile.

          b.   *What$_i$ would [to discuss t$_i$ with him] be worthwhile?

    c.   What$_i$ would it be worthwhile [to discuss t$_i$ with him]?

(268) a.   Mit ihm das zu besprechen würde sich   lohnen.
                with him that to discuss   would REFL reward
                'To discuss that with him would be worthwhile.'

          b.   Was$_i$ würde [mit ihm t$_i$ zu besprechen] sich   denn noch lohnen?
                what$_i$ would [with him t$_i$ to discuss]   REFL then still reward
                'What would it still be worthwhile to discuss with him.'

Another piece of evidence comes from VP-topicalization possibilities. In particular, nominative subjects can move to Spec-CP as part of the VP:[5]

(269) a. [Ein wunder ereignet]$_i$ hat sich   hier noch nie   t$_i$.
            [a   miracle occurred]$_i$ has REFL here still never t$_i$
            roughly 'A miracle has never occurred here.'

          b. [Wunder ereignet]$_i$ haben sich   hier noch nie   t$_i$.
            [miracles occurred]$_i$ have   REFL here still never t$_i$
            roughly 'Miracles have never occurred here.'

Examples of this sort further demonstrate that covert raising to a derived subject position cannot be what is going on either. XPs that have raised to Spec-CP are themselves opaque for extraction, so extracting the subject out of the moved VP to get it into Spec-TP would be ruled out. This – and any more abstract attempt to get the subject into a local relationship with a licensing head after the overt raising to Spec-CP of the phrase that contains it – will also run into difficulties with cyclicity and the requirement that syntactic movement be upwards.[6]

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[5]It is true that this sort of behavior is generally much easier to get with unaccusatives than with unergatives or real transitives, but this does not weaken my argument. Unaccusative subjects are subjects too, and if subject licensing is supposed to take place VP-externally and force raising of the relevant DP to a derived position, then it should apply to all subjects, no matter where they start out. The fact that external subjects resist topicalization with the VP could simply be because this really is VP topicalization, not νP topicalization.

[6]One could still maintain the current Chomskyan view with licensing via Agree in situ before topicalization occurs, but again, this gets us nothing beyond allowing us to maintain the general DP licensing requirement.

Thus, in the words of Haider (1997b), "German does not provide compelling evidence for, but displays considerable evidence against, the contention that case-checking obligatorily requires a functional head in the spec-position of which case-features are checked, overtly or covertly" [p. 90]. My interpretation of this state of affairs is that German lacks the English (EPP) requirement for a filled Spec-TP, having instead a (V2-topic) requirement for a filled Spec-CP. Recall from 6 that German expletives are clearly inserted to satisfy such a V2 requirement, not the EPP:

(270)   a. Es wird   heute getanzt!
            it becomes today danced
            'There will be dancing today!'

        b. Wird   (*es) heute getantzt?
            becomes (*it) today (*it)   danced
            'Will there be dancing today?'

        c. Meinst du, dass (*es) getantzt wird?
            think   you that (*it) danced   becomes
            'Do you think there will be dancing today?

        d. Heute wird   (*es) getantzt!
            today becomes (*it) danced
            'Today there will be dancing!'

Expletive *es* only appears in V2 clauses like 270a, thus not in questions like 270b or embedded clauses like 270c. It also fails to appear if something else raises to Spec-CP to satisfy the V2 requirement, like *heute* 'today' in 270d. This is distinctly different from the EPP-driven appearance of English *there*.

Still, the EPP and the V2 requirement are reducible to the same abstract situation of a functional head that requires a filled specifier. What categories can satisfy the requirement (English DP, German XP) depends on the heads where the requirement is active (English T, German C). If we take displacement to be driven by the needs of functional heads, we thus arrive at a unified account of (the topicalization part of)

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V2 and the EPP, essentially as proposed by Heycock (1991). The DP-licensing view of displacement, on the other hand, provides no insight into V2 topicalization.

8.2.5 Successive cyclic movement

I will end this section with two of the more standard arguments in favor of the EPP. The first comes from Successive Cyclic Movement (SCM), i.e. raising that proceeds step-by-step through intermediate specifiers, as suggested by examples 271 and 272 from Bošković (2002):

(271)   The students$_i$ seem all t$_i$ to know French.

(272)   a.   Mary$_i$ seems to John [$_{IP}$ t$_i$ to appear to herself to be in the room].

   b.   * Mary$_i$ seems to John [$_{IP}$ t$_i$ to appear to himself to be in the room].

The position of *all* in 271 has been explained by assuming that *the students* has moved through that position and stranded the quantifier there Sportiche (1988).[7] Perhaps even more interesting is the availability of the anaphor *herself* in the embedded clause in 272a, and the impossibility of *himself* in 272b. The simplest way to account for these is to assume that *Mary* has moved through Spec-TP in the intermediate clause, leaving a trace that binds the anaphor in the first example and blocks binding by the higher antecedent *John* in the second. Movement through intermediate positions like this would fall out if we say that there is an EPP requirement in every intermediate clause, forcing the embedded subject to raise successively through each on its way to the matrix subject position. We have already seen evidence for an EPP feature

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[7]The analysis of floated quantifiers in Sportiche (1988) has frequently come under fire, but at least some of the alternatives that have been proposed would yield the same result here. For example, Baltin (1995) argues that such elements are generated in their surface positions, not as modifiers of the DPs in question, but in order to account for restrictions on their occurrence he proposes that they must be specifiers of syntactic predicates. Crucially, syntactic predicates require subjects, and what makes the phrase headed by *to* in 271 predicative is the fact that the DP *Mary* has raised through its subject position.

in embedded nonfinite clauses in our discussion of ECM constructions, where the embedded subject must always surface before *to*. Examples like these are not decisive evidence in favor of the EPP-based view. E.g. Boeckx (2000) and Bošković (2002) have argued that SCM can be derived without the EPP from general constraints on movement, while Grohmann et al. (2000) and Epstein and Seely (1999) have argued that the data above can be accounted for without SCM at all, but these accounts are not obviously correct.

8.2.6 Accounting for the insertion of expletives

There is one last piece of data, however, which cannot be explained without assuming a role for the needs of the clausal functional heads in determining DP positioning. This is the absolute requirement in languages like English for surface subjects in finite clauses – the core of the original EPP. The raising of *John* in sentences like 252b, repeated here as 273b, could be driven by that DP's need for Case, but something else is needed to trigger the insertion of expletives in 274b and 275b:

(273) a. * Seems John to be sick.

      b.   John seems to be sick.

(274) a. * Is raining.

      b.   It is raining.

(275) a. * Seems that no one is home.

      b.   It seems that no one is home.

The verb in 274 takes no thematic argument, so there is no DP that could require Case, and in 275 the only argument in the sentence, *no one*, has its Case requirements taken care of in the subordinate clause, yet both sentences are bad unless expletive *it* is inserted to fill the highest subject position.

Here there is no way around admitting that the needs of some functional projection are involved, and this point is conceded uncontroversially even by those who wish to eliminate the EPP. Generally, the strategy to deal with these facts in the absence of an EPP is to adopt some version of the so-called Inverse Case Filter (henceforth ICF). This is the idea that those heads which **can** check Case **must** check Case, ruling out sentences like 275a because finite T has failed to check the Case of any DP. It is true that under earlier versions of Minimalism, the ICF was implied by the way that syntactic Case was implemented in the theory. This was technically a mutual dependency, with both the DP and the functional head bearing Case features that would check and delete under identity in the Spec-head configuration. Since both sets of Case features were uninterpretable, they needed to be checked by LF, both on DPs and on functional heads. A functional head like T with an unchecked Case feature would thus cause the derivation to crash just like a DP with the same status. However, this view of Case and of feature-checking in general has been abandoned in Chomsky's more recent versions of Minimalism (Chomsky, 2000, 2001). Checking in general no longer requires identical features on probe and goal, and in particular functional heads like T are no longer assumed to have an uninterpretable Case feature. Rather, it is only the DP which bears such a feature, while the functional head bears an uninterpretable EPP feature. Checking of the DP's Case feature is done via Agree and amounts to having its value specified on the basis of the category of the functional head. This derivational step is strictly-speaking independent of the elimination of the EPP feature, as seen e.g. in expletive constructions, where finite T specifies the Case feature of the associate under Agree, but has its EPP feature checked off by the expletive. Within this system, there is no way to implement the ICF. Of course, one could continue to assume the earlier version of Case theory with the ICF, and drop the EPP, but it is entirely unclear to me how this would be an improvement over

assuming normal Case along with the EPP. In spite of their names, Case and inverse Case do **not** imply or depend on each other, except under very specific assumptions about the workings of feature-checking. That is, it is not the case that the ICF comes for free with Case, so assuming it instead of the EPP is not the simplification it is sometimes assumed to be. Furthermore, such a move undermines any conceptual argument for Case over the EPP, because there is no obvious way to distinguish the ICF from the EPP in terms of external motivation. Both boil down to saying that certain functional heads require a local DP.[8]

8.2.7 Technical issues and recent developments in the theory

At this point it is appropriate to briefly consider some additional technical issues relating to Case and the EPP, which come up in relation to the theoretical developments discussed in the previous paragraph. If we consider the two principles in terms of a cyclic derivational theory, there may actually be some reason to prefer the EPP on grounds of complexity. If displacement is driven by the needs of the DP, then the relevant deficiency will be registered by the computational system at the point when the DP is inserted in the structure but cannot be resolved until a later stage when the relevant functional head (T for subjects, ν for objects) is merged into the structure. This means that the computational system must treat unchecked features as reminders for some future action, which must be kept in memory, and there must be some filter-like mechanism which rules out all derivations that terminate with unchecked features. On the other hand, if the needs of the functional head are the driving force, then the deficiency can be addressed immediately at the point when

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[8]Grohmann et al. (2000) use categorial and ϕ-features to drive movement instead of the ICF, although the effect is essentially the same. If anything, the theory they develop might be a way to improve the formal basis underlying the EPP, but it remains stipulative, and it is not clear that what they propose is substantively different from the EPP.

that deficiency enters the derivation. That is, unchecked features can be treated as instructions for immediate action. They do not need to be kept in memory past their initial activity, and there is no need for a mechanism to worry about features that never end up getting checked off. The relevant derivations will crash immediately if the instruction embodied by the unchecked feature fails. Of course, the first type of system is by no means implausible, and arguments at this level should not be taken all too seriously, but the second type is simpler.

Concerns of this kind played a role in the debates over Greed and Enlightened Self-Interest in earlier stages of Minimalism and also in Chomsky's reworking of the interaction between Case and the EPP discussed above. It is worth noting that the role of syntactic Case in handling displacement has been massively reduced in Chomsky (2000, 2001), with the EPP actually triggering all movement. The checking of Case features can also occur under Agree in situ when movement is not made necessary by an EPP feature. This revision was at least in part a response to Schütze (1997), in an attempt to address the mismatches between syntactic positioning and morphological case-assignment that were discussed there and throughout this dissertation. As such, it comes much closer than earlier theories to what I will be arguing for here. As far as the work that Case actually does in Chomsky's system, we are mainly left with the morphological matters of actual case-marking and agreement. The only clearly syntactic issue is that a DP is only 'active' for A-movement operations as long as its Case feature is unchecked, and this is essentially just needed to prevent superraising. Such utility should make us very suspicious indeed of Case as a syntactic entity. The point of view taken in this chapter is that the morphological work should in fact be left to the morphology (the main thesis of this dissertation) and the syntactic residue should be handled by other principles with better independent motivation (see Section 8.6.1 for my discussion of superraising).

To conclude this section, then, the basic facts about which DPs move where support the idea that such movement is driven by the needs of clauses and their functional categories, not by the needs of the DPs themselves. The researchers who wish to eliminate the EPP do not consider the problem from this point of view, and do **not** argue that the requirements of the functional heads play no role. Rather, given data like that in 275, they are forced to postulate uninterpretable features on the functional heads in the form of the ICF, in addition to the normal uninterpretable Case features on DPs. What I would like to argue is that, if there is no conceptual or morphological evidence for a general formal licensing condition (syntactic Case) on DPs, and if the basic evidence from displacement is also unconvincing, then we must reconsider the assumption that syntactic Case is necessary at all. It is a virtue of the view being proposed here that I am attempting to derive all DP movement via one set of features on the functional heads, eliminating the Case features on DPs entirely. In contrast, those who wish to do without the EPP use the single term Case, but must assume that it consists of two independent sets of features.

8.3   The Case-less hypothesis

In Section 8.2 I presented some initial reasons to be suspicious of syntactic Case. The real justification for its place in the theory is the phenomenon of DP-specific displacement patterns, but from a general point of view, the EPP seems to do a better job of accounting for these. Nonetheless, Case has played a central role in syntactic theory for twenty-five years, and even with its reduced status in Chomsky's recent work, it remains crucial for the explanation of a number of syntactic phenomena. No matter how good our high-level arguments against it may be, we cannot eliminate syntactic Case if doing so gets us into empirical trouble. In the remainder of this

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paper, I will thus turn to the realm where Case plays its most important explanatory role and departs the furthest in its predictions from the EPP: the regulation of subject positions in subordinate clauses. I will attempt to show that current Case-based theories of this aspect of grammar are stipulative at best and inaccurate at worst and will lay out a new account, based on the EPP, locality and improved theories of expletives and selection.[9] To a large extent, my argumentation will be negative, demonstrating how Case theory fails to account insightfully for various facts. The theory I propose to replace it will in many details remain preliminary, but this is an unavoidable consequence of the scope of the inquiry.

Recall to begin with that the essence of Case theory is the hypothesis that DPs by themselves are defective and require formal licensing from some other element, above and beyond association with a θ-role. The hypothesis I am proposing here is essentially the opposite:

(276)   Nominal phrases do not require abstract licensing beyond what is needed for integration into the semantic interpretation.

This is in fact the null hypothesis. Integration into the semantic interpretation of a sentence (via a θ-role or some functionally equivalent mechanism) is a conceptual necessity, but as I have argued above, there is no conceptual necessity for any 'abstract licensing' beyond this. Again, the assumption occasionally encountered – that all syntactic elements must be licensed – must be recognized as an attempt to justify specific licensing relationships once they have been assumed. The need for overt case-marking is, I have argued, an independent and language-specific morphological matter. What is really relevant is the mismatch between the overt positions of DPs

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[9]One could claim that the EPP is just as much of a stipulation as syntactice Case, but this is incorrect. Something implicating the needs of clausal functional heads is absolutely necessary to account for the insertion of expletives, whereas there are no such clear data implicating the needs of DPs.

and the positions where we expect them to get their θ-roles. To the extent that the postulation of syntactic Case gives us real insight into this mismatch – insight which cannot be achieved by independently necessary principles of grammar – it is justified. In the absence of such unique insight, syntactic Case should be eliminated from the theory.

The two hypotheses laid out at the beginning of the last paragraph can be distinguished in terms of what they take to be the real explananda in the distribution of overt DPs. Under Case theory, DPs are by default defective, so for every instance where a DP is allowed to appear, we are obliged to explain what allows it to do so, to posit a Case-licensing element and provide independent evidence for its existence. Under the Case-less hypothesis I am proposing, DPs in and of themselves are satisfied as long as they receive a θ-role. For me it is thus those instances where a DP can**not** appear that require an explanation. I will argue that there is actually quite good empirical motivation for this view from the occurrence of overt subjects. Within Case theory the basic premise is that finite T licenses a subject in its specifier, while nonfinite T does not. Overt subjects should thus only be possible in nonfinite clauses when some alternate method of Case-assignment is available. However, I will argue in Sections 8.4 and 8.5 that, once the nature of the nonfinite complementizer *for* is properly understood, it turns out that overt subjects actually **can** appear in most types of nonfinite clauses. Crucially, the instances where subjects are **not** allowed to appear – the complements of subject-raising and true ECM predicates – form a natural class. Indeed, the common properties of these two clause-types allow a principled explanation for why subjects are excluded from them. On the other hand, there is no independent factor unifying the much larger assortment of clause-types, both finite and nonfinite, which do allow subjects. Thus it is simpler to take admission of subjects to be the default, and non-admission to be the exception which requires

explanation.

8.4   Excursus on the status of *for*

In Section 8.5 I will attempt to show that subjects are quite generally allowed in nonfinite clauses, even in the absence of any plausible external licensing. Specifically, with the exception of raising-to-subject and true ECM infinitives, **every** class of English nonfinite clause can take an overt subject. This argument depends crucially on the interpretation of data like that in 277. At first blush, 277a would seem to constitute an example of a nonfinite clause-type that does not allow an overt subject.

(277)   a.   * It is likely John to be sick.

        b.   It is likely for John to be sick.

In this section I will argue that it is actually 277b, where the embedded clause is introduced by the element *for*, that is the relevant example, and thus that this clause-type actually does allow overt subjects. The issue at hand essentially boils down to what the source of ungrammaticality in 277a is, and what distinguishes it from 277b. According to a Case-based analysis, the embedded clause in 277a cannot check the Case on its subject *John* because it is a simple infinitive, and thus the sentence is ruled out. On the other hand, 277b has a supplementary syntactic Case-licensing mechanism tied to the presence of *for*, which gives *John* a way to check its Case, and so the sentence is good. I will argue, however, that this traditional story has a number of flaws. I will propose instead that the two sentences have the same syntactic structure, differing only in whether or not the abstract element underlying *for* is overtly spelled-out. The ungrammaticality of 277a will be claimed, then, to be due to the requirements on when overt spell-out of this element is obligatory.

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8.4.1 The overt distribution of *for*

Let us consider in more detail, then, the overt distribution of this element *for*. One of the most striking facts is that it is barred when the subject is the non-overt PRO:

(278) a. John would like PRO to bring the beer.

  b. * John would like for PRO to bring the beer.

This is the basic contrast which supports the idea that the function of *for* in the clause, its raison d'être, is to license overt subjects. But of course, this is not the entire story. To begin with, *for* is actually optional in certain instances, e.g. on the complements of *want*-class verbs, as shown by examples 279a and 279b (see e.g. Postal, 1974, Lasnik and Saito, 1991, Bošković, 1997, Martin, 2001, for discussion of this class, which includes verbs like *want, (would) like* and *prefer*):

(279) a. John would like Frank to bring the beer.

  b. John would like for Frank to bring the beer.

Now, it should immediately come as a surprise that an element supposedly crucial to licensing should turn out to be optional. Still, the licensing account has been supported in this instance by arguing that the environments where *for* is optional have a special distribution. The other relevant data are as follows:

(280) a. John would like desperately *(for) Frank to bring the beer.

  b. John would like desperately (*for) PRO to bring the beer.

(281) a. *(For) John to bring the beer would be difficult.

  b. (*For) PRO to bring the beer would be difficult.

As 280a shows, *for* becomes obligatory even with *want*-class verbs if an adverb intervenes between the matrix verb and the embedded subject. It is also obligatory when the nonfinite clause appears in the subject position of the matrix clause, as

in 281a. Sentences 280b and 281b show that, even under these circumstances, *for* is still impossible with a PRO subject.

The Case-based account of these patterns depends on the idea that *want*-class verbs can (optionally) assign Case to the subjects of their complements. When they do, the motivation for *for* is eliminated, and it remains absent, as in 304. Given this analysis, the pattern in 280a can be assimilated to the fact that adverbs cannot intervene between a verb and its object:

(282)   John loves (*desperately) his beer.

I.e., there is some sort of adjacency requirement on Case-assignment/licensing in English, so when the matrix verb and the embedded subject are rendered non-adjacent by an intervening adverb, the insertion of *for* is the only option available. The need for an overt *for* in 277b can be traced to the assumption that adjectives, unlike *want*-class verbs, cannot assign Case in English. This may be sufficient to handle 281a as well. To the extent that examples like 283 are grammatical with *for*, where the infinitival clause is the subject of a passivized *want*-class verb, the obligatoriness of *for* is explained by saying that the matrix verb does not govern into its subject position, and in any case, being passive, has no Case to assign.

(283)   *(For) John to bring the beer would be preferred.

8.4.2   Problems with the Case account

For a number of reasons, this analysis of *for* can longer be maintained. Perhaps the biggest problem is that the account depends on *want*-class verbs being able to Case-license the subject of their complements in the same way that *believe*-class verbs do (again, see Postal, 1974, Lasnik and Saito, 1991, Bošković, 1997, Martin, 2001, for discussion of the delimitation of this class, which includes *believe, prove*

and *make out*). However, it is now generally agreed that these two classes behave quite differently. There is good evidence that the embedded subject gets into a close relationship to the matrix clause with *believe*-class verbs, but the same evidence shows that this does not happen with the *want*-class. As this point is not terribly controversial, I will only present two pieces of evidence here, directing readers to the cited works for more full discussion. First, and most clearly, if the matrix verb is passivized, the embedded subject can raise to matrix subject position with *believe*-class verbs, but not with *want*-class verbs:

(284)   a.   John$_i$ was believed/proven/made out t$_i$ to be sick.

   b.   * John$_i$ was wanted/preferred/liked t$_i$ to be sick.

Second, while embedded subjects with *believe*-class verbs can marginally scope over matrix elements, those with *want*-class verbs cannot (data taken from Bošković, 1997):

(285)   a.   ? Joan wants him$_i$ to be successful even more fervently than Bob's$_i$ mother does.

   b.   ?* Joan believes him$_i$ to be a genius even more fervently than Bob's$_i$ mother does.

(286)   a.   ? I believed [those men$_i$ to be unreliable] because of each other's$_i$ statements.

   b.   ??* I wanted [those men$_i$ to be fired] because of each other's$_i$ statements.

(287)   a.   ?? I believed [none of the applicants to be qualified] after reading any of the reports.

   b.   ??* I wanted [none of the applicants to be hired] after reading any of the reports.

   Given their close relationship with the matrix clause, it is plausible to think that the subjects embedded below *believe*-class verbs are licensed by those verbs. But this

relationship is not established with the subjects under *want*-class verbs, so the same explanation is far less attractive for them. Now, it may still be technically possible under various versions of the theory to claim ECM-style licensing for these subjects. E.g. in Government and Binding theory we could say that ECM is possible as long as no barrier intervenes to block government from the matrix verb into the embedded clause. The major problem for this, of course, is that PRO subjects are possible under *want*-class verbs, which in that theory were only possible in ungoverned positions, so we would need to stipulate that a barrier, e.g. a covert C, intervenes when there is PRO, but not when there is an overt subject. Under recent versions of Minimalism (Chomsky, 2000, 2001), one could posit Case-checking on the embedded subject in situ by Agree with matrix ν. But we would again have to wonder what distinguishes such configurations from those with PRO (which, under Chomsky's theory require a different kind of null Case-licensing). Furthermore, we would still need some means to distinguish this from what is going on with *believe*-class verbs in order to derive the difference in the facts above. In particular, it is hard to imagine how subjects under *want*-class verbs could be allowed to check Case on matrix ν, yet be prevented from raising to matrix subject position in the passive. In the end, a basic problem for any claim that *want*-class complement subjects are licensed from the external clause – and indeed an issue that will come up again and again in this chapter – is the lack of independent motivation. It is always possible to posit abstract licensing relationships in instances where subjects show up unexpectedly, but unless this licensing can be tied to something else, this gets us nothing more than a restatement of the distribution of subjects.

A common alternative to stipulating external licensing for subjects under *want*-class verbs is to say that there is a covert counterpart to *for* in sentences like 279a, which the same ability to license a subject as its overt counterpart (for recent versions

of this idea, see Bošković, 1997, Martin, 2001). Given the fact that an overt *for* is indeed possible, and the lack of evidence for any difference in the amount of structure, it is likely that this is on the right track. Note, however, that this undermines the attractively simple idea that *for* shows up whenever licensing is needed. In particular, we lose the nice story about adverb intervention. In fact, upon closer scrutiny the adverb placement facts raise a number of problems.

As it turns out, the pattern represented by 280a is **not** parallel to that exemplified by 282. First of all, it **is** possible to have an adverb between the matrix verb and the embedded subject as long as an *for* is there as well, as in 288a but an adverb can **never** intervene between a verb and its own direct object, even when *for* or another supposedly Case-licensing preposition like *of* is inserted (cf. 288b). If nothing else, this shows that *for* is more than just something inserted to assign Case. The true parallel of 282 and 288b is 288c:

(288) a. John would like desperately for Frank to bring the beer.

     b. * John loves desperately (for/of) his beer.

     c. * John believed quite strongly (for) Frank to have brought the beer.

With *believe*-class verbs, insertion of *for* does not obviate the ungrammaticality resulting from an intervening adverb. This is an additional piece of evidence that the subjects of *believe*-class verbs really are treated like objects of the matrix verb, while the subjects of *want*-class verbs are not. It also leads us toward an explanation for the adverb intervention facts that does not depend on Case-licensing.

Since at least Stowell (1981), examples like 288b have been explained by assuming that Case-assignment must be under adjacency in English. However, this idea was never entirely satisfactory, and under current theories it is even less so. It was never adequately explained why English should have this restriction, while many other

languages do not. For a language like German, one could claim that the adjacency requirement is obviated in some way by the overt case-morphology. This is not possible, however, for a language like French and the classic example in 289:

(289)   Jean mange souvent des pommes.
          Jean eats   often   of   apples
          'Jean often eats apples.'

French has no more overt case-marking than English, yet it allows adverbs to intervene between the verb and its direct object. Indeed, the analysis of this difference between English and French that has been standard since Pollock (1989) has nothing to do with the Case-licensing of the object. Rather, it is argued that the finite verb in French raises to a functional head above the position of the sentential adverb. In the English translation, the adverb is thought to be in the same position as in French, but the verb does not raise as high. Sentences like 288b are thus impossible in English because they would either involve the verb raising too high, or the adverb being adjoined improperly internal to νP. The licensing of the object has nothing to do with it. If the embedded subject is structurally closer to the matrix verb with the *believe*-class than with the *want*-class, then it is not unexpected that there is room for an adverb to intervene with the latter but not the former. E.g., if Lasnik and others are right, and the embedded subject can actually raise to the matrix derived object position, then the impossibility of intervening adverbs is not just parallel with 288b and 288c, but one and the same fact. Alternatively, if there is no raising, but simply a difference in the size of the complement clauses (say, CP vs. TP), with accompanying differences in locality effects, then we can simply say that it is the additional structure under *want* that provides the relevant adverbial adjunction site

A solution to the adverb facts along these lines is actually desirable on independent grounds, because a Stowell-style adjacency restriction on Case-licensing is not

formulable in Minimalist terms. Linear adjacency is a matter of PF, while syntactic licensing is assumed to be a matter for the narrow pre-Spell-out syntax (and/or perhaps the LF branch). The account sketched out in the previous paragraph does not run into this problem, because there the licensing of subject DPs plays no role, and we are free to deal with the distribution of *for* in other ways for which adjacency might be appropriate.

Another set of facts that is puzzling for the view that *for* plays a crucial Case-licensing role in nonfinite clauses comes from gerundivals like those in 290:

(290)   a.   John remembered (*for) Frank buying the beer.

        b.   (*For) Frank buying the beer was unexpected.

        c.   (*For) Frank being too sick to move, John had to buy the beer.

We have here nonfinite clauses whose subjects are quite clearly not licensed externally, yet where the element *for* is not allowed. This is especially clear in 290c, where the gerundival clause is an adjunct. Examples of this kind will be discussed extensively in Section 8.5.2 below. For now, we simply note that they make it clear that *for* is not necessary for the licensing of subjects in non-raising nonfinite clauses. In other words, *for* is restricted to certain nonfinite clause-types, which suggests that it is not simply inserted as a Case-licenser, but as the realization of some syntactic element present in those clause-types.

8.4.3   The categorial status of *for*

An important question we need to ask, then, is just what syntactic category this *for* represents. This will be of direct relevance to its role in the licensing of subjects, since Case-licensing properties are generally thought to be at least partly determined by category membership. As I see it, there are three main possibilities, that *for* is a P, an

element in the I complex, or a C. The first alternative is initially attractive, because there clear is a preposition *for* in English (which if nothing else is the historical source of the *for* that introduces infinitives), and because it would allow us to assimilate the Case-licensing facts to those of Ps in general. The problem is that the parallel with normal PPs is not as extensive as one might like. The complement of *for* is not the DP requiring licensing, but rather a nonfinite clause, of which that DP is the subject. So if the P is really responsible for Case-licensing here, then it would be essentially via an ECM mechanism to the specifier of its complement, not directly to its complement as in something like *I bought a present for my mother.* Now, it may be possible to formalize this, but it will require very specific assumptions about the mechanics of Case-licensing. That is, the licensing of the subject of nonfinite clauses below *for* does **not** come for free from the idea that *for* is just a P here.

These issues could be circumvented if we assume that *for* is some sort of I element that shows up in specific classes of nonfinite clauses that license overt subjects. This would allow the subject-licensing properties of these clauses to be handled in parallel with those of finite clauses: both finite and *for-to* I are Case licensers, while, say, the bare *to* I that appears in raising complements is not. Of course, we would still need something to say about the licensing of subjects in the complements of *want*-class verbs when there is no *for*, as in 279a above. Given the arguments against ECM for such instances, one is forced again to assume that in such examples there is a null counterpart of *for* with the same Case-licensing capabilities. It is not unreasonable to claim that there is a null element in such sentences, and indeed I will argue below in favor of such an idea, but note again that such a move forces us to abandon the Case-licensing explanations of the conditions on the appearance of *for*, e.g. after adverbs. Taking *for* to instantiate I is also odd in that it does not seem to fit into the complex of verbal inflectional elements in any straightforward way. Specifically, it does not

mark tense, agreement or even finiteness, but rather seems to introduce the clause like a complementizer. A related problem comes from the word-order: if the subject of *for-to* clauses is in Spec-IP like other subjects (which should be the case if it is licensed by I like other subjects), then we would expect it to come before *for*. That is, we would predict orders like *...John for to...* rather than the attested *...for John to....* To handle this, Bošković (1997) proposes, following Watanabe (1993) and others, that *for* starts out along with *to* under I, but then raises to C after it has checked Case on the subject. Now, this does get the surface word-order right, and it maintains both the idea that *for* is involved in Case-licensing and the general rule that subject-licensing is handled by I. However, we are left to wonder why *for* should have to raise to C here when other I elements do not, and how it does so without bringing *to* along with it. The operation would seem to require some form of excorporation, unless it can be shown that *for* and *to* instantiate separate heads in an expanded Infl. Furthermore, because *for* is not assumed to be a P in any sense, it eliminates any independent justification for why it should be able to check Case. That is, there is no explanation of why *for* should pattern with finite I in licensing overt subjects and not with the nonfinite I in raising complements.[10]

Given the word-order facts and its apparent clause-introducing function, *for* is thus most commonly taken to be a special type of nonfinite complementizer. I will adopt this analysis here, and will present some additional evidence in its favor immediately below. Note first, however, that if this is correct, then it would be quite odd to take *for* to be a Case-licenser, because this property is not usually attributed to elements in C.[11] Rather, this has generally been work for P, D (in possessives) and the

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[10] Note that there are dialects of English for which the *for* in I analysis has some evidence to back it up, in particular, Belfast English (as discussed by Henry, 1992). This variety does allow orders where the embedded subject precedes *for*, and, famously, allows *for* to appear even when there is no overt subject. Indeed, it even appears in raising complements, which do not seem to be CPs.

[11] Such an idea is not, however, unheard of. Holmberg and Platzack (1995), e.g., argue that C

functional heads in the extended verbal projection. Furthermore, if it were correct that subjects check their Case in T in finite clauses, but in C in nonfinite clauses, then we might expect them to occur in a higher position in the latter. Yet to my knowledge there is no other evidence for this, and, as noted above, the subject follows overt *for* rather than preceding it as it would if it were in its specifier. No matter what we do, then, the idea that *for* is inserted in order to license an overt subject in a clause which would not otherwise allow it does not work out terribly well. There clearly is a connection between the occurrence of this element and overt subjects which we will need to explain, but it is not reducible to the former Case-licensing the latter.

8.4.4 Parallels with *that*

Interestingly enough, as discussed in some detail recently by Pesetsky and Torrego (2001), the distributional properties of *for* show striking parallels to those of the complementizer *that.* This is one of the strongest arguments in favor of analyzing *for* as a C, and it provides us with an interesting insight into the constraints on its overt appearance. Consider the following:

(291)   a.   I would like (for) him to buy the book.

      b.   I believe (that) he bought the book.

(292)   a.   [*(For) him to buy the book] would be preferable

      b.   [*(That) he bought the book] was unexpected.

(293)   a.   Who$_i$ do you think (*that) t$_i$ bought the book?

      b.   What$_i$ do you think (that) he bought t$_i$?

      c.   Who$_i$ would you like (*for) t$_i$ to buy the book?

      d.   What$_i$ would you like (for) him to buy?

plays a role in Case-licensing in V2 languages.

It is well-known that the complementizer *that* is optional in object clauses as in sentences like 293b, just like *for*. Also like *for*, *that* is obligatory when the embedded clause it heads is in subject position, as in 292b. What is really striking, and less well-known, is the fact that there is a *for*-trace effect in English analogous to the *that*-trace effect. That is, if the subject is wh-extracted from an embedded clause, then the complementizer must remain empty, whether it is a finite clause headed by *that* (cf. 293a) or a nonfinite clause headed by *for* (cf. 293c). When it is the object that is extracted, the complementizers remain optional (again, see Pesetsky and Torrego, 2001, for discussion). In addition to suggesting quite strongly that *for* is a complementizer analogous to *that*, note that the existence of a *for*-trace effect militates further against taking its appearance to depend on the Case-licensing needs of the embedded subject. The Case-licensing needs of a DP are supposed to be handled before it undergoes wh-movement, i.e. the wh-trace in 293c is in a position that should require Case-licensing, so we should expect an overt *for* to at least be possible. Yet it is not, even in contexts where *for* would be required to be overt if the subject had not been wh-moved away:

(294)   * Who$_i$ would you like very much for t$_i$ to buy the book?

Now, this could simply mean that there is a *for*-trace effect independent of and in addition to the Case-based conditions on the appearance of *for*. If this were so, however, then we would expect the Case-based conditions to rule out sentences like 295a which avoid the *for*-trace effect by having no overt *for*. While this example is perhaps slightly marginal, it contrasts sharply with examples like 295b, where there is no extraction:

(295)   a.   Who$_i$ would you like very much t$_i$ to buy the book?
         b.   * I would like very much John to buy the book.

In other words, subject extraction obviates (or at least weakens) the requirement for an overt *for* following adverbs. Since wh-movement should not affect Case-licensing issues, this is a further argument against taking the distribution of overt *for* to be determined by the Case-licensing requirements of embedded subjects.

The other restrictions on the occurrence of overt *for* – its obligatoriness in the complements of adjectives and after adverbs – are detectable with *that*, though the effects are not as strong. I.e. the sentences without an overt *that* are somewhat degraded, but not fully ungrammatical:

(296) a.   John would like desperately *(for) Frank to bring the beer.

b.   John believes strongly ?*(that) Frank has the beer.

(297) a.   It is unfortunate *(for) John to be sick.

b.   It is unfortunate ?(that) John is sick.

Now, the overt distribution of *that* cannot be explained in terms of Case, because that complementizer is not supposed to play a role in the licensing of subjects. Thus if we conclude that the distribution of *for* should be assimilated, at least in part, to that of *that*, then we have a further reason to abandon a Case-based account. It is to be hoped that the recognition of this parallel will help us to arrive at a better account for the distribution both of overt *that* and overt *for*. I will not develop a full such theory here, but some discussion is in order, and a few suggestions are immediately available.

8.4.5 Explaining overt complementizer distribution without Case

To begin with, let us consider accounts that have already been proposed for the distribution of *that* and see how well they work and how well they can be extended

to cover *for*. The standard idea within GB was that the distribution of overt and non-overt forms of *that* should be captured in terms of the Empty Category Principle, reducing to the idea that empty categories must be governed in an appropriate way by an appropriate item (see e.g. Stowell, 1981, Rizzi, 1990). This had two separate consequences that are relevant here: in the first place, it forced the complementizer itself to be overt in contexts where it was not properly governed; in the second place it forced the complementizer **not** to appear in circumstances where it would block the proper government of an empty category in the subject position. Thus overt *that* is necessary in sentences like 292b because, having raised with its clause to the subject position, it cannot be governed by the matrix verb. In contrast, in sentences like 293a, an overt *that* could be taken to block antecedent-government of the wh-trace in the embedded subject position by the moved *who* in the matrix Spec-CP. This problem would not arise for the trace in object position in 293b, because it can be governed by the verb. Note that such a theory would extend quite naturally to the parallel facts with *for*.

However, these analyses have, for the most part, been abandoned, not least because of their crucial reliance on government, a theoretical device which has been eliminated within Minimalism. In a recent paper, Bošković and Lasnik (2003) present a number of other theoretical and empirical problems for government/ECP-based accounts of the distribution of null complementizers and offer a different theory, building on Pesetsky (1992), that attempts to overcome them. Their basic idea is that the null variant of *that* is an affix which must attach leftward, typically on the verb that selects it. In instances where this affixation is blocked, the null form would yield a stray affix filter violation, and thus only the overt, non-affixal form is licit. Affixation will be impossible when the clause has raised out of the complement of the verb, as in 292b, and under certain assumptions perhaps also when an adverb intervenes as

in 296b. Thus overt *that*, which has no affixation requirement, must occur.

A number of issues arise for this theory, many of which Lasnik and Bošković themselves discuss, but we can take it as a starting point and see where it gets us. They do not discuss the parallel distribution of overt *for*, but it would be fairly straightforward to extend their analysis to cover it. Something this would **not** give us, however, is an explanation of the puzzling fact that overt *for* is never possible when the subject is PRO, as shown by the examples repeated here as 298 and 299:

(298)   John would like desperately (*for) PRO to bring the beer.

(299)   (*For) PRO to bring the beer would be difficult.

What is relevant here is the context **following** the complementizer, so an account based on affixation on the preceding element has nothing to offer. It is proper to wonder, then, whether this fact is a quirk of *for* and its nonfinite environment, or just another part of the shared distribution of overt complementizers. Unfortunately, parallel sentences involving the finite clause-types with *that* alternating with null cannot be constructed, because PRO cannot appear in finite clauses.

Another possibility to consider, however, is that this is part of a broader pattern whereby overt complementizers are disallowed before phonologically empty subject positions. Consider again the COMP-trace effect, which Bošković and Lasnik (2003) do not discuss and for which their theory is of no help. Whether or not C can become affixal on a preceding verbal head does not obviously have anything to do with whether or not the following subject has been extracted. Thus the possibility cannot be excluded that what we have in English is not a COMP-trace effect, but a COMP-EC effect, where EC is meant to stand in for a phonological empty subject, whether PRO or a movement trace. To be sure, this is not an analysis, but rather a descriptive generalization about the facts. A deeper explanation is needed, but to

my knowledge the generalization is at least accurate.

Furthermore, there is some evidence that the purported connection is real, i.e. that the impossibility of *for*-PRO is related to the impossibility of *that*-trace. The evidence comes from the comparison of the standard English that we have been considering to this point with the dialect spoken in Belfast (henceforth BE), as treated by Henry (1992). The sentences in 300 are all ungrammatical in standard English, where *for* is not allowed in nonfinite clauses that lack an overt subject. But no such constraint applies in BE, and the sentences are fine.

(300)　　a.　I went to the shop for to get bread.

　　　　b.　For to stay here would be just as expensive.

　　　　c.　I tried for to get them

What is interesting is that BE also lacks the *for*-trace effect, as shown by the following:

(301)　　Who do you want for to go?

So BE would seem to lack a *for*-EC effect entirely. Now, recall that a Case-based account for the COMP-trace effect is implausible, since a wh-trace should have the same Case-licensing needs as an overt DP. Thus if the possibility of *for*-PRO is really related, as suggested by the data in 300 and 301, then we have one more reason to abandon any hope of explaining the distribution of *for* in terms of the formal licensing needs of embedded subjects. Instead, it is best taken as the variable spell-out of the C that introduces certain nonfinite clauses, subject to general (if still poorly understood) constraints on null and overt complementizers.

8.5 Subjects are generally possible in nonfinite clauses

In this section I will present evidence that overt subjects are allowed in most nonfinite clause-types, contrary to what we would expect if they could only be licensed by exceptional mechanisms in such contexts.[12] The demonstration will depend crucially on the conclusions drawn in the previous section. Specifically, in some of the classes I will discuss, an overt subject must be preceded by an overt *for*. I will take this to reflect constraints on the occurrence of *for* and its non-overt counterpart, rather than than constraints on the licensing of overt subjects.

8.5.1 Complements of adjectives and *want*-class verbs

To begin with, consider the contrast in 302:

(302) a. It is likely (that) John will be sick.

   b. * It is likely John to be sick.

Examples of this sort are commonly cited to demonstrate that finite clauses license overt subjects while nonfinite ones (frequently/generally) do not. However, 302b becomes grammatical if there is an overt *for* before the embedded subject, as in 303:

(303) It is likely for John to be sick.

Under theories where the element *for* is inserted specifically to handle the Case-licensing needs of the embedded subject, this example is perfectly consistent with saying that, by default, nonfinite clauses do not license overt subjects. However, as I have argued in the previous section, such a theory is no longer tenable. For one thing, this means that we need an alternate explanation of the ungrammaticality

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[12]See Schütze (1997, p. 23 ff.) for a similar discussion of subjects in nonfinite clauses in the absence of external licensing.

of 302b, which I have suggested is because the null form of the complementizer is illicit in complements of adjectives. More importantly, however, examples like 303 show that overt subjects are in fact possible in nonfinite clauses of this type, and furthermore that this is not due to any factors external to the clause. In other words, in a sentence like 303, we cannot plausibly argue that *John* has its Case checked by some element in the matrix clause, as we would for instances of ECM and raising. Now, if this turned out to be an exceptional state of affairs for nonfinite clauses, then the general notion that subjects require licensing would be strengthened (and we would have to reconsider the specific idea that *for* is somehow responsible for the exceptional licensing here). However, adjective complements are **not** exceptional among nonfinite clause-types in allowing an overt subject.

Verbs of the *want*-class can of course also take nonfinite clausal complements with overt subjects, as in 304:

(304)   John would like Frank to bring the beer.

Under a Case-theoretic account, we must ask what could be handling the Case-licensing of *John* in such sentences. As we have seen above, however, the clear distinctions between this class and the *believe*-class argue against an ECM-style analysis. Rather, whatever is licensing the subject seems to be clause-internal. As discussed in Section 8.4.2, this has led a number of researchers (including Bošković, 1997, Martin, 2001) to argue that this class of nonfinite clause always has an element corresponding to *for*, and that it can handle Case-licensing even when null as in 304. This would allow parallelism with clauses that are adjectival complements and would help to maintain the basic idea of Case theory, since we could say that overt subjects are only allowed when Case-licensed by finite T, ECM or the special complementizer element *for*. Indeed, it is quite plausible that there is a null complementizer in examples

of this type, but the idea that it is responsible for subject Case licensing is suspect. In addition to the arguments given in Section 8.4 against explaining *for* as a Case-licenser, consider that extending its reach to examples of this type would undermine the only really attractive portion of the hypothesis. Given certain assumptions, it was at least possible to suggest that the distribution of *for* could be explained in terms of Case-licensing: it appears when other forms of licensing are unavailable – as when the embedded clause raises to subject – but does not appear when the subject is licensed via ECM. If we say that a covert form of *for* is sufficient to license a subject in sentences like 304, then we would expect a covert *for* to be sufficient in other examples, like 292a, repeated here as 305:

(305)   [*(For) him to buy the book] would be preferable

The problem with a null *for* in 305 thus cannot be due to the Case-licensing needs of the subject, but must result from independent conditions on the overt distribution of *for* itself. Now, I have argued on independent grounds in favor of just this view, but I am trying to eliminate Case from the theory. We must consider what this move would mean if we were trying to **maintain** Case. Once we decouple the Case-licensing properties of the complementizer from whether or not it appears overtly as *for*, it does no explanatory work for us. It simply recapitulates the distribution of overt subjects in nonfinite clauses. In other words, the only real benefit we get from assuming that $for/\emptyset$ is a Case-licenser, is that it allows us to uphold the idea that all DPs require licensing. It does **not** make that idea any more attractive.

Now, given the fact that an overt *for* is possible on the complements of *want*-class verbs, there is some independent support for its existence. While we have no independent explanation for why the special nonfinite complementizer $for/\emptyset$ should license overt subjects, we would at least have something to work with if it turned

out that all nonfinite clauses with overt subjects contained this complementizer (or some other independently justified means of licensing like ECM). That is, it would be a bit of a mystery, but at least we would have the right descriptive generalization. However, once we move beyond the complements of adjectives and *want*-class verbs, we find additional classes of nonfinite clauses which allow overt subjects, yet show no evidence whatsoever of the element *for*.

8.5.2 Gerundival clauses

nonfinite clause-types with overt subjects and no *for* include small clauses and gerundivals.[13] I will concentrate on the latter here, and refer the reader to Schütze (1997) discussion of the former. Consider the examples in 306:[14]

(306)　a.　John remembered (*for) Frank buying the beer.

　　　　b.　(*For) Frank buying the beer was unexpected.

　　　　c.　Him/*he buying the beer was unexpected.

　　　　d.　(*For) Frank being too sick to move, John had to buy the beer.

While the possibility of an overt *for* in 279b lends some credibility to the assumption of a null counterpart of *for* in 304, there is no support for such an assumption in gerundival clauses, where *for* is never possible. Nonetheless, overt subjects are clearly allowed. For 306a one could suggest that licensing is by ECM, but this is not possible

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[13]Another clause-type that might belong here are the bare infinitives that show up as complements of perception verbs, e.g. *I saw John go to the store.* The tight restrictions on their distribution could have just as much with their own categorial status as with the Case-licensing needs of their subjects. Consider in support of this latter view that sentences like 1 are possible. In the latter conjunct, the bare infinitive is **not** the complement of the verb, and **not** in any position where ECM should work.

　(1)　　I saw John bring the beer, and John bring the beer is what I saw

　(2)　＊I believe John to have brought the beer, and John to have brought the beer is what I believe.

The contrast with ECM 2 is quite clear.

[14]I restrict my attention here to the class of gerunds that take non-possessive subjects, since they present the bigger problem for Case theory.

for the other examples. In 306b the gerundival clause is the subject of the sentence, and it would be rather difficult to claim that matrix T can check Case on the subject of an embedded clause which itself has raised to subject position.[15] Worst of all, in 306d, the gerundival clause is an adjunct to the main clause, thus there is simply no question of some sort of mediated Case-checking from the matrix clause.

Note that there is a variant of the latter sentence introduced by an overt preposition, as below:

(307)   With Frank being too sick to move, John had to buy the beer.

This might lead us to think that *with* is analogous to *for*, and even that there is a null counterpart of *with* in 306d, perhaps rescuing the idea that nonfinite clauses require special prepositional complementizers in order to license subjects. However, the *with* that shows up here is quite different from the *for* that introduces infinitival clauses. For one thing, while *for* can at least optionally appear on infinitives in all positions, *with* is **only** possible on adjunct gerunds. I.e. it is not possible for *with* to introduce subject or object gerunds. Furthermore, while *for* is the only element that can introduce infinitives, there are several prepositions in addition to *with* that can introduce gerundival adjuncts, expressing the different possible semantic relationships to the main clause (e.g. *Just once I want to have a party **without** John showing up* and ***In spite of** John showing up uninvited, it was a very nice party*). This particular characteristic of gerundival clauses is presumably just an instance of the behavior of

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[15]Reuland (1983) did actually claim something along these lines, but his account cannot be seriously entertained. He suggested that what is responsible for subject licensing in general is agreement with a nominal element Agr in Infl. Gerundivals are supposed to differ from other infinitival clause-types in having Agr, and Agr itself is supposed to get Case externally from the matrix clause. This is then to be passed on to the subject of the gerundival clause via agreement. Note, however, that this would be a minimality violation, with Case being passed to a DP that is properly contained within another DP. The postulation of agreement between these two DPs might provide a technical way around the minimality problem, but there is no independent motivation for claiming that the subject of the gerund agrees with the entire gerundival clause. Crucially, the case of the gerundival subject does not correlate with the position that the gerundival clause occupies in the matrix clause.

adjuncts more generally. Bare DPs are not usually allowed to appear as adjuncts, but are instead typically embedded in PPs, where the P identifies the semantic role of the adjunct DP within the larger clause. In this sense, example 308 is parallel to example 307. The lack of an overt P in 306d can thus be seen as analogous to the ability of certain noun phrases to appear as bare adjuncts when their semantic relationship to the rest of the clause is made clear by the semantics or some lexical idiosyncrasy, as shown by the alternation between 309a and 309b (see Chapter 3 and Emonds, 1987, for discussion).

(308) With this weather, I don't know if we'll be able to go out.

(309) a. John waited an hour.

  b. John waited for an hour.

Note, then, that since the DP *this weather* in 308 has no subject internal to it, there can be no question of what the P *with* is doing: it integrates its complement into the surrounding clause for purposes of interpretation. There is no reason to think that *with* is doing anything differently in 307, and its complement is **not** the embedded subject, but the entire gerundival clause. The clincher is that the appearance of prepositions introducing gerundival adjuncts is not determined by whether or not the gerund has an overt subject:

(310) a. Without PRO opening it up, we'll never know what the problem is.

  b. With PRO stopping at the beer distributor and PRO picking up something for dinner, we aren't going to have much time to get the house ready.

The prepositions *with* and *without* are doing the same work in 310 that they would do if the gerunds they introduce had overt subjects. They are θ-role assigners for the gerundival clause, not licensers for any embedded subject. Indeed, this is the issue that gerundival clauses in all positions present for Case-theory: we can point

to something in the matrix clause that is involved in θ-role association and might plausibly be involved in licensing, but it would be θ-association and Case-licensing for the entire gerundival clause, not for the subject embedded within it.

We are led to the conclusion, then, that overt subjects are allowed in gerundival clauses without external licensing, just as in the complements of adjectives and *want*-class verbs. Here, however, there is no evidence for a special element like *for* which one could claim to be licensing the subject internally. That is, there is no simple unified analysis that we could give to all of the nonfinite clause-types that allow overt subjects in English, no single characteristic that they share which could be made responsible for Case-licensing in the subject position.

8.5.3   Cross-linguistic evidence

Internal licensing of subjects in nonfinite clauses is of course not restricted to English. In fact, there is ample cross-linguistic evidence to support the idea that overt subjects are quite generally possible, and that it is their absence under special circumstances that we should be seeking to explain. One well-known example is the so-called inflected infinitive construction in European Portuguese (examples from Raposo, 1987):

(311)   a.   Será   difícil   [eles aprovarem   a   proposta].
              will-be difficult they to-approve-AGR the proposal
              'It will be difficult for them to approve the proposal.'

        b.   *Será   difícil   [eles aprovar   a   proposta].
              will-be difficult they to-approve the proposal

        c.   Será   difícil   [PRO aprovar   a   proposta].
              will-be difficult PRO to-approve the proposal
              'It will be difficult to approve the proposal.'

Raposo (1987) and others have argued that it is the verbal agreement morphology which allows nonfinite I to be a Case-assigner/checker in examples like 311a. This is

supported by the fact that an overt subject is impossible when there is no agreement, as in 311b, PRO being the only possibility here, as in 311c. Such a proposal is also attractive because it would allow a unified account of overt subjects in finite and nonfinite clauses. Finiteness per se would have nothing to do with subject licensing. Rather, it would be those clause-types with subject agreement on the verb, whether finite or not, which allow subjects. Note however that the ungrammaticality of 311b does not actually imply that agreement licenses overt subjects. One could just as easily say that overt agreement morphology is obligatory in the presence of an overt subject, and that the sentence is bad not because of any syntactic deficiencies of the subject, but because it is morphologically ill-formed. Indeed, there is independent evidence for the latter analysis of these data.

The idea that licensing depends on agreement is a plausible account of the EP facts, but Case-theory should not be a theory to handle one language. It is supposed to be a universal account of the distribution of DPs, and morphological agreement is a non-starter in this capacity. In English, for example, none of the nonfinite clause-types discussed above show overt verbal agreement, yet they license subjects. Even worse, we find clause-types with just the opposite state of affairs in Modern Greek. It is often said that the language has no proper infinitives, because verbs show overt agreement even in embedded contexts where an infinitive would be expected in other languages. Thus the examples in 312, from Iatridou (1993), look quite a bit like ECM, subject control and raising infinitives, yet in all three the embedded verb shows clear overt agreement:

(312)   a. Vazo   ton Kosta   na tiganizi   psaria.
             put:1SG the Kosta:A na fries:3SG fish
             'I am making Kostas fry fish.'

         b. Tha prospathisi na erthi.
             will tries:3SG   na comes:3SG

'He will try to come.'

c. Ta pedhia fenonde   na agapun   tin Maria.
the children seem:3PL na love:3PL the Mary:A
'The children seem to love Mary.'

While these may not be infinitives in the traditional sense, there is also good evidence that they are not fully finite. For one thing, they are introduced by a special element *na* which is distinct from the normal finite complementizers. For another, they appear to be tenseless in the sense that non-present forms are not allowed:[16]

(313) a. * Evala/vazo   ton Kosta   na tiganize   psaria.
made/make:1SG the Kosta:A na fried:3SG fish

b. * Ta pedhia   fenonde   na agapusan tin Maria.
the children seem:3PL na loved:3PL the Mary:A

What is especially interesting for us, however, is the treatment of the subject position in these embedded clauses. In 312a, the embedded subject does not get the nominative that we would expect in a finite clause, but accusative. In the other two sentences, the embedded subject is not allowed to be overt, and is obligatorily coreferent with the matrix subject. In other words, as far as the subjects are concerned, we really are dealing with ECM, control and raising (see Iatridou, 1993, for further evidence for these analyses). Thus we cannot even adopt a weak version of an agreement-licensing correlation, where overt agreement implies the licensing of an overt subject. But this means that, faced with the overt subjects in EP infinitives, we cannot simply point at the agreement and act as though everything were explained. Agreement by itself is simply not enough to license overt subjects. The EP examples thus must be taken more seriously, and Case theory needs a better story to tell about why the subjects are allowed.

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[16]Iatridou does not give a past tense counterpart to 312b, but she does explicitly say that such a sentence would be ungrammatical [p. 179].

In fact, evidence is available from closer at hand to show that it is not the verbal morphology that is responsible for subject licensing in Portuguese infinitives. It comes from the colloquial forms of Portuguese spoken in Brazil, as discussed by Pires (2002). Due especially to changes in the pronominal system, overt verbal agreement has been lost or greatly reduced in many of these varieties.[17] This goes for the infinitives as well, which now appear only in their uninflected form. Now, if it were the case that verb agreement is responsible for licensing overt subjects in sentences like 311a above, then we would predict that the dialects of BP which have lost agreeing infinitives should have also lost overt subjects in infinitives. As the following sentences from Pires (2002) show, however, this prediction is not borne out:

(314)   a. A   Maria ligou antes de nós/ eu/ *mim sair
              The Maria called before of we/ I:N/ *me:A leave:INF

              'Maria called before we/I left.'

    b. [O   Carlos e   o   Pedro/ eu/ *mim chegar   cedo] não
          [The Carlos and the Pedro/ I:N/ *me:A arrive:INF late] not
          surpreendeu ninguém.
          surprised   no one
          'Carlos and Pedro/me arriving late did not surprise anyone.'

Neither of the sentences in 314 could be analyzed as ECM. Furthermore, the fact that pronouns show up in the subject form rather than the object form (1st singular *eu* instead of *mim*) militates against saying that the licensing requirements of the subject in sentences like 314a are taken care of by the prepositional elements *antes de*. Rather, we again have a situation where overt subjects are allowed in a nonfinite clause, in the absence of plausible external licensing, and here even without internal agreement. Of course, one could always call on abstract agreement to license overt subjects in

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[17]The old 2nd singular pronoun, which triggered distinctive agreement, has been replaced by a formal pronoun that was originally a singular noun and thus triggers 3rd singular agreement. Similarly, the 1st plural pronoun has been largely replaced by the form *a geinte*, again originally a singular noun meaning 'people'. Since 3rd singular agreement is null in most instances, this has effectively resulted in the elimination of overt agreement affixes in these slots.

nonfinite clauses in languages like English and Brazilian Portuguese, but this misses the whole point. The reason why Raposo (1987)'s story about EP was attractive in the first place was that it connected subject licensing to an independently verifiable fact. EP was supposed to be special and different from English in that it has overt morphological agreement on infinitives and thus allows overt subjects in nonfinite clauses. Modern Greek and BP destroy this nice little picture, because the former has agreeing verbs that cannot take overt subjects and the latter has non-agreeing infinitives that can. Getting around this by positing abstract agreement wherever the data do not fit reduces the theory to a bald restatement of the distribution of overt subjects and robs it of any explanatory power.

Another problematic example for Case theory comes from classical Latin. As is well known, Latin made liberal use of a construction known as the *accusativus cum infinitivo*, or AcI, with an infinitival form of the verb and a subject in the accusative. At first glance, this is reminiscent of the English ECM construction. In 315a, for example, it is possible that the matrix verb *dīxit* 'he said' could be what is handling the Case checking for the embedded subject *aquam* 'water'.[18]

(315) a. Thalēs Mīlēsius aquam dīxit esse initium   rērum.
           Thales Milesius water:A said be   beginning things:G
           'T. M. said that water was the first principle of things.' – or –

           'T. M. claimed water to be the first principle of things.' (C., *N.D.*, 1. 10, 25)

       b. Est inūsitātum   rēgem reum   capitis esse.
           is   extraordinary king:A answerable:A head:G be
           'It is an extraordinary thing for a king to be tried for his life. (C., *Dei.*, 1. 1)

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[18]The Latin examples are taken from Gildersleeve (1895), and are given with his citation of the Teubner Text editions. Ancient Greek had a similar construction. See vanden Wyngaerd (1994) for examples and for discussion of the phenomenon in both languages.

c.   Hominem-ne Rōmānum tam Graecē   loquī?
     man:A-PTCL Roman:A such Greek:ABL speak

     'A Roman speak such good Greek? (To think that a Roman should

     speak such good Greek.)' (PLIN., *Ep.*, IV. 3, 5)

However, bare infinitive clauses were quite generally able to take overt accusative

subjects in Latin, not just in the complements of *believe-* and *want*-class verbs, but

also in subject clauses, complements of nouns and adjectives (cf. 315b), and various

root infinitives, like the historical infinitive and the exclamatory infinitive (cf. 315c).

It is quite clearly not the case that the embedded subject could depend on the ma-

trix verb for its licensing in all of these contexts (see Pillinger, 1980, Cann, 1983, for

additional arguments against a general ECM analysis). Yet there was no special ele-

ment like *for* in English, nor was there verbal agreement like that in EP which could

even be suggested to distinguish infinitives with overt subjects from those without.

Furthermore, while one could try to argue that infinitives in English and Brazilian

Portuguese really do have agreement, but that it is not realized overtly due to the

general paucity of inflectional morphology in those languages, such a claim is impos-

sible for Latin. The various finite verb forms of the language show very rich subject

agreement indeed.

Russian, too, has infinitive constructions that have neither verbal agreement nor

an overt preposition-like element, yet allow overt subjects, here in the dative case:

(316) Gruzovikam ne proexat'.
       trucks:D   not ride-through:INF
       'It is not in the cards for the trucks to get through.' (Moore and Perlmutter,

       1999)

(317) Kak mne skazat'.
       how me:D say:INF
       'How can I put it.' (Neidle, 1982)

Now, lest one get the idea that such things are found only in languages with extensive case systems, we should consider some data from Irish. Again, here we find nonfinite clauses with overt subjects in a number of contexts where it is far from clear what could be licensing them. Consider the following from McCloskey (1985):

(318) a. Níl   iontas é   mac mí-nádúrtha a thógáil.
          is-not wonder him son un-natural   raise:INF
          'It is no wonder that he should raise an unnatural son.'

       b. Bheinn   sásta iad   a bheith i láthair.
          I-would-be glad them be:INF   present
          'I would be glad for them to be present.'

       c. Ghoillfeadh   se orm   tu me a ionsai.
          would-bother it on-me you me attack:INF
          'It would bother me for you to attack me.'

       d. Cánathaobh í   a bheith chomh deacair?
          why   it:A be:INF so   difficult
          'Why should it be so difficult.'

None of these contexts can be interpreted as ECM. Rather, we have infinitive clauses that are noun complements, adjective complements, extraposed subjects and matrix questions. Yet, again, overt subjects are possible, and do not require an overt prepositional element or anything else to license them.

Ultimately, any attempt at a unified Case-based analysis of even just the languages discussed thus far is bound not to be enlightening. We can say that there are (at least) two types of T, one that can check the Case of an overt DP in its specifier and one that cannot, but there is no property independent of this Case-checking which reliably distinguishes them, either within one language or cross-linguistically. In standard English, the presence of the overt element *for* would imply +Case, but the lack of overt *for* does not necessarily imply -Case T, since overt subjects can appear without *for* in gerundival clauses and the complements of *want*-class verbs.

In European Portuguese, +Case T is obligatorily spelled out with overt morphological agreement, even in nonfinite clauses, while -Case T is spelled out without agreement, but in the closely related colloquial Brazilian Portuguese, both +Case and -Case T can lack overt agreement. In Modern Greek, there is always overt agreement, but this does not imply +Case. In Latin, Russian and Irish, +Case T shows nothing resembling agreement or an overt preposition. It is all well and good to say that overt agreement licenses overt subjects in EP, or that (overt or covert) *for* licenses subjects in English, but such statements are meaningless for a general theory. In the GB era, it was sometimes claimed that languages could differ parametrically on what element was responsible for Case assignment. So e.g. Raposo (1987) claimed that nominative Case was assigned by agreement in EP, while Iatridou (1993) claimed that it was assigned by T in Greek. Similarly, Koopman and Sportiche (1991) argued that nominative Case could be assigned by Infl either via Spec-head agreement or via Government. Theories of this sort have been abandoned within Minimalism because of the complicated and variable view of Case theory they imply. One way to look at it is that such views require a disjunct formulation of the Case filter, and a guiding idea throughout the development of syntactic theory has been to avoid such disjunctions.

It is interesting at this point to consider the data which Koopman and Sportiche in particular were concerned with, and how it would be accounted for in recent versions of Chomsky's theory and in the theory I am developing here. At issue was cross-linguistic variation in the surface position of subjects, and how this correlates with facts about agreement. English and French are SVO and are analyzed as having subject raising to Spec-IP, assigning nominative Case to the subject and triggering agreement on the verb. Irish and Welsh, on the other hand, being VSO, are analyzed as having a different parameter setting such that I can only assign Case via government. Thus the subject remains in a lower position, and verb agreement is not triggered. Arabic, on

the other hand, has both Case-assignment mechanisms at its disposal. The subject can raise to Spec-IP, deriving SVO order with subject-verb agreement, or it can stay low, yielding VSO order without agreement.

The question is whether we are really justified in analyzing the word-order facts as resulting from differences in Case assignment/licensing. Note that there is no actual difference in the languages involved in terms of the appearance of DPs: subjects are allowed. The variation is solely in the position where they occur. Furthermore, the different positions do not correlate with different morphological cases, even in Arabic where both positions are possible. This is reflected to a certain extent in Chomsky's recent work (Chomsky, 2000, 2001), where Case-licensing is uniformly handled by an abstract Agree relation, and variation in DP positioning is tied to variation in the presence of an EPP feature. Now, the facts from Arabic do seem to require a tight relationship between agreement and actual overt movement. Note again, however, that agreement is not necessarily the same thing as licensing, and that a tight relationship of this kind can, in principle, result from a dependency in either direction. That is, as in the instance of EP, it is not a priori clear whether agreement licenses a DP in a particular position or the appearance of a DP in a particular position forces agreement. Furthermore, universal theories of agreement and DP-licensing cannot be based on Arabic alone, and the tight connection between overt raising and agreement simply does not obtain in most languages. Consider e.g. associates of *there*-type expletives in English and many other languages, or nominative objects in Icelandic, all of which trigger agreement in spite of staying low. Our theory of morphological agreement thus needs to allow for both possibilities, without tying either directly to DP licensing, which the framework being developed here can do. There are no issues related to Case-licensing, because it is eliminated. The cross-linguistic variation in the overt position of subject DPs simply depends on variation in the EPP, such that

the Celtic languages and Arabic do not have a requirement that the position before the verb be filled by a DP. Overt verbal agreement is a morphological process, and as such is expected to show cross-linguistic variation. It will depend in large part on syntactic configurations and be subject to certain universal constraints, but languages can differ on how exactly it is instantiated. Thus in Arabic agreement will only be triggered by DPs that have raised to Spec-TP, while in most European languages it can be triggered by a nominative DP in any number of sufficiently local positions.

8.5.4 Which clause-types form a natural class?

Overt subjects are thus possible in an array of nonfinite clause-types which do not have anything obvious in common. This goes even for instances where there is no plausible source of external licensing. Now, if it is true that DPs generally need Case-licensing, and that the normal means of licensing subjects (via Case-checking with finite T) is unavailable in nonfinite contexts, this is unexpected. We must ask at this point just what types of nonfinite clauses do **not** allow overt subjects. As far as I can tell, in English at least, this class is essentially limited to the complements of raising verbs as in 319a:

(319) a. $John_i$ seems t_i to be sick.

b.   John believes $Frank_i$ [t_i to be sick].

If one subscribes to the view that the subject of the nonfinite complement of *believe*-class verbs raises overtly to a derived object position in the matrix clause in sentences like 319b, then such clauses are entirely parallel, and thus would also be nonfinite clauses that do not allow overt subjects. On the other hand, if there is no actual raising here, then these ECM infinitives constitute an additional class of infinitives that allow overt subjects. One might also expect to see obligatory control infinitives,

i.e. complements of *try*-class verbs in the class of clause-types that ban overt subjects. However, I will argue in Section 8.8 that this results from semantic/thematic factors rather than syntactic/licensing factors, and thus is irrelevant to our discussion here.

The question, then, is which group of clause-types should be regarded as the default pattern, and which should be regarded as a deviation requiring explanation. On the one hand, we could assume that overt subjects are not generally allowed and try to explain all the contexts where they appear via explicit Case-licensing mechanisms. On the other we could assume that subjects are generally fine as long as they can be associated with θ-roles, and propose explicit explanations for the instances where they cannot show up. I submit that the above discussion points to the second alternative. Even if we restrict our attention to nonfinite clauses, the clause-types in which overt subjects cannot appear constitute a mere fraction of all the existing types. What is more, they constitute a natural class – embedded clauses whose subject has raised into a higher clause. The clause-types where overt subjects are allowed, on the other hand, do **not** form a natural class. Here we have complements of adjectives and *want*-class verbs, gerundival subject, object and adjunct clauses, small clauses and nonfinite exclamatives[19], not to mention the various finite clause types. There is no characteristic morphological or syntactic pattern that unites these clause types – either within English or cross-linguistically – which we could use to explain their ability to take overt subjects. A theory would be possible where we simply invoke Case in all of these clause-types, but it would be vacuous unless we could tie it to something else. If we have no diagnostic for the presence of Case that is independent of the appearance of overt DPs, then we can simply claim that Case can be checked wherever DPs surface and cannot be checked wherever they do not surface. This

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[19]The latter are things like *For such an idiot to be our president!*. See Schütze (1997) for data and discussion on these and small clauses.

would achieve an accurate description of the facts while explaining nothing. Indeed, the only thing it would give us is the ability to maintain the idea that DPs require Case-licensing.

When the issue is viewed abstractly in this way, it is clear how we should proceed. We should assume that, all other things being equal, subjects are possible wherever their thematic needs can be handled, even in nonfinite clauses. We should then treat the exceptions to this generalization, the instances where overt subjects cannot appear, as our explanandum. In this way we follow standard practice in proposing an explicit account for the instances about which we can make substantive generalizations, and treating the non-unifiable contexts as the default, the 'elsewhere case'. In terms of standard Principles and Parameters theories of syntax, this amounts to abandoning the requirement that DPs have formal licensing, i.e. abandoning syntactic Case. In its stead we will need an explanation of what forces subjects to evacuate the complements of raising and ECM predicates. This will be the focus of Section 8.6

8.6 Raising, ECM, and the categorial status of clausal complements

We can begin our discussion with the example sentences which opened this chapter:

(320)   a.   * Seems John to be sick.

      b.   John$_i$ seems t$_i$ to be sick.

Sentence 320a corresponds more or less to what we expect the structure to be at the point when *seems* (or the set of heads that will be spelled out as *seems*) has been merged into the structure, but it cannot surface this way because the matrix EPP has not been satisfied. This is remedied in 320b by raising of the embedded subject to

matrix subject position. According to Case-based accounts, 320a has the additional problem that the embedded subject cannot check its Case feature, a deficiency which is also resolved by the raising. Matters are a bit different in example 321a. Even if we assume that DPs need Case, *John* should be fine, being in a finite subject position. Yet the sentence is nonetheless ruled out. That this is due to the matrix EPP is demonstrated by the fact that the minimally different 321b, with an expletive inserted in the relevant position, is grammatical:

(321)   a.   * Is likely (that) John will be sick.

          b.   It is likely (that) John will be sick.

To this point, then, the data can be accounted for by the EPP alone, without reference to Case.

8.6.1   Superraising

Trouble comes, however, from sentences like 322. Here *John* does raise and thus should satisfy the matrix EPP, and given the grammaticality of 320b above, it would seem that a trace is sufficient to satisfy the EPP in the embedded clause.

(322)   * John$_i$ is likely (that) t$_i$ will be sick.

Indeed, sentences of this type present one of the strongest arguments for the existence of Case (as argued explicitly by e.g. Martin, 2001). The basic idea is that, once *John* enters into a Case-checking relationship in the subordinate clause, it is barred from doing so in the matrix clause. There are a number of specific ways that this can be implemented. For example, we could say that *John* checks its Case and the EPP on T in the embedded clause, then raises and satisfies the matrix EPP, but cannot check the uninterpretable Case feature on matrix T, because its own Case feature is no longer

available. This would be a formalization of the Inverse Case Filter. Alternatively, given the problems with the ICF discussed above, we could assume with Chomsky (2000, 2001) that an element which has no uninterpretable features left to be checked is 'inactive' for future operations. Then *John* would be rendered inactive when its Case feature is checked in the embedded clause, and it would simply not be visible for attraction by the matrix EPP feature. It is interesting to note that, no matter how such an account is formulated, the ungrammaticality ultimately reduces to there being no way to meet the needs of the matrix clause. Still, it crucially requires the assumption of some feature like Case on DPs that can be checked off in order to encode the idea that a given DP can only take care of the needs of one finite clause. There is reason to believe, however, that this is on the wrong track.

Consider that this type of explanation blocks A-movement not just from finite subject position as in 322, but from all positions where Case is checked. While it is typically claimed that this is the correct generalization, I would like to argue that it is not. Recall from the discussion in Section 8.2.1 that movement from object position can be determined by the combined workings of the EPP and Relativized Minimality. It is possible to encode something like Burzio's Generalization within the grammar in order to ensure that object position will only be a Case-position when movement from it does not occur, but this gets us nothing. In any case, a general prohibition on movement from Case-positions is not necessary to account for the behavior of objects. We also do not need it for objects of prepositions. Again, as discussed in Section 8.2.3, languages like German that do not allow objects of prepositions to undergo A-movement do not allow them to undergo A'-movement either, so what we actually need is a general ban on extraction from PPs. Syntactic Case can be brought in after the fact to describe the patterns with DOs and objects of prepositions, but it does no real explanatory work.

If we consider these facts a bit more closely, however, the use of syntactic Case in the analysis of these facts is not just superfluous but incorrect. A-movement is in fact possible out of positions where DPs could otherwise be satisfied. There is nothing inherently defective about object or prepositional object positions in passives that forces DPs appearing there to move. Rather, it is the requirement for a derived subject (i.e. the EPP) which forces them to move when the external subject has been suppressed. Direct objects generally do have to raise to subject position in passives because they are the structurally highest remaining argument, the closest potential satisfier for the EPP. However, this can be interrupted by the presence of a higher argument, which itself is then forced to move as in 323:

(323)   John was given the beer.

In spite of the passive morphology, the object is perfectly licensed in situ in such examples. Now, one could argue that the DO in double object constructions is in a different position than the DO in simple transitives, because the IO occupies the structural object position. One could claim further that this special position for DOs in the double construction is associated with inherent Case, allowing the object to remain in situ in the passive. But I know of no independent evidence for such claims, and they strike me as extremely ad hoc, proposed solely to save Burzio's Generalization and the idea that passive verbs do not license structural Case. The idea that A-movement is triggered solely by the needs of clausal functional heads is much simpler. What is more, there is evidence of a similar kind from preposition stranding in languages which allow it, for which the inherent Case story is even less plausible. Consider the contrast between 324 and 325:

(324)   a.   John has never sat [$_{PP}$ on this chair].

           b.   [This chair]$_i$ has never been sat [$_{PP}$ on t$_i$].

(325)   a.   John has never left books [$_{PP}$ on this chair].

         b.   Books have never been left [$_{PP}$ on this chair].

         c.   * [This chair]$_i$ has never been books left [$_{PP}$ on t$_i$].

In the passive in 324b, the prepositional object raises to subject position. In 325b, however, it does not, because a higher argument is available, which raises to subject in its place. This is straightforward and precisely what we would predict if A-movement is driven by the EPP. If A-movement is driven by the needs of DPs, then things are much more complicated. Why should *the chair* be any more licensed within the PP in 325b than it is in 325a? Unlike in 323 we have absolutely no basis for saying that the additional object has forced the PP out of its normal position to one where it can get inherent Case. If one assumes the old abstract P-incorporation account of P-stranding, one could say that the intervening DO (or its trace) instead blocks incorporation of the P into V, thus P never loses its own ability to assign Case in such examples, and the DP is licensed in situ. Again, however, the abstract incorporation story is formally suspect and has no independent empirical support. It is far simpler to assume that A-movement is driven by the EPP, and this can very well occur out of positions where DPs are licensed to appear when the EPP can be satisfied by other means. In other words, a general ban on A-movement out of 'Case-positions' is **not** supported.

I would like to argue instead that the correct generalization about sentences like 322, repeated here as 326a, is that the embedded clause is a barrier to A-movement. Why should this be? The beginning of an answer lies in examples like 326b:

(326)   a.   * John$_i$ is likely (that) t$_i$ will be sick.

b. [That John will be sick] is likely.[20]

Apparently, the entire embedded finite clause from 326a has raised to matrix subject position to satisfy the EPP. If this is correct, then movement of *John* out of that clause as in 326a will actually be blocked by Relativized Minimality. Matrix T has an EPP feature which must be satisfied by the merging of an appropriate element in its specifier. If this is not to be done by the insertion of an expletive, it must be done by movement of a lower element. Sentence 326b shows that the embedded clause is just such an appropriate element, thus it will raise. Since the embedded subject *John* is contained within this clause, it cannot be raised out of it, just as the DP *Frank* cannot be raised from within the DP *the picture of Frank* in 327:[21]

(327)   * Frank$_i$ seems [the picture of t$_i$] to be hanging askew.

This analysis of raising verbs can be straightforwardly extended to the *believe*-class verbs, if the latter do indeed involve raising of the embedded subject into the matrix clause. Under such an analysis, true ECM complements are entirely parallel to raising complements. That is, we can say that overt subjects are not possible because they have been forced to raise to the matrix clause to satisfy an EPP feature there, in this instance on ν, Agr$_O$, or whatever head it is that provides the landing site for movement. If the overt raising analysis of ECM is **not** correct, and ECM subjects

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[20]I have switched to the raising predicate *be likely* because independent factors obscure the facts with simplex raising verbs like *seem*. Specifically, sentences like **That John is sick seems* are bad. It is unlikely that this is due to a syntactic difference between raising verbs and adjectives that would be relevant to the current discussion, since both *seem* and *be likely* allow the subject of an embedded nonfinite clause to raise into the matrix subject position, and there is no general ban against full clauses in the subject position of simplex verbs like *seem* (cf. *That John will be sick seems likely*). The correct generalization is apparently that simplex raising verbs, unlike raising adjectives, require an overt complement, an issue that is completely independent of whether the subject is a clause or not (cf. **A riot seems* beside *A riot is likely*). The proper account of these facts may very well be (partly) syntactic, but it does not seem to be connected to the issues that concern us here.

[21]A similar analysis of these facts is presented by Haeberli (2003). He argues for a technically very different theory, where movement is driven by the checking of categorial features, but he claims that the category C is specified as [+N], allowing CPs to satisfy the EPP and blocking the raising of other [+N] categories from within them.

actually remain within the embedded clause, then as noted above this clause-type actually passes over into the class of nonfinite clauses which allow overt subjects. In fact, if we follow Lasnik (2001), then the overt raising of embedded subjects into the matrix clause with *believe*-class verbs is in fact optional in English. Recall that he accounts for this by assuming that the EPP feature on ν is optional, with no reference to DP licensing. The question, then, is how the embedded subject could have its Case-checking needs taken care of in sentences where it does not overtly raise. Note that much of the evidence for the position of this DP is interpretive, and thus should reflect LF, so the possibility of covert movement for Case-checking purposes can be discounted. We would be left to assume that the licensing is by Agree in situ. Note again, however, that such a mechanism is essentially empty, since it has neither phonological nor interpretive effects. In any case, ECM infinitives raise no special problems for the account proposed here, where Case-licensing plays no role.

8.6.2   Deriving selection

Consider now what the analysis just proposed means for the larger concerns of this chapter. I argued in previous sections that, once *for* is properly understood, raising (and perhaps true ECM) clauses are the only ones where overt subjects are banned. I have now shown that the behavior of such clauses can be understood entirely in terms of the EPP, without reference to Case. We are thus in a position to argue against the standard take on when subjects are allowed to be overt. The idea that they are allowed generally in finite clauses, but not in nonfinite clauses except when some exceptional licensing mechanism is present, is far less attractive now. Rather, it would seem that they are quite generally allowed, the only exception being when they are forced to raise in order to satisfy an EPP feature in a higher clause. Moreover, we can see raising as resulting from a conspiracy of the independently observable

properties of predicates like *seem*. They do not assign an external θ-role, nor do they take a nominal complement (i.e. an underlying object), yet as clausal predicates, they appear in structures with a subject EPP feature. The only resources available for the satisfying this EPP, then, are related to their clausal complements. They can attract the subject from the embedded clause as in 328a; or they can insert an expletive subject associated with the embedded clause, as in 328b; or they can attract the entire complement clause as in 328c:

(328)　a.　John$_i$ seems t$_i$ to be sick.

　　　　b.　It is likely (that) John will be sick.

　　　　c.　[That John will be sick] is likely.

As discussed above, the first solution is not available in English when the complement clause is finite, because A-movement of the subject out of such clauses violates RM. Note also that the second two solutions are not available if the complement clause is of the raising type. It is actually predicted under the account here that sentences like 329 should be out. If this sentence were possible, we would expect normal raising from such a nonfinite clause to be blocked by Relativized Minimality, just as the possibility of 326b blocks 326a.

(329)　　*[John to be sick] is likely.

　　Still, this is not a full explanation. The question is, why should finite clauses be able to satisfy the EPP and be barriers to A-movement while raising infinitives are not? It is plausible to think that the answer should lie with their categorial status. I will not pursue this matter in detail here, but there is reason to believe that something like the traditional CP/IP distinction is on the right track. That is, finite clauses are CPs, while raising and ECM infinitives are IPs, and CPs but not IPs are nominal

to the extent that they can satisfy the EPP.[22,23] There is some support for this idea from other types of nonfinite clauses. We have seen already that sentences like 329 can be made grammatical with the addition of the element *for*:

(330)   [For John to be sick tomorrow] is likely.

In other words, certain nonfinite clauses are nominal as well in the sense that they can raise to satisfy the EPP. Not coincidentally, these are the clause-types that can take overt subjects and the element *for*, which I have argued is a complementizer. Note that, as we would expect, raising and real ECM with such clauses is also blocked:

(331)   * John$_i$ seems [for t$_i$ to be sick]

(332)   * John believes Frank$_i$ [for t$_i$ to be sick]

There are thus two possible structural analyses for 329, both of which are ungrammatical. Either the raised nonfinite clause is an IP and thus not eligible to satisfy the matrix EPP, or it is a CP with the null C in a position where overt spell-out of *for* is required.

8.6.3   Expletive *it*

What is not immediately predicted on the basis of what I have said so far is why a raising verb cannot take a nonfinite complement and an expletive subject:

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[22]This is reminiscent of Rosenbaum's (1967) account, whereby finite clauses are actually embedded in a dummy nominal projection.

[23]Note that, if the distinction really is between CPs and IPs, then there is potentially an additional way to explain why A-movement is blocked from such clause-types. Since CPs are phases, movement out of them should only be possible through the Spec-CP escape hatch, but since Spec-CP is an A'-position, A-movement cannot target it and will be blocked entirely. I considered such an account alongside the RM account in McFadden (2002a), and it has also been proposed by Nevins (to appear). Evidence to distinguish between the two analyses could come from languages that appear to allow raising out of certain types of finite clauses, e.g. Brazilian Portuguese (Rodrigues, 2002) and Modern Greek (Iatridou, 1993), depending on what we could tell about the categorial status of the relevant clauses, and whether they themselves can raise.

(333)   * It is likely John to be sick.

I have argued above that what is wrong with this sentence is that it contains a null C in a position where overt *for* would be required. Given the immediately preceding discussion, however, we must also deal with the possibility that the nonfinite clause here is in fact an IP, since I have argued that raising predicates take IP complements in sentences like 328a. If what we have is an IP, then there can be no non-overt C causing problems in 333. Indeed, sentences of this type have constituted another strong argument in favor of the assumption of Case, since they would seem to instantiate the situation where there is nothing to check the Case on *John*.

In his attempt to eliminate the need for Case, Marantz (1991) considers such examples and argues that what is really illicit is the insertion of expletive *it*. He specifically proposes that *it* can only be inserted as a last resort, when nothing else is able to satisfy the EPP. In 328a, *John* is available to satisfy the matrix EPP, but as argued above, such raising is blocked from a finite clause as in 326a. In such an instance – and only such an instance – expletive *it* comes to the rescue. On the other hand, since *John* could have raised in 333, insertion of *it* is blocked. However, a serious difficulty for this approach is presented by the alternation between 328b and 328c, repeated here as 334a and 334b:

(334)   a.   [That John will be sick] is likely.

         b.   It is likely (that) John will be sick.

Given the possibility of raising the entire embedded CP to satisfy the matrix EPP in 334a, under Marantz's account insertion of *it* should be illicit in 334b. Since 334b is clearly fine, insertion of expletive *it* cannot be only allowed as a last resort, and thus we cannot say that insertion of *it* in 333 is blocked by the possibility of raising *John* as in 320b.

Nonetheless, I would like to argue that Marantz was on the right track in suspecting that the problem in 333 lies with expletive *it*. Above I suggested that those types of clause from which A-movement is barred are in some sense nominal, since they themselves are able to satisfy EPP requirements, and that A-movement from within them is thus blocked by a form of Relativized Minimality. In fact, these are precisely the same clause-types which can be embedded in a clause that has an expletive-*it* subject:

(335)　a.　* John$_i$ is likely [that t$_i$ is sick]. (finite clauses)

　　　b.　　[That John is sick] is likely.

　　　c.　　It is likely [that John is sick].

(336)　a.　* John$_i$ would be odd [for t$_i$ to be sick]. (*for* DP *to* clauses)

　　　b.　　[For John to be sick] would be unfortunate.

　　　c.　　It would be unfortunate [for John to be sick].

(337)　a.　* PRO$_i$ would be unfortunate [t$_i$ to be sick]. (arbitrary PRO clauses)

　　　b.　　[PRO to be sick] would be unfortunate.

　　　c.　　It would be unfortunate [t$_i$ to be sick].

(338)　a.　　John$_i$ is likely [t$_i$ to be sick]. (raising verb complements)

　　　b.　* [John to be sick] is likely.

　　　c.　* It is likely [John to be sick].

I would like to suggest that what these data reflect is an expletive-associate relationship between *it* and the embedded clause. That is, just as *there* places restrictions related to definiteness and specificity on a post-verbal DP, *it* places restrictions on a post-verbal clause, in particular that it be a clause that is nominal in the sense we have been discussing so far. However this restriction should ultimately be implemented, its effect is quite reasonable: the subject expletive can only associate with

elements which are themselves eligible to be subjects. The problem with sentences like 338c is then that the expletive does not have a proper associate. This gives us a unified account of the three-way correlation in the data in 335-338, based on a distinction between nominal and non-nominal complement clause-types. The traditional Case-based account has an explanation for the correlation between the blocking of raising and the possibility of expletives, but it offers no insight into why these two properties should also pattern with the ability of the entire clause to raise to subject position. Thus an account of raising based on the EPP and RM not only accounts for the data, but captures a generalization that those based on syntactic Case miss.

8.6.4 Raising in German, Irish and Latin

Support for the account of raising and expletives just laid out comes from crosslinguistic evidence. I have argued that what forces the embedded subject to move out of raising infinitives is not its own need for licensing, but the need for a subject in the matrix clause, i.e. the EPP. This makes the prediction that, in a language that does not have an EPP of the English kind, we should be able to find examples where the the embedded subject stays in situ. Recall now that I argued in Section 8.2.4 that German has, in place of an EPP-like subject requirement, a V2-topic requirement that can be satisfied by any XP. If we look, then, at raising-type verbs in German, we find that they behave exactly as expected under my analysis. The verb *scheinen* 'appear' behaves in many respects like its English counterpart, taking a complement clause and assigning no external θ-role. It can appear preceded by an expletive and followed by a finite complement, as in 339a, or followed by a nonfinite complement and preceded by a subject element which has clearly raised out of it, as in 339b:

(339) a. Es scheint, dass Hans das Bier vergessen hat.
           it appears that Hans the beer forgotten has

'It appears that Hans forgot the beer.'

b. Die Einbrecher scheinen die Schreibmaschine gestohlen zu haben.
the burglars   appear   the typewrite   stolen   to have
'The burglars appear to have stolen the typewriter.'

However, as discussed by Ebert (1975), there is no requirement that the fronted XP be the embedded subject. It can just as well be the embedded object (example 340a) or an adverbial element (example 340b), in which case the embedded subject is perfectly happy to remain in situ:

(340)   a. Die Schreibmaschine scheinen die Einbrecher gestohlen zu haben.
the typewrite   seem   the burglars   stolen   to have
roughly 'The typewriter seems to have been stolen by the burglars.'

b. Gestern   scheinen die Einbrecher die Schreibmaschine gestohlen zu
yesterday seem   the burglars   the typewriter   stolen   to
haben.
have
roughly 'It was yesterday that the burglars appear to have stolen the typewriter.'

In other words, what is driving movement the pre-verbal position in these examples is just the V2-topic requirement. Now, if it were the need for Case that were responsible for raising to subject, then it would be difficult to explain why the embedded subjects in 340 are licensed in situ.

Evidence of a somewhat different kind comes from Modern Irish. Recall from Section 8.5.3 that this language allows overt subjects in a number of nonfinite clause-types where there is no clear source of external licensing. Now, the status of Irish with respect to the EPP is controversial, but it is clear that whatever requirements there may be, they are not as strong as in English. This can be seen by the fact that an overt expletive can appear when a raising verb takes a finite complement, but is not required (all data here are from McCloskey, 1985):

(341)　　a.　Caithfidh [go　　bhfuil sí　breoite].
　　　　　　　must　　　COMP is　　she ill
　　　　　　　'It must be that she is ill.'

　　　　　b.　Caithfidh sé [go　　bhfuil sí　breoite].
　　　　　　　must　　　it COMP is　　she ill
　　　　　　　'It must be that she is ill.'

What is really interesting is that this correlates with optionality in the raising of the embedded subject out of an infinitive complement:

(342)　　a.　Caithfidh sí$_i$　[gan　　　t$_i$ a bheith breoite].
　　　　　　　must　　　she$_i$ NEGCOMP t$_i$ be:INF　ill
　　　　　　　'She must not be ill.'

　　　　　b.　Caithfidh [gan　　　í　a bheith breoite.
　　　　　　　must　　　NEGCOMP her be:INF　ill
　　　　　　　'It must be that she is not ill.'

In 342a we can see that the embedded subject has raised to the finite matrix clause because it has crossed over the negative complementizer *gan* and is in the nominative form of finite clause subjects.

Now, if this raising is for Case reasons, we should expect it to be obligatory, but it is not. The embedded subject can also remain in situ to the right of *gan* and show the accusative form normal for overt subjects of nonfinite clauses. Now, one could always try to claim that the embedded clauses have different structures here, and thus have different Case-licensing properties. For example, one could suggest that we have a normal raising IP in 342a but more like the equivalent of a *for ... to* CP in 342b. However, this is not supported by the fact that both are introduced by the same complementizer-like element *gan*. Furthermore, there is evidence against taking 342b to have an embedded CP from the behavior with expletives. While an expletive subject is optional above a finite clause, it is **impossible** above a nonfinite clause, even when the embedded subject does not raise:

(343)   * Caithfidh sé [gan   í   a bheith breoite].
          must   it NEGCOMP her be:INF   ill

Assuming that Irish expletive *sé* places a similar restriction on its associate to that placed by English *it*, this would seem to indicate that the embedded clause here really is just a raising infinitival. Irish thus apparently allows the subject position in the matrix raising clause to be filled overtly, but does not require it. This can be done either by inserting an expletive above a finite clause, or by raising the subject out of a nonfinite clause. If this movement were for the licensing needs of the DP involved, we would be at a loss to explain how that DP gets licensed when the movement does not take place.

Similar arguments can be made on the basis of data from verbal complement AcI clauses in Latin. As is well-known, when the matrix verb is passivized, the embedded subject can raise, indicated by nominative case-marking and verbal agreement as in 344b:

(344)   a. Omnes   Belgas   Caesarem   necavisse   dicunt.
            all:N.PL Belgae:A.PL Caesar:A.SG kill:PERF.INF say:3PL
            'Everyone is saying that the Belgae have killed Caesar.'

        b. Belgae   Caesarem   necavisse   ab omnibus dicuntur.
            Belgae:N.PL Caesar:A.SG kill:PERF.INF by all   say:3PL.PASS
            'The Belgae are said to have killed Caesar by everyone.'

        c. Belgas   Caesarem   necavisse   ab omnibus dicitur.
            Belgae:Apl Caesar:Apl kill:PERF.INF by all   say:3SGPASS
            'It is being said by everyone that the Belgae have killed Caesar.'

However, it is also possible for the embedded subject to remain in the embedded clause as in 344c. We can tell that it has because it retains the accusative of AcI subjects and because the verb is in an impersonal form. This is thus roughly equivalent to what we get in English when the raising verb takes an expletive subject and the subject remains in the lower clause, but here the lower clause is an infinitive. Again, if it is

the need for licensing that drives the embedded subject to raise in 344b, then what allows it to remain low in 344c?

8.7 Subjects and tense/eventivity

I have argued repeatedly throughout this chapter that Case is unnecessary for a theory of the distribution of subject DPs. At worst the standard theories make the wrong predictions, and at best they are stipulative, because Case is not reliably connected to anything but DP distribution. It could thus in principle be assumed to be present wherever DPs are present, and absent wherever they are not, resulting in a completely vacuous theory. Before I move on to discuss the alternation between PRO and overt subjects, where this stipulative nature of Case-theory is especially apparent, I would like to discuss a class of proposals in the literature which has explicitly attempted to overcome this problem.

8.7.1 Tense

The idea, which has been presented in a number of forms by a number of researchers, is that the licensing of subjects correlates in some way with the tense, modal or aspectual properties of the clause. An interesting aspect of this correlation is that clauses with PRO subjects and clauses with overt subjects pattern together, opposite the nonfinite complements of raising and ECM verbs. This is one of the main insights of Martin's (2001 and preceding) reworking of Chomsky and Lasnik's (1993) null Case theory of PRO, according to which the null subject of control clauses actually does receive Case. Following Stowell (1982), Martin notes that there is an interpretive difference between the control infinitivals in 345 and the raising/ECM infinitivals in 346:

(345)   a. Ginny remembered to bring the beer.

      b. Sara convinced Bill to go to the party.

      c. Bob wants to buy a new camera.

(346)   a. Zagallo believed Ronaldo to be the best.

      b. The doctor showed Bill to be sick.

      c. The defendant seemed to the DA to be guilty.

The subordinate clauses in 345 have an event time that Stowell and Martin characterize as unrealized with respect to the matrix clause. On the other hand, that of the infinitives in 346 is identical to or simultaneous with that of their matrix clauses. Martin's idea is that control and raising infinitivals are distinguished by the presence of a feature [+/-tense] in the I complex, and that this feature interacts with [+/-finite] to determine the Case-checking properties of I. Thus [+tense] I, which is common to finite clauses and control infinitives, checks Case, while [-tense] I, which appears in control infinitives, does not. If I is [+tense, +finite], it checks the nominative Case that licenses an overt DP, but if it is [+tense, -finite], it checks the null Case that licenses PRO. When I is [-tense] its tense interpretation depends completely on the matrix clause, and it assigns no Case, so its subject is forced to raise.

Now, there is some controversy over whether the relevant feature really is tense or something else. Martin himself, though he uses the tense-based terminology, argues that the relevant interpretive correlate is more a matter of modality, with the 'unrealized tense' of control infinitivals corresponding to something like *would* or *should*. However, data presented already in Stowell's (1982) squib on the matter make it clear that neither of these is the right generalization. Specifically, gerundival clauses pattern with raising and ECM infinitives with respect to their tense properties, as shown in 347 and 348:

(347) a. Jenny remembered [PRO to bring the wine].

b. Jenny remembered [PRO bringing the wine].

(348) a. Jim tried [PRO to lock the door].

b. Jim tried [PRO locking the door].

In the a. examples, the control infinitives both have an unrealized interpretation, that is, at the time of the event in the matrix clause, the event in the embedded clause had not yet happened. On the other hand, in the b. examples, the time of the event in the embedded gerundival clauses is **not** specified as unrealized with respect to the matrix or in any other way. Rather, it is determined wholly on the basis of the semantics of the matrix verb. In 347b it is past with respect to the matrix because you can only remember something that has already happened, and in 348b it is present or future relative to the matrix because of what it means to 'try' something. That is, the event time of control infinitives is inherently specified as unrealized with respect to the matrix event time, while the event time of gerunds is unspecified, determined completely by the matrix clause.[24] Note also that 347b and 348b cannot be paraphrased with finite clauses involving modals like *would* or *should*. Gerunds are thus [-tense] in Martin's terms, yet contrary to what he would predict, they allow subjects, both overt and PRO.

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[24]Note that the event time of a finite clause can also be dependent for its precise interpretation on the event time of a higher clause, as in 1:

(1) a. John said that Bill hit the ball.
     b. John says that Bill hit the ball.
     c. John will say that Bill hit the ball.

The finite simple past tense of the embedded clause specifies the event time as being before some reference time, but that reference time is established by the matrix clause. Thus in 1a the embedded event time must be in the past, but in 1c it must only be prior to the future event time of the matrix clause, thus it could itself lie in the future. The property of having tense, then, is the ability to specify the relationship between the event time and some other reference time, not necessarily the ability to also specify that reference time. This latter ability is tied in to the matrix/embedded distinction more so than the finite/nonfinite distinction. See Stowell (1996) for discussion.

Another example of this type seems to come from infinitival clauses that are complements of adjectives, though I have not seen it mentioned in the literature. Consider the following paradigms:

(349)   a. It was difficult PRO to shovel the driveway.

          b. It is difficult PRO to shovel the driveway.

          c. It will be difficult PRO to shovel the driveway.

(350)   a. It was difficult for John to shovel the driveway.

          b. It is difficult for John to shovel the driveway.

          c. It will be difficult for John to shovel the driveway.

The event time of the embedded clauses in 349 and 350 is simultaneous with that of the matrix clause, as can be seen when we vary the tense of the latter. This is precisely the pattern that Martin notes for raising and ECM clauses, and is distinct from both control clauses, with their specified 'unrealized' tense, and finite clauses. Yet both PRO and overt subjects are possible in the complements of adjectives. Martin's claim that Case-licensing of a subject correlates with a clause having an independent tense specification is thus simply incorrect.

8.7.2 Eventivity

An alternative, proposed e.g. by Schütze (1997), is that subject licensing correlates with the eventivity of the clause. Schütze notes that the true ECM complements of *believe*-class verbs can get only habitual/generic interpretations as in 351a, while the control complements of *want*-class verbs can be interpreted as single events, as in 351b. Crucially, gerundival clauses pattern with the other subject-licensing clause-types in allowing the eventive interpretation, shown in 351c:

(351)   a. I believe John to run to school (every day).

    b. I want John to run to school (right now).

    c. Jane remembers [John breaking the lamp yesterday].

As Schütze (1997) himself points out, however, there are some counterexamples to this generalization. For example, certain raising predicates can take eventive complements:

(352)   a. John is likely to run to school right now.

        b. John seemed to run to school yesterday, but really he ran to the mall.

Furthermore, eventive predicates are quite generally possible in the presence of a tense/aspect auxiliary:[25]

(353)   a. I believe John to have committed the crime (that fateful night).

        b. John seems to have committed the crime (that fateful night).

Also, the correlation only holds in one direction. That is, clauses with subjects need not be eventive:

(354)   a. John ran to school every day.

        b. I want John to run to school every day.

It is not entirely clear, then, how we would formulate the purported licensing condition. Given these last examples, we cannot say that [+eventive] T licenses subjects while [-eventive] does not. Rather, we must find some other feature or element which both licenses subjects and licenses – but does not force – an eventive interpretation, and we must allow other elements like auxiliaries to license an eventive interpretation in the absence of the subject-licensing element. The relationship between eventivity

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[25]Bošković (1997) and Martin (2001) attempt to account for this by proposing that an event variable must be bound by an appropriate operator. They then claim that aspectual auxiliaries and temporal adverbs are event binders, as is Tense.

and subjects is thus indirect at best. Furthermore, with any account of this kind, one must wonder why something like eventivity or tense should have anything to do with the formal licensing of subjects.

8.7.3 What does tense/eventivity really have to do with subjects?

I do not mean to deny that there are correlations between tense/eventivity and the appearance of subjects in clauses. I simply want to show that they are not the result of a direct link in the form of Case-licensing. This is not the place for a full discussion of the interpretation of tense and eventivity, but a more promising approach is to assume, as is usual that tense and event semantics are related to the functional heads that appear in the clause. Differences in the normal interpretations of the various clause-types can then be related to differences in the array of functional heads that they involve. For example, Stowell (1996) assumes that the function of T is to encode the temporal relationship between the time of the event in its complement and the reference time in its specifier. One could thus argue that clause-types which lack a specification for this relationship (raising and ECM infinitivals and gerundivals) either lack this T altogether or have a defective specification. The lack of such a TP in raising/ECM clauses fits right in with the assumption that they are otherwise defective in lacking a CP.

The (partial) correlation with the presence of subjects would be due to the fact that only defective clauses allow DPs to be raised out of them. This is a mere suggestion at this point, but as such it already outperforms the theory of a direct link between tense and Case licensing because it does not make the wrong predictions about the gerunds. It is also more attractive conceptually, because it derives the cor-

relation from plausible links of tense interpretation and the appearance of subjects to the functional structure of the clause without positing any suspect direct connection between the two. It is plausible to think that something similar could be said about eventivity. Thus while correlations do exist between the tense and eventivity properties of clauses and the appearance of subjects within them, the evidence does not support a direct causal link. Once again we see that there is no single diagnostic which reliably characterizes the clause types that allow subjects. Positing an element called abstract Case in such clauses, whose sole purpose and effect is to license subjects, is stipulative and buys us nothing.

8.8 The alternation between PRO and overt subjects

The final issue for a theory of the distribution of subjects in embedded clauses is the alternation between PRO and overt subjects. The theory of PRO has long been a subject of intense research and debate and has undergone substantive revisions from early GB to current Minimalism, with Case consistently playing a key role. However, as throughout this chapter, I will argue that the assumption of abstract Case here is unnecessary at best and misleading at worst.

8.8.1 Null Case

According to the standard GB account, PRO was restricted to appear in ungoverned positions and was not subject to the Case filter. Overt DPs required Case and thus were restricted to governed positions since Case could only be assigned under government. Aside from serious conceptual and theoretical issues,[26] this account ran into

[26]Among other things, it was always quite odd that PRO should not require Case. Under the Visibility Condition, e.g., syntactic Case was supposed to play a role in θ-role assignment, but PRO requires a θ-role just like any other DP. This forced a disjunctive formulation of the Case filter in

insurmountable empirical obstacles. Chomsky and Lasnik (1993) thus proposed that PRO does in fact require Case of a special kind called null Case. This idea was then developed more fully by Martin (2001), who argued, as described in the preceding section, for a correlation between null Case assignment and a particular kind of T.[27]

While the null Case account of PRO overcomes many of the problems of the GB PRO theorem, it has a number of difficulties of its own. The biggest, as noted also by Hornstein (1999) and Manzini and Roussou (2000), is that null Case itself is a suspect entity without independent motivation, the same problem that Case has been running into throughout this chapter. In the words of Manzini and Roussou (2000):

> ...null Case and PRO are only ever seen in connection with one another. In other words, there is no independent way of establishing the existence of either. Thus null Case does not appear to provide a genuine explanation for the distribution of PRO, but rather a way of stating the descriptive generalization concerning its distribution. [p. 411]

One might think that null Case could perhaps be correlated quite literally with null morphological case-marking. This is an initially attractive idea, because one might think that a non-overt element would be barred from positions that host overt morphology. However, as discussed in Chapter 2, the well-known facts from Icelandic repeated below demonstrate that PRO is in fact assigned the same range of morphological cases as overt DPs (from Sigurðsson, 1991):

(355)   a. Strákarnir vonast til að PRO komast allir í skóla.
            the boys:N hope   for to N   get   all:N to school
            'The boys hope to all get to school.'

        b. Strákarnir vonast til að PRO leiðast ekki öllum í skóla.
            the boys:N hope   for to D   bore   not all:D in school
            'The boys hope not to all be bored in school.'

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order to exclude PRO from its purview.

[27]I refer readers to these two papers for more discussion of the shortcomings of the GB theory of PRO.

Subject-controlled predicates in the embedded clause agree with the case we would expect if we had an overt subject, even when the subject is the non-overt PRO. The nominative case in 355a could be taken to depend on the matrix subject, but the dative in 355b can only be from the embedded subject, which would show quirky dative if it were overt. vanden Wyngaerd (1994) presents similar evidence from ancient Greek and Latin, showing that this is not a language-specific quirk of Icelandic. We thus cannot identify null Case with any morphological phenomenon.

What is worse, the distinction between null and non-null Case does not seem to hold up even within Martin's own system. The problem (a recurring source of difficulty for theories of PRO) is that PRO and overt DPs are **not** in complementary distribution. Recall that, even if we ignore contexts where an overt DP must be preceded by *for*, we find the two alternating as the subjects of certain *want*-class verbs and gerunds (see Schütze, 1997, §2.1.3 for discussion of these facts and additional environments where PRO and overt subjects alternate):

(356)   a. John wants PRO/Frank to bring the beer.

          b. John remembers PRO/Frank bringing the beer.

Martin does not discuss gerunds, but he does attempt to deal with alternations like 356a. His proposal (p. 155) is that overt DPs can actually be licensed by null Case in such instances. He then suggests that the reason why overt DPs are banned in prototypical obligatory control environments, as in the complement of *try*, is that in addition to Case, overt subjects must check their ϕ-features, and that this operation is unavailable in such clauses. This is a highly unorthodox assumption that raises non-trivial theoretical problems.[28] Yet Martin provides no independent motivation for the use of ϕ-features in licensing, for why they should be relevant to overt DPs

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[28]For example, ϕ-features on DPs are interpretable, but it is usually assumed that only uninterpretable features require checking and thus can drive movement.

and not PRO, or for why they cannot be checked in obligatory control clauses. Furthermore, the move undermines the null/non-null Case dichotomy that the theory appeared to be based on. It may well be that PRO is intended to be licensed only by null Case (though this is not made clear) while overt DPs can be licensed by either null or non-null Case, in which case a distinction is maintained, but the idea loses its lustre if it there is no longer a one-to-one correlation between Case-type and DP-type.

Thus the null-Case theory does not seem to offer any significant insight into the distribution of overt and PRO subjects. The crucial point that Martin's work does demonstrate is that the there is an important divide between the clause-types whose subject raises into a higher clause and those that keep their subject, whether it be overt or PRO. However, the connection of this property with tense is inaccurate, the assumption of Case to encode it is unnecessary, and the subdivision of that Case into null and non-null varieties to correspond to PRO and overt subjects is untenable.

8.8.2   Interpretive explanations for PRO/overt DP mismatches

How, then, are we to account for the alternation between these two subject types? If we abandon the idea of Case as I have proposed, then the difference cannot be a matter of syntactic licensing. This conclusion is supported by the fact that, again, PRO and overt DPs are **not** in complementary distribution. Rather, there are a number of environments where both are licit, including e.g. the complements of adjectives like *difficult*:

(357)   a. It was difficult [PRO to carry all that beer].

     b. [PRO to carry all that beer] was difficult.

     a. It was difficult [for John to carry all that beer].

     b. [For John to carry all that beer] was difficult.

357 shows that clauses with arbitrary PRO are appropriate associates of expletive *it* and can raise to subject position, just like the *for...to* infinitives with an overt subject in 357. Note also that whether the subject is PRO or overt, the embedded clauses have an event time simultaneous to the matrix, and eventive predicates are possible without support from auxiliaries or adverbs. Similar facts hold for gerunds. These facts argue quite strongly that the alternation between PRO and overt subject here is **not** accompanied by a deep difference in the structures of the clauses, and thus is problematic for theories that try to relate their alternation to Case: there is no way to make sure that an overt DP will get Case in such instances while PRO will not, short of a bald stipulation. Indeed, as far as a syntactic licensing-condition is concerned, overt nominals and PRO should be the same thing: syntactic DPs. How they actually differ is in their phonological and interpretive properties, and thus we ought to seek to explain the differences in their distribution in just these terms. I have already suggested in Section 8.4 that the phonological difference may be connected to the equally phonological differences in whether the complementizer is spelled out as *for* or null. I will argue briefly here that the remaining differences can be tied to constraints on the interpretation of the two elements.

The distributional mismatch between PRO and overt DPs which may appear most problematic for my Case-less theory comes from obligatory control:

(358)   John tried *for Frank/PRO to get a keg.

I have proposed that subjects are generally possible in contexts where they can be associated with a θ-role – even in nonfinite clauses – unless they are forced to raise into a higher clause to satisfy an EPP requirement there. In typical obligatory control examples like 358, however, overt subjects are impossible in the embedded clause, even when accompanied by *for*. This cannot be the result of raising, because the

matrix predicate *try* assigns an external θ-role.

However, as has been argued recently by Schütze (1997) and Wurmbrand (2002) following many others, the problem with overt subjects in such sentences is traceable to the semantics of the verbs in question. That is, 'try' implies agentive involvement of its external argument in the eventuality in its complement, thus a coreferent subject is required, which is spelled out as PRO. Note, however, that an overt subject is possible when a convergent semantic interpretation is available, as in 359:

(359)   I've actually tried for him to catch the ball. He just wouldn't move.

This passage was found (through a Google search) on a message board discussing a beta version of a soccer video game. The speaker is describing his attempt to get the goalie to do an action. Since the speaker is literally in control of the goalie's actions – the goalie is in some sense an extension of the speaker – it is entirely consistent for the speaker to try for the goalie to do something.[29] Further support for the idea that acceptability of an overt embedded subject with such verbs is a matter of semantics rather than syntax comes from the fact that it varies from verb to verb, based on lexical semantics. This is, overt subjects range "from perfect with *want* to somewhat marginal with *hope (for)* to quite difficult with *try (for)* to impossible with *start*." (Schütze, 1997, p. 35)

Thus the impossibility of overt subjects in obligatory control clauses is not due to a syntactic restriction at all, let alone issues of abstract DP licensing. There do, however, seem to be clauses, at least in some languages, with no trace of a subject. Wurmbrand (2001, 2002) argues that this is what happens in restructuring clauses in German, as in 360:

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[29]The point here is not that it is possible to find examples on the internet of *try* with an overt embedded subject – one could find any number of sentences in this way which have no bearing on actual English, given the possibility for errors and the size of the corpus. What is important is that examples like 359 can be found, which is not an error, but is consistent with native speakers judgments when seen within its unorthodox context.

(360) a. weil   Hans den Traktor   zu reparieren versuchte.
           because Hans the tractor:A to repair   tried
           'because Hans tried to repair the tractor.'

       b. Der Lastwagen und der Traktor   wurden/*wurde zu reparieren
           the truck:N   and the tractor:N were/*was   to repair
           versucht.
           tried
           approx. 'They tried to repair the truck and the tractor.'

Sentence 360a looks like a normal instance of obligatory control, presumably with a PRO subject in the embedded clause, but something more interesting is going on in 360b. The matrix control verb *versuchen* 'try' has been passivized (note that it appears in the passive participle form), and the object of the embedded verb *reparieren* 'repair' has raised to matrix subject position – though *reparieren* shows no signs of being passivized. This is diagnosed not so much by the initial position of the (conjoined) DP, as by its nominative case-marking and the plural agreement it has triggered on the finite auxiliary. The problem is this: if this were a normal control example with a PRO subject in the embedded clause, the embedded object would have to raise across it to get to subject position, violating Relativized Minimality. Similar concerns apply to the case-marking facts. Based on this and a number of other facts, Wurmbrand argues that the embedded clause in 360b literally lacks a subject position. Having no subject at all, such predicates have their external θ-role supplied from the matrix clause, yielding the control reading.

The question now is whether data of this kind are problematic for the hypothesis being developed here. If there is no need for syntactic Case licensing, as I maintain, then why are subjects not possible in the embedded clauses of restructuring contexts? To answer this we need to consider more carefully the details of Wurmbrand's analysis. Crucially, she does not just claim that these embedded clauses are lacking a derived

subject position. Rather, she analyzes them as bare VPs without the ν head that introduces external arguments. In other words, subjects are not excluded by a failure of syntactic licensing, but because they are simply not projected, or, put differently, because there is no θ-role available for them. My claim all along has been that DPs are generally licit as long as they can be integrated into the interpretation by association with θ-roles, and the lack of subjects in these contexts is entirely consistent.

Thus instances where PRO is possible and overt DP is not do not require the assumption of anything like abstract Case. The obligatoriness of control in certain contexts is due either to lexical semantic requirements of the matrix verb, or the total lack of a thematic subject position in the radically reduced complements of restructuring predicates. Let us turn, then, to mismatches in the opposite direction, i.e. contexts where overt DPs are possible but PRO is not. For this issue I would like to make the parallel suggestion that the restrictions on the distribution of PRO are due to the conditions on its interpretation. I will have less of substance to say about this claim, in large part because the question of the proper treatment of PRO and control is a hotly debated issue at present with no clear consensus (for recent discussion see e.g. Martin, 1996, Hornstein, 1999, Landau, 1999, Manzini and Roussou, 2000, Martin, 2001, Culicover and Jackendoff, 2001, Wurmbrand, 2001, Landau, 2003, Boeckx and Hornstein, 2003). A number of these works, especially Hornstein (1999) and Manzini and Roussou (2000), do explicitly explore the idea that the distribution and interpretation of PRO should be unified within a single theory. The intuition is fairly clear. Obligatory-control PRO must be interpreted – as its name implies – as coreferent with some locally available DP, thus it will be restricted to positions where this is possible.

While perhaps not exactly the same phenomenon, this is abstractly quite similar to the situation with reflexives. It is not usually argued that reflexives have different

Case-licensing needs than normal DPs, but rather that their interpretation is referentially dependent in a specific way. Though there has always been disagreement on exactly how and where it should be implemented in grammar, the restricted distribution of reflexive pronouns has thus been taken to be some reflex of this interpretive property. For example in standard Government and Binding Theory reflexives could only occur in positions where they could be bound by an appropriate antecedent in a sufficiently local domain (its 'governing category). Other theories have used explicitly semantic (and/or pragmatic) restrictions in addition to or instead of such syntactic ones, but the basic idea is more or less the same.

I submit that PRO should be treated analogously, though, again, it is a matter of debate exactly how this should be done. Hornstein (1999), e.g. proposes a fully syntactic account, which claims that there is actually no PRO, and obligatory control just reduces to movement. That is, the subject of the the clausal complement of a verb like *try* is obligatorily interpreted as coreferent with the matrix subject because it is in fact a trace (or copy) related to it via a movement chain. This immediately explains why controlled PRO is impossible in matrix contexts, because there is no higher position to which it could have moved. The exclusion from the subject position of embedded finite clauses in languages like English is assimilated to the impossibility of raising from such clauses. On the other hand, this would imply that obligatory control infinitivals are IPs rather than CPs (or at least are non-nominal in the relevant sense). There is some evidence that this is correct, given that sentences are bad where such clauses have raised to subject position, as in 361a, or are the associates of expletive *it*, as in 361b:

(361) a. * [PRO to bring the beer] was tried.

       b. * It was tried [PRO to bring the beer].

However, such examples could just as easily be ruled out because they have an obligatorily-controlled PRO without a viable controller (or an NP-trace that has no appropriate moved antecedent). Also, to the extent that tense and eventivity are reliable indicators of the size of the clause, the facts suggest that control clauses are really CPs. Recall from the discussion in Section 8.7 that their event time is specified as 'unrealized' with respect to that of the matrix clause, and that eventive predicates are fine in the absence of temporal/aspectual auxiliaries and adverbs. Hornstein (1999)'s approach also requires some non-trivial assumptions – e.g. a radical reinterpretation of θ-theory – and has been criticized on extensive empirical and theoretical grounds by Culicover and Jackendoff (2001) and Landau (2003). For example, he has no good explanation for why we do not generally get raising from object to subject position with a single predicate, deriving sentences with a 'PRO' in object position and reflexive meaning.

I do not wish to argue for or against Hornstein's theory here, but to simply give some idea of the issues involved. What is relevant to my concerns is that, even if we adopt such a thoroughly syntactic account as this, we still need make no crucial reference to abstract DP licensing. To be sure, Hornstein himself formulates his theory in such a way that raising (and thus control) is driven and constrained by syntactic Case, but the instances where Case is assumed to be active are the same ones that I have discussed already in this chapter (especially in Section 8.6) and shown that licensing needs of the DP were **not** the crucial factor. In other words, if we can block raising from finite embedded clauses without positing syntactic Case (cf. Section 8.6.1), then we can block control in the same context. If it turns out that the correct theory of obligatory control PRO is not so exclusively syntactic as that in Hornstein (1999), but rather depends in large part on thematic, semantic and and pragmatic factors as argued e.g. by Culicover and Jackendoff (2001), then it would

be even more clear that a notion like syntactic Case is irrelevant.

Now, the PRO that appears in non-obligatory control contexts like 357a, repeated here as 362, is a somewhat different matter, as it does not require a local antecedent in the same way:

(362)   It was difficult [PRO to carry all that beer].

Nonetheless, this does not mean that its interpretation is entirely free. E.g. Landau (2003), following much earlier work, notes:

> More generally, it has been noted that PRO in NOC [non-obligatory control -TM] behaves like a *logophor*, displaying sensitivity to perspective, center of consciousness, and so on. Given that logophors are subject to more stringent antecedence conditions than pronouns, they are expected to be more restricted in distribution than the latter. This is indeed the case. [p. 483f., emphasis in original]

It is thus not unreasonable to think that the distribution of arbitrary PRO can ultimately be explained in terms of the conditions on its interpretation. The alternation between arbitrary and controlled PRO, e.g., is quite generally regarded in this way, including by Hornstein, who suggests that we get arbitrary PRO in just those instances where raising is blocked and thus a controlled reading is impossible. The point again is that the issues that remain to be resolved are issues for any theory of PRO, not just one that denies the existence of syntactic Case. By giving up the notion of a general DP-licensing requirement we do not lose any real insight into why PRO is banned from the subject position in finite clause and similar matters. Simply claiming that PRO has different Case-licensing requirements than overt DPs – in spite of the fact that there are a number of positions where both are equally possible – is an unmotivated stipulation, without support from any independent properties. On the other hand, tying its distribution to interpretive constraints capitalizes on the real and clear differences between its referential properties and those of overt DPs.

8.9 Conclusion

I have chosen to close my dissertation with this chapter because it leaves the most open questions and suggests the most avenues for future research. I have taken a shot here at the formidable edifice of Case theory, presenting evidence that our theory of grammar does not benefit from the assumption that DPs require abstract licensing over and above their need for θ-roles. The number of relevant phenomena and the breadth of the data are too great for me to have even approached completeness, and in many instances while I have provided convincing arguments against analyses, I have not been able to propose fully developed replacements. In my own estimation the most acute needs remaining are a real account of the distribution of *for*, and of course a satisfactory theory of PRO and control. I can comfort myself a bit, perhaps, with the fact that the latter need is felt quite generally. It is to be hoped that the work presented here can contribute to a future solution. As concerns the theme of this entire dissertation, I think I have presented enough reasons to be suspicious of the postulation of syntactic Case to address concerns that might have arisen due to the restriction of m-case to the morphological component argued for in previous chapters. The larger point, after all, is that if we are more careful about what is morphological and what syntactic, we can avoid a number of pitfalls and arrive at a deeper understanding of a wide range of linguistic phenomena.

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