

Introduction and Overview

In chapter 1 we discussed the component of the grammar that regulates the assignment of thematic roles to arguments, theta theory. Chapter 2 deals with the component of the grammar that regulates phrase structure, X'-theory. The grammar we are building has a modular structure: it contains distinct interacting components or modules. In this chapter we consider another module of the grammar: case theory.

Case theory accounts for some of the formal properties of overt NPs and integrates the traditional notion of case into the grammar. Though the discussion focuses on case in English we occasionally refer to examples from German.

In section 1 we introduce the notion abstract case as distinct from morphological case. Abstract case is a universal property, while the overt realization of abstract case by means of morphological case varies cross-linguistically. Section 2 is concerned with the distribution of NOMINATIVE and AC-CUSATIVE case in English. In this section we introduce the case filter, the requirement that all overt NPs be assigned abstract case. In section 3 we introduce the difference between structural case and inherent case. In section 4 we consider the adjacency requirement on case assignment. Section 5 describes the properties of passive sentences. Section 6 discusses the relation between case, theta theory and subcategorization.

1 Morphological Case and Abstract Case

Consider the examples in (1):

- 1a The butler attacked the robber.
- 1b [That the butler attacked the robber] is surprising.
- 1c [For the butler to attack the robber] would be surprising.

(1a) is a simple sentence, containing two NPs, *the butler* and *the robber*. In (1b) the simple sentence (1a) is used as the subject clause of an adjectival

predicate (*surprising*). In (1c) we find the non-finite parallel of (1a) used as the subject of the adjectival predicate.

In chapter 1 we saw that NPs realize the arguments of the predicate of the sentence and are theta-marked, directly or indirectly. In (1) the verb *attack* assigns two theta roles. This information is encoded in the lexical entry of *attack*. Following our convention adopted in chapter 1, we indicate the relevant theta roles by numbering and ignore for the most part the specific label. Occasionally, we consider the thematic relations more carefully.

2 attack: verb

| | |
|----------|---|
| <u>1</u> | 2 |
| | |

Let us replace the argument NPs in (1) by the corresponding pronouns:

- 3a *He* attacked *him*.
 3b That *he* attacked *him* is surprising.
 3c For *him* to attack *him* would be surprising.

Depending on their positions in the sentences, the third person pronouns appear in different forms. When the pronoun is the internal argument of *attack* it takes the form *him*. Adopting the terminology of traditional grammar we call this form the ACCUSATIVE case. When the third person pronoun is the external argument of *attack* it takes either the form *he* or the form *him*. The latter form is again the ACCUSATIVE case of the pronoun; the form *he* will be called the NOMINATIVE case. Pronouns thus can be seen to have different case forms: *he* is NOMINATIVE, *him* is ACCUSATIVE. A third case form found in English NPs is the GENITIVE, illustrated in (4a) and (4b).

- 4a *The butler's* coat was too big.
 4b *His* coat was too big.

In English, the overt morphological realization of case in full lexical noun phrases is restricted to the GENITIVE case. As seen in (1), NOMINATIVE and ACCUSATIVE are not realized overtly in modern English full NPs, though

these case forms were overtly marked in earlier stages of the language.¹ Adjectives and determiners, which used to have case forms in earlier stages of the language, have also lost distinct overt case forms.

The overt distinction of **NOMINATIVE** and **ACCUSATIVE** forms in modern English is still to be found in the pronoun system, though even there we find several examples of case **syncretism**: two case forms having the same morphological realization. Table (5) illustrates the overt realization of the case forms in NPs: in (a) we find the full lexical NPs, in (b) we list the pronouns. As can be seen **NOMINATIVE** and **ACCUSATIVE** are the same for the pronouns *you* and *it*.

5 English case forms

| | NOMINATIVE | ACCUSATIVE | GENITIVE |
|--------------------------|--------------|--------------|----------------|
| <i>a Lexical NPs:</i> | | | |
| | the man | the man | the man's |
| | the good man | the good man | the good man's |
| <i>b Pronominal NPs:</i> | | | |
| 1 sg | I | me | my |
| 2 sg | you | you | your |
| 3 sg masc | he | him | his |
| 3 sg fem | she | her | her |
| 3 sg neut | it | it | its |
| 1 pl | we | us | our |
| 2 pl | you | you | your |
| 3 pl | they | them | their |

Other languages, like Latin or German, have a morphologically rich case system where distinct cases are overtly marked on nouns, adjectives, determiners, etc., as well as on pronouns. Consider, for instance, the following Latin examples:

- 6a Caesar Belgas vincit.
 Caesar Belgians beats
 'Caesar beats the Belgians.'

An interesting discussion of the development of the English case system is found in van Kemenade (1986), Lumsden (1987) and Roberts (1983). These works should be accessible when chapter 7 has been covered.

- 6b *Belgae* *Caesarem* *timent*.
 Belgians Caesar fear
 'The Belgians fear Caesar.'

In (6a) the NP *Caesar* is in the NOMINATIVE case and the NP *Belgas* is ACCUSATIVE. Conversely, in (5b) *Belgae* is NOMINATIVE and *Caesarem* is ACCUSATIVE.

From German we give the following examples:

- 7a *Der Mann/Student hat den Lehrer gesehen*.
 the man/student has the teacher seen
 NOMINATIVE ACCUSATIVE
- 7b *Der Lehrer hat den Mann/Studenten gesehen*.
 the teacher has the man/student seen
 NOMINATIVE ACCUSATIVE

In German, case forms are overtly realized on the determiner system of NPs and also on a certain class of nouns (cf. the ACCUSATIVE form *Studenten* in (7b)).

Although English does not have the overt case-marking that we find, for example, in Latin and in German, it has the remnants of an overt case system, as seen in the pronominal system. We therefore do not wish to say that English lacks case. Rather, following our discussion of agreement in chapter 2, section 3.2.2, we postulate that English has a fully-fledged system of abstract case, similar to that in Latin or German. We assume that abstract case is part of universal grammar. In English the abstract case-marking is often not morphologically realized. The degree of morphological realization of abstract case varies parametrically from one language to another.

The concept of abstract case is an important part of Government and Binding Theory. Based on work by Vergnaud (1985), Chomsky and his followers have developed a theory of case, *case theory*. As we shall see (section 6) attempts have been made to relate case theory to other components of the grammar, notably theta theory. We first look at some examples of English case forms and try to show how case theory can be developed on the basis of those.

2 Structural Case: NOMINATIVE and ACCUSATIVE

In this section we concentrate on the distribution of NOMINATIVE and ACCUSATIVE case forms. We discuss GENITIVE case in section 3.

As can be seen in (3), the NOMINATIVE case (*he*) is reserved for the NP in the subject position of finite clauses. The ACCUSATIVE case (*him*) is used both for the object NP of a transitive verb ((3a), (3b) and (3c)) and for the subject NP of an infinitival subordinate clause (3c).² We also find ACCUSATIVE case realized on the NP complement of a preposition.

8 Jeeves moved towards *him*/**he*.

Adopting the concepts of traditional grammar, we can say that subjects of finite clauses have NOMINATIVE case and that NPs that are complements of prepositions or verbs as well as NPs that are subjects of infinitival clauses appear in the ACCUSATIVE. But this informal system needs some discussion. At this point we have provided a list of occurrences without trying to relate the distribution of the case forms to other properties of the sentences in question. Recall that we argued in the Introduction that lists offer no insight into the phenomena that are listed.

2.1 Complements: ACCUSATIVE

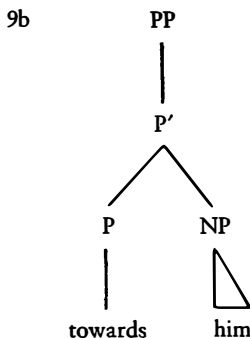
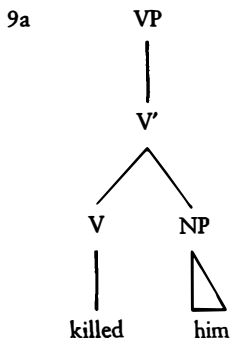
2.1.1 V AND P AS CASE ASSIGNERS

Let us first look at the complements of transitive verbs and prepositions. Following traditional accounts of case we might say that transitive verbs and prepositions assign ACCUSATIVE case to the NP they govern. They case-mark an NP which they govern. Thus in (9) the V and the P will case-mark the complement NPs. In this view, heads assign case.

² The subject of infinitival clauses used as main clauses is assigned either NOMINATIVE (i) or ACCUSATIVE (ii):

- (i) He go there? Impossible.
- (ii) Him attack Bill? Never.

Sentences such as (i) and (ii) are clearly marked. They cannot be used to start a conversation, rather they will be used to echo a preceding utterance. The source of the case on their subjects is a matter for further research.



The conditions of case assignment are partly structural: ACCUSATIVE case is assigned under government. A verb cannot assign ACCUSATIVE case to an NP outside the VP such as the subject:

10 *Him found the evidence.

Consider the definition of government given in chapter 2:

11a Government (chapter 2 (78))

A governs B if and only if

- (i) A is a governor;
- (ii) A m-commands B; and
- (iii) no barrier intervenes between A and B.

Maximal projections are barriers to government.

Governors are heads.

(11b) spells out the various components of the definition in more detail:

11b Government

A governs B if and only if

- (i) A is a governor;
- (ii) A m-commands B;
- (iii) no barrier intervenes between A and B.

where

- (a) governors are the lexical heads (V, N, P, A) and tensed I;
- (b) maximal projections are barriers.

In (10) the V *find* does not govern the subject NP.

The possibility of case assignment is also a function of the type of verb, i.e. the governor. Only transitive verbs and prepositions assign case. Intransitive verbs like *wander* or *overeat* cannot assign case to a complement NP:

12a *He wandered them.

12b *He overate them.

Nouns and adjectives also do not assign ACCUSATIVE case (see discussion in section 3).

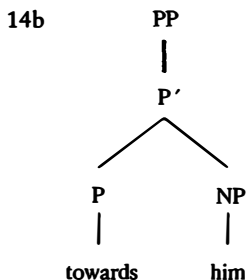
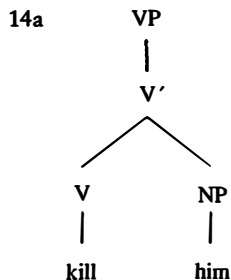
13a *Poirot's attack him.

13b *Poirot is envious him.

We shall classify transitive verbs and prepositions as ACCUSATIVE case assigners.³

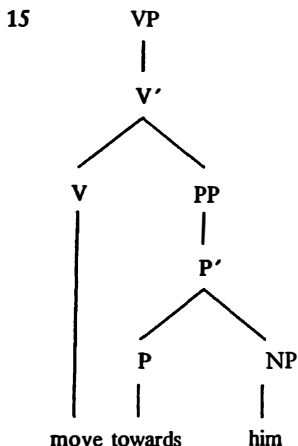
2.2.2 A NOTE ON MINIMALITY AND GOVERNMENT

In section 2.1.1 we propose that both V and P are ACCUSATIVE case assigners. In the configuration (14a) V case-marks the direct object NP, [NP, V'], and in (14b) P case-marks its complement, [NP, P'].



Consider though, the representation in (15):

In chapter 2, section 7, we pointed out that the ability of a category to assign case has sometimes been related to the presence of the feature [-N]. Prepositions and verbs are [-N], nouns and adjectives are [+N] (see Stowell, 1981).



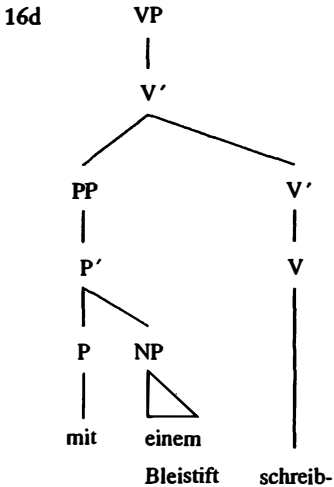
The reader may wonder which element is the case assigner in (15): is *him* case-marked by the preposition or is it case-marked by V? Under our definition of government in (11) it is P which case-marks the NP *him*, PP being a maximal projection, hence a barrier. This is also confirmed if we consider German data such as those in (16). The advantage of German is that V and P may assign distinct cases; in our example: the V *schreiben* assigns ACCUSATIVE and the P *mit* assigns DATIVE. Consider the following examples from German:⁴

- 16a *dass er einen Roman schreibt*
 that he a novel (ACC) writes
 'that he writes a novel'
- 16b *dass er mit einem Bleistift schreibt*
 that he with a pencil (DÄT) writes
 'that he writes with a pencil'
- 16c **dass er mit einen Bleistift schreibt*
 that he with a pencil (ACC) writes

In (16a) the direct object NP *einen Roman* is assigned ACCUSATIVE case by the transitive verb *schreiben*. In (16b), the complement of *mit* is assigned

⁴ (16) illustrates subordinate clauses to avoid the specific word-order problems of Germanic languages (cf. Haegeman 1992).

DATIVE. It cannot be assigned ACCUSATIVE, as seen in (16c). The structure of the VP in (16b) will be (16d), and PP is a barrier for government.



Schreiben, though potentially an ACCUSATIVE case assigner, does not assign ACCUSATIVE to the NP inside the PP.

There is an alternative way of ensuring that P case-marks its complement in (16d) and one which will become more relevant in chapters 10 and 12. We introduce it here for completeness' sake. Consider (16d) again. Both V and P c-command, and m-command, the NP; we might wish to say that V cannot assign case to NP because P is 'closer', P intervenes between V and NP. We could say that if there are two potential governors, the closer governor wins out. This idea is expressed in terms of a minimality condition on government (17). Observe that government is defined in terms of m-command but that the intervening Z is computed in terms of c-command.

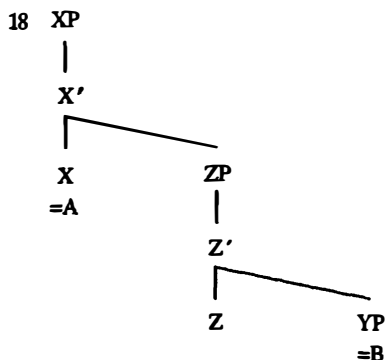
17 Minimality

A governs B if and only if

- (i) A is a governor;
- (ii) A m-commands B;
- (iii) there is no node Z such that
 - (a) Z is a potential governor for B;

- (b) Z c-commands B;
 (c) Z does not c-command A.
 (Cf. Rizzi, 1990a: 7)

(18) gives a schematic representation.



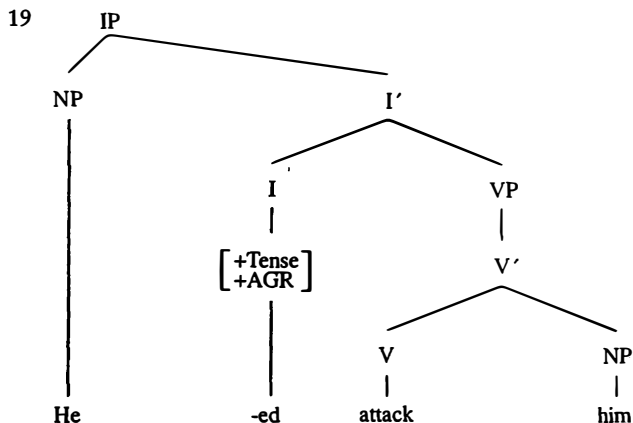
By the Minimality condition, (17) has the effect of excluding the possibility that V govern YP, the complement of the PP in (16). The minimality condition will become important in the second half of the book, especially in chapters 8, 10 and 12.

2.2 Subjects: NOMINATIVE and ACCUSATIVE

2.2.1 NOMINATIVE SUBJECTS

Subjects of finite clauses have NOMINATIVE case (cf. (3a)). Let us try to link the assignment of NOMINATIVE case to a governing head just as we have linked the assignment of ACCUSATIVE case to V or to P in 2.1.1. One important element in the discussion is the contrast between the subjects of finite clauses and those of infinitivals: subjects of finite clauses are NOMINATIVE, subjects of infinitivals are ACCUSATIVE (cf. (3c)). In chapter 2 we claimed that the distinction between finite and non-finite clauses can be drawn in terms of the feature composition of the head of the clause, INFL or I. In finite clauses INFL is [+Tense, +AGR]; in non-finite clauses INFL is [-Tense, -AGR]. This suggests that the assignment of NOMINATIVE case can be associated with finite INFL. We leave it open at this point whether it is

Tense or AGR or a combination of Tense and AGR which is responsible for the NOMINATIVE case. Consider the tree diagram in (19):



In order to ensure that I can case-mark [Spec, IP] under government we are forced to adopt the definition of government in terms of m-command (11). A definition in terms of c-command would not suffice: I does not c-command [Spec, IP]. On the other hand, for case assignment by V (or by P) both a definition in terms of c-command and one in terms of m-command would do: in the example above V c-commands the object NP.

It has been proposed (Sportiche 1988b) that the subject NP in [Spec, IP] is assigned NOMINATIVE case not by virtue of government by I but rather by virtue of the specifier-head agreement between the subject NP and INFL. It could thus be argued that case-marking is achieved either via government or via specifier-head agreement.⁵

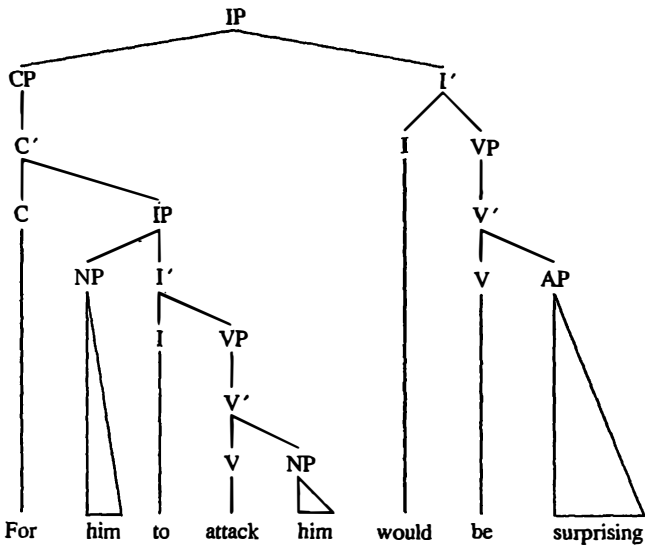
2.2.2 THE SUBJECT OF INFINITIVAL CLAUSES

2.2.2.1 *For as a Case-marker* We repeat (3c) with its tree diagram representation in (20):

20a [For him to attack him] would be surprising.

The role of agreement in determining case relations has become more prominent in more recent developments of the theory. In Chomsky (1992), it is proposed that indeed that all case assignment is licensed via specifier-head agreement relations. Such an account clearly will imply serious modifications to the discussion in section 2.2.1.

20b



How do we account for the ACCUSATIVE case of the subject NP of the infinitival clause? One possible answer would be to argue that it is the infinitival I (*to*) that is responsible for case-marking the NP subject. This is unlikely in view of the following examples.

- 21a **[Him to attack Bill] would be illegal.*
 21b *[That he should have attacked Bill] was surprising.*
- 22a **I prefer very much [him to go now].*
 22b *I prefer very much [that he should go now].*

(21a) and (22a) each contain an infinitival subordinate clause. In each example the infinitive marker *to* is present but the sentence is not grammatical. In contrast, (21b) and (22b) contain a finite subordinate clause; the head of the clause, I, assigns NOMINATIVE case to the subject NP. Potentially, there might be different ways of explaining the ungrammaticality of (21a) and (22a), but a significant point to take into consideration is that the sentences are saved by the insertion of *for* as the complementizer of the non-finite clause:

23a [For him to attack Bill] would be illegal.

23b I prefer very much [for him to go now].

Alternatively, the sentences are rescued by the omission of the overt subject of the infinitival clause. In chapter 5 we discuss the status of the subject position (indicated with a dash) in the infinitival clauses in (24).

24a [—To attack Bill] would be illegal.

24b I prefer very much [—to go now].

Let us try to relate these groups of examples. It is the presence of the element *for* under C that enables the overt NP subject *him* to survive. When *for* is absent the subject pronoun must also disappear (24). Which property of *for* could be used to explain these phenomena?

In (23), the preposition *for* occupies the head position of CP. We call *for* in such examples a **prepositional complementizer**. *For* is a preposition, hence an ACCUSATIVE case assigner (see sections 2.1 and 2.2.1). We shall argue that the role of *for* is indeed to case-mark the subject *him*. The next question is why there should be any need for such a case on the NP.

Let us postulate that there is a universal requirement that all overt NPs must be assigned abstract case, the **case filter**.

25 Case filter

Every overt NP must be assigned abstract case.

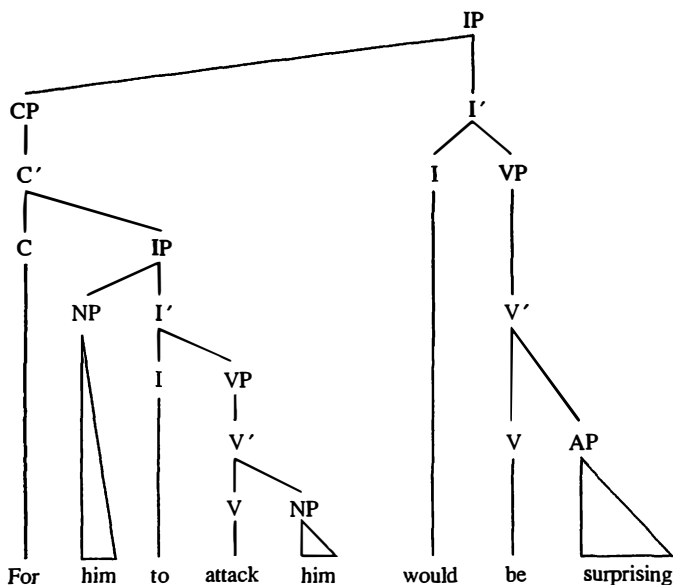
This requirement is called a filter because it 'filters out' any construction containing an overt NP which is not assigned case. We assume, from now on, that the case filter applies to *all* overt NPs. The reader may observe that a filter such as (25) does not explain anything. It merely states that a certain type of construction is ungrammatical, without attempting to explain why this should be so. In section 6 we shall try to link the case filter to other principles of the grammar.

(21a) and (22a) are ungrammatical, but can be saved either by insertion of the case assigner *for* or by omission of the overt subject. Our hypothesis will be that (21a) and (22a) are ungrammatical because *to*, the non-finite I of the infinitival clause, cannot assign case to the [Spec, IP]. Finite I, which is [+Tense, +AGR], assigns NOMINATIVE case and contrasts with non-finite I which is [-Tense, -AGR] and does not assign case. (21a) and (22a) are ungrammatical because they violate the case filter.

The case filter has nothing to say about the subject of the infinitives in (24) since these sentences lack an overt NP subject (see chapters 5 and 8 for the discussion of infinitival clauses without overt subject).

The prepositional complementizer *for* in (23) case-marks the subject NP of the infinitival clause: (23) passes the case filter and is grammatical. However, caution is needed with respect to such an analysis of (23). We have said that case is assigned under government. Hence we would like to be able to say that the case assigner *for* governs *him*, the subject of the clause which it introduces. Consider (26):

26



The question could be raised how come *for* can case-mark the NP in [Spec, IP]. If maximal projections are barriers for government (cf. (11)) then *for* should not be able to govern into its complement IP. We will assume that IP is not a barrier. Observe that I, the head of the infinitival IP, is a functional head which has the feature composition [-AGR, -Tense]. In (11b) we did not list non-finite I among the governors. As a first approximation, let us say that non-finite I is 'weak', it is not a governor and that its projection IP cannot block outside government. Hence *for* can govern into non-finite IP and case-mark its subject. Observe that we should ensure that in (26) the

finite inflection of the matrix clause (past tense, third person singular) will not be able to govern into the lower clause to assign nominative case to the subject:

27 [_{CP} *For he to attack Bill] was illegal.

We shall assume that while the infinitival IP is not a barrier for outside government, CP, whose head is *for*, is a barrier for government. In chapter 10 we return to the definition of barriers. If NOMINATIVE case is assigned by virtue of specifier–head agreement between the subject NP and a finite INFL, then (27) will also be excluded. The NP *he* does not have the required specifier–head relation with the matrix I, rather *he* is the specifier of *to*, the subordinate non-finite I.

2.2.2.2 *Exceptional Case-marking* Continuing the examination of subjects of infinitives in English, we turn to (28):

28 John believes [him to be a liar].

In (28) *believe* takes an infinitival clause as its internal argument. The first question we may ask is which label to assign to the bracketed string: is the relevant constituent an IP or a CP? One argument in favour of the IP hypothesis is that it is not possible to insert the complementizer *for*, which is typical for infinitival clauses, in front of the subordinate clause:⁶

29a *John believes for him to be a liar.

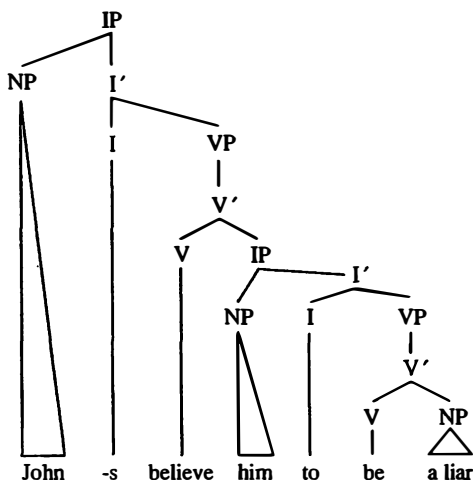
29b *John believes very much for him to be a liar.

(28) will have the syntactic representation (30):

Believe may also take a finite CP as its complement:

(i) I believe [_{CP} that [_{IP} he is a liar]].

30



The question we address here is how *him* can satisfy the case filter, i.e. be assigned (ACCUSATIVE) case. Our hypothesis (see the discussion of (21) and (22)) was that infinitival I is not a case assigner. The obvious candidate for case-marking *him* in (30) is the transitive verb *believe*:

31 I believe this story.

In (31) *believe* case-marks the NP *this story*. On the basis of our previous discussion it is plausible that *believe* can assign case to *him*, the subject of the complement IP. *Believe* is separated from *him* by a maximal projection, infinitival IP. By assumption, infinitival IP will not constitute a barrier for outside government and hence *believe* can assign case to the relevant NP.

The situation in which a verb like *believe* can govern into an IP and assign case to its subject NP is often referred to as exceptional case-marking abbreviated as ECM.

As a final illustration consider the following examples:

32a I know [_{IP} John to be the best candidate].

32b I don't know [_{CP} whether [_{IP} —to go to the party]].

32c *I don't know [_{CP} whether [_{IP} John to go to the party]].

(32a) is parallel to (30). *Know* takes an IP complement, governs into the maximal projection IP and case-marks *John*. In (32b), the presence of *whether* indicates that we have an infinitival clause of the type CP. In this example, there is no overt subject in the infinitival clause (see chapter 5 for non-overt subjects in infinitival clauses), thus the case filter (25) does not come into play with respect to the subject NP of the lower clause. In (32c) *know* again takes a clausal CP complement (witness the presence of *whether*). In this example the infinitival clause contains an overt NP subject *John*. The sentence is ungrammatical because it violates the case filter. Infinitival *to* is assumed to be unable to assign case. The potential case assigner *know* is separated from the relevant NP by the maximal projection CP, which is a barrier (see also the discussion in chapter 10).

2.2.2.3 *Small Clauses* In chapters 1 and 2 we have briefly discussed the structure of small clauses, illustrated in (33).

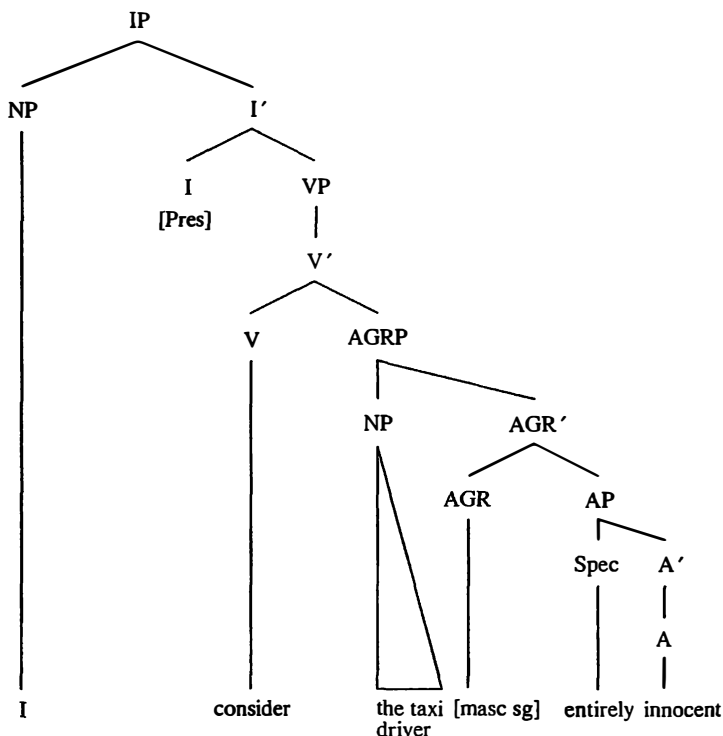
33a Maigret considers [the taxi driver [entirely innocent]].

33b I consider [Maigret [an inspector of great value]].

33c I consider [your proposal [completely out of the question]].

Given the case filter the subject NPs of the small clauses in (33) must be case-marked. The small clauses themselves do not contain a case-marker. Consider, for instance, the simplified syntactic representation of (33a):

33d



We adopt the hypothesis discussed in chapter 2 that small clauses are projections of a functional head AGR. By analogy with the argumentation used in section 2.2.2.2 we deduce that the AGR head of a small clause fails to assign case. This assumption would account for the ungrammaticality of (34a) in contrast with the grammatical example (34b):

34a [*The taxi driver entirely innocent] was believed by everyone.

34b [That the taxi driver is entirely innocent] was believed by everyone.

(34a) is ungrammatical because the subject of the small clause, *the taxi driver*, lacks case. In (34b) the finite INFL on *is* assigns NOMINATIVE case to its subject. Let us say that, like non-finite I, small clause AGR is too weak to case-mark its subject. We propose that in (33d) it is the verb *consider* which case-marks the subject of the small clause. Witness the fact that if we

replace the small clause subject by a pronoun it will have the ACCUSATIVE form. If V can case-mark the subject of the small clause this implies that the small clause AGRP also is not a barrier for an outside governor.⁷

2.3 Summary

To sum up this section: we have argued that overt NPs are subject to the case filter: they must be assigned abstract case. We have discussed two instances of abstract case: NOMINATIVE and ACCUSATIVE. ACCUSATIVE case is assigned by a governing V or P, NOMINATIVE case is assigned by I, under government, or by specifier-head agreement. In order to account for case assignment to the subjects of infinitival clauses we have adopted two hypotheses: (i) non-finite I is not a case assigner; (ii) infinitival IP is not a barrier to outside government. Subjects of small clauses are also case-marked by an outside governor. Again we assume that (i) the small clause AGR is not a case assigner, and (ii) the AGRP which constitutes the small clause is not a barrier for government.

3 Adjectives and Nouns

3.1 *Of-insertion*

So far we have looked at case assignment by finite I – NOMINATIVE – and by verbs and prepositions (including *for*) – ACCUSATIVE. Nouns and adjectives are not case assigners in English:

- 35a Poirot envies Miss Marple.
- 35b *Poirot is envious Miss Marple.
- 35c Poirot is envious of Miss Marple.
- 35d *Poirot's envy Miss Marple
- 35e Poirot's envy of Miss Marple

All the examples in (35) contain a main predicate morphologically and semantically related to the verb *envy*. In (35a) *envy*, the verb, is used; in (35b)

The reader will observe that the data discussed here will also be subject to important revisions if we assume with Chomsky (1992) that all case assignment (or case-checking as it is called) is done under specifier-head relations (cf. footnote 5).