

11 Case

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0 Introduction

Case has a long history in the grammatical study of human languages. Although it stems from the Classical Greek word that means declension or modification and it was originally used to refer to the variants of a given noun, it came to mean “interrelation between nouns (or words)” in the course of the Middle Ages. In modern linguistics, case is used to refer to something like “grammatical forms expressing some relations that such nominal categories (henceforth, nominals) as nouns, pronouns, or adjectives may bear in a clause,” though it is often the case that one framework varies widely from another in its exact denotation. In this chapter I describe case, concentrating on its treatments within the framework of Generative Grammar.

Whatever framework may be assumed, however, it is not easy to tell exactly what kind of role case plays in the grammatical system of natural language: it does not refer merely to the declined forms (morphological shape) of nominals, or the relationships they bear in a clause. Rather, it is the generic term given to what expresses abstract relationships between morphological forms of nominals and the interpretational relations they bear in a clause. In other words it refers to the grammatical category that mediates between form (morphophonology) and meaning (semantics). In this respect it is very interesting to ask what kind of role case plays in syntax, for syntax is often assumed to be the intermediate between semantics and morphophonology, especially within the framework of Generative Grammar. In what follows in this chapter I address myself to some issues that case poses to the theory of syntax.¹

1 Morphological Case, Abstract Case, and Universal Grammar

In the history of linguistics, case was studied for a long time as one of the main topics of morphology: the study was made primarily by considering such

questions as “how does the variance of the forms of case yield the difference in meaning?” or “what kind of case should be employed when such and such a meaning is expressed?” Even in the Generative Grammatical tradition, case was regarded as a merely morphological feature that is assigned by a (kind of transformational) rule to a particular lexical item with such a grammatical relation as SUBJECT or OBJECT (cf. Chomsky 1965, Siegel 1974). Since grammatical relations are structurally determined in the framework of Chomsky (1965), the morphological shape of a given nominal is also determined according to its structural position in this framework.

It is a well-known fact that languages differ in terms of their way of expressing morphological case on nominals. In Latin, for example, every noun has six forms of case, each of which is expressed by declining its stem. While, like Latin, many languages in the world (Russian, Finnish, Georgian, Basque, etc.) have morphologically distinct forms of case for all nominals, it is only for pronouns that English makes the distinction in terms of their morphological shapes, and the distinction is only binary: nominative vs. non-nominative. Still more curiously, in languages like Chinese or Thai, there is simply no morphological distinction of case. It should be noted, however, that the fundamental assumption of Generative Grammar concerning the uniformity of the human language ability (i.e., the assumption about Universal Grammar) demands that the aforementioned differences among languages in terms of the morphologically overt/covert marking of case should be taken to be superficial and attributed to some parametric variations in morphology. The important point is that, whether it is overtly displayed or not, case should be present in all nominals at a more deeply abstract level in the theory of grammar. This abstract notion of case as a theoretical construct is called “abstract Case” to contrast it with the morphological forms of case. Hereafter I will call the former “Case” (capital C) and the latter “case” (small letter c). Under this view of Case and case, the morphological shape of a given DP is regarded as the morphophonological realization of Case, an abstract feature assigned to that DP by some rule.

2 Syntax of Case Marking

Under the aforementioned theory of abstract Case assumed in the Aspects model, Case was connected remotely with syntax, for Case is just marked by the Case marking rule upon a nominal with such and such a grammatical relation. In the late 1970s and the early 1980s, however, Case came to play a significant role in syntactic theory.

2.1 *Theory of abstract Case*

Chomsky (1980), following an idea suggested by Jean-Roger Vergnaud (cf. Rouveret and Vergnaud 1980, Vergnaud 1985), proposed that Case should be

regarded as the prerequisite for DP to be active in syntax. That is to say, a sentence containing any (phonologically overt) DP without Case appropriate for its structural positioning is excluded as an ungrammatical one. This idea about the licensing of DP with Case enabled us to give an answer not only to the question concerning the distribution of DP in syntactic structures but also to the question of why certain DPs must undergo the transformation called DP-movement.

Elaborating this idea under a more integrated theory of grammar, Chomsky (1981) made the following proposals (later called Case Theory, which was supposed to be a module of Universal Grammar):²

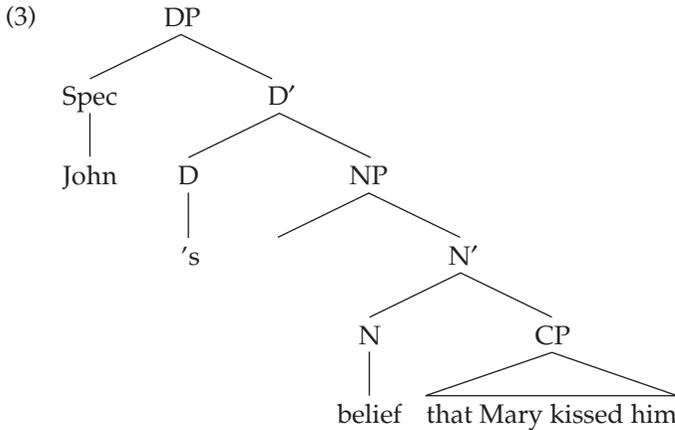
- (1) **Case Filter** (applied at S-structure)
*NP if NP has phonetic content and has no Case. (Chomsky 1981: 49)
- (2) **Case Assignment Rules** (Chomsky 1981: 170)
 - a. NP is nominative if governed by AGR.
 - b. NP is objective if governed by V with the subcategorization feature: NP (i.e., transitive).
 - c. NP is oblique if governed by P.
 - d. NP is genitive in [_{NP} X'].
 - e. NP is inherently Case-marked as determined by properties of its [-N] governor.

Furthermore, Chomsky (1981) proposed to distinguish Case assigned under (2e) from the others assigned under (2a, b, c, d): the former was named “inherent Case” and the rest “structural Case.” He assumed that, while structural Case is dissociated from theta-role and assigned in a purely structural way, inherent Case is linked closely with theta-role. Hence, various theta-roles may be assigned to an element with a given structural Case in principle. This captures a well-known fact concerning a difference between structural Case and inherent Case: in accusative languages like English, Latin, and Japanese, DP as the subject in a clause which is assigned nominative Case under (2a), and DP as the object in a clause which is assigned accusative Case under (2b),³ may usually have various kinds of theta-role; on the other hand, DP with such inherent Case marking as ablative or instrumental can only have a fixed theta-role such as that associated with Source or Instrumental (cf. Fillmore 1968).⁴

2.2 *Government based Case theory*

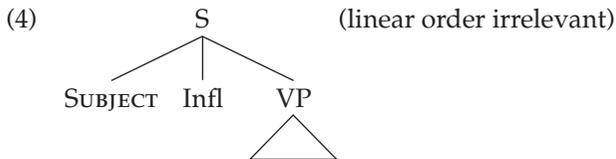
Since its original formulation in Chomsky (1980), Case Theory had been continuously elaborated in subsequent work through the GB era (e.g., among many others, Chomsky 1981, 1986a, Stowell 1981, Baker 1988). Most remarkable is the elaboration concerning the unification of structural conditions on

Case marking. Except genitive Case, all other structural Cases are assigned under government. It is theoretically preferable if we can say all Cases are assigned under government. Let us assume, following the lead of Abney (1987), that noun phrases are headed not by N (noun itself) but by D (determiner), the abstract functional category responsible for the inflection within noun phrases. According to this DP-hypothesis, noun phrases such as *John's belief that Mary kissed him* are analyzed as in (3):⁵

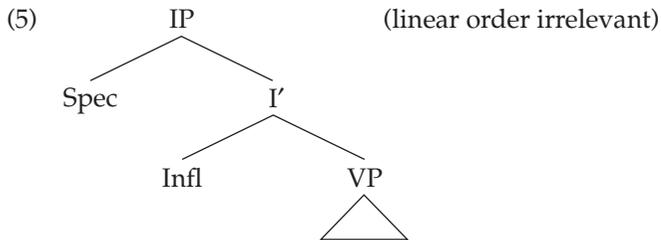


Now suppose that the possessive marker 's as a D has the ability to assign genitive Case under government. Then, it is possible to say that it is under government that the assignment of genitive Case to *John* (3) is executed. With this modification of (2d),⁶ the assignment of all structural Cases is unified under government; thence, this elaborated Case theory can be called "Government Based Case Theory" (hereafter, G-CT).

Moreover, in formulating (2a), Chomsky (1981) assumed the phrase structure illustrated in (4), where the surface position of SUBJECT counts as a daughter of the S-node, which also dominates Infl (containing AGR-features):



In fact, the position of SUBJECT is indeed governed by Infl in (4), but it is odd from the X'-theoretical point of view since S does not have a head (see Stowell 1981) in (4).⁷ Under Chomsky's (1986b) X'-theory, reinforced with the binary branching hypothesis of Kayne (1984), it is assumed that SUBJECT in an indicative affirmative clause usually occupies the Spec of Infl at S-structure, as illustrated in (5):



In the structure illustrated in (5), which satisfies the X'-theory, the Spec of Infl is also governed by Infl as required.

With this (elaborated) G-CT, we can appropriately predict which case form of DPs can appear in which positions. Take (6), for example:

- (6) a. *We*/**Us*/**Our* love **they*/*them*/**their*.
 b. **he*/**him*/*his* belief that Mary kissed Bill

The first person plural pronoun at the sentence initial position in (6a), which is assumed to occupy the Spec of Infl (a functional head including AGR), is governed by AGR; therefore it is assigned nominative Case and morphophonologically realized as *we* in English. Likewise, the third person plural pronoun, which counts as the object of the transitive verb *love*, must stand in the accusative, for it is governed by the verb and, hence, assigned accusative Case by it.⁸ In (6b), on the other hand, the third person masculine singular pronoun is governed by D (just like *John* in (3) above), resulting in its morphological realization of genitive Case.

The above examples in (6) show how the G-CT works to exclude DPs whose assigned Case feature is incorrectly realized in their surface positions. In addition, the G-CT enables us to explain the ungrammaticality of sentences in which DP fails to be assigned a proper Case:

- (7) a. Mary loves him.
 b. Mary is fond *(of) him.
 c. Mary criticized him.
 d. Mary's criticism *(of) him.

Note that the preposition *of* in these examples has no particular meaning. Then, the ungrammaticality of the sentences without it must be attributed to something other than meaning; namely, form. Given the G-CT, the reason why they are ill formed is that there is no proper Case assignor available. Although the adjective *fond* in (7b) and the noun *criticism* in (7d), respectively, can properly assign a theta-role to *him*, they are not a structural Case assignor. Hence, *him* fails to satisfy the Case Filter, resulting in ungrammaticality, unless some proper preposition like *of* is provided to realize the inherent Case assigned to it together with its theta-role (see Chomsky 1986a, Chomsky and

Lasnik 1993). In (7a, c), on the other hand, the verbs *love* and *criticize*, both of which assign an external theta-role to their subject, can properly assign accusative Case to *him* as required.

Next let us consider (8):

- (8) a. [That John loves Mary] is doubtful.
 b. [**(For)* John to love Mary] would be doubtful.

In (8a), *John* is properly assigned nominative Case by the Infl in the embedded clause because the Infl in the embedded clause in (8a) is a tensed one and has AGR in English. On the other hand, the Infl in the embedded infinitival clause in (8b) lacks AGR because of its [-AGR] nature in Modern English; therefore *John* in (8b) has no proper Case assignor available unless the prepositional complementizer *for* is provided to assign oblique Case to it (see Chomsky 1981, Stowell 1981, for the prepositional complementizer).⁹ It is interesting to notice that the Case Filter (1) requires that Case must be assigned to DP if DP has phonetic content. Then, this allows us to predict that if DP lacks phonetic content, it can occur at a position to which Case is not assigned. This prediction is, indeed, borne out:

- (9) a. [{ PRO } to go abroad] would be nice.
 { *(For) him }
 b. John's plan [{ PRO } to go abroad].
 { *(For) him }
 c. It is nice [{ PRO } to go abroad].
 { *(For) him }

As can be deduced from the discussion thus far, the positions where PRO occurs in the examples in (9) are all Case-less: since the English infinitival Infl has no ability to assign Case to its Spec because of its [-AGR] nature, there is no Case assignor inside the embedded infinitival clauses in (9). Even outside of the clause, there is no Case assignor available, for nouns and adjectives lack any ability to assign Case; therefore, PRO can occur there without any proposition.¹⁰

2.3 Exceptional Case marking

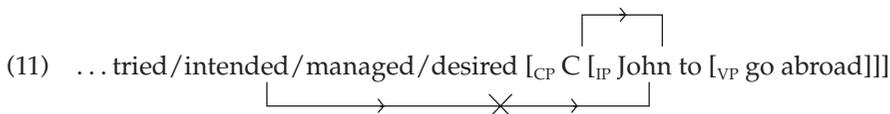
Here it is important to note that it is because Case is not available from inside or outside of the infinitival clause that phonologically overt DPs (without any prepositional complementizer) are disallowed to occur at the subject position of the infinitival clause lexically selected by a category lacking Case assigning ability such as nouns or adjectives, just as *him* in (9b, c) is disallowed. Given that transitive verbs can assign Case, it is interesting to consider what happens about Case if an infinitival clause is selected by such a verb.

To examine this, take the following examples:

- (10) a. Mary believed/considered/reported [John/*PRO to have loved her].
 b. Mary tried/intended/managed/desired [*John/PRO to go abroad].

Since all the verbs in (10) assign an external theta-role, they may count as an accusative Case assignor (see n. 8). This enables us to predict that phonologically overt DPs are allowed to occur at the subject position of the embedded infinitival clauses in (10) because (accusative) Case is available from V from the outside of the clauses. Then, why are they excluded only in (10b)?

Although each verb in (10b) as a transitive one may have the ability to assign accusative Case, it is possible to say that it cannot assign its Case to the subject position of the embedded infinitival clause because it does not govern the position. This is confirmed by the fact that PRO, which can appear only in a non-governed position (see n. 10), can appear there. Then, what prevents the verbs from governing that position in (10b)? It is commonly assumed that such verbs as listed in (10b) select CP as their infinitival complement, so that V cannot govern the Spec of Infl where the subject of the embedded clause occurs. This is due to the so-called Relativized Minimality effect on government (see Rizzi 1990) (that is, C m-commands that position more closely than V m-commands it: cf. the definition of government given in n. 2), as illustrated in (11):



Therefore, phonologically overt DPs are excluded in (10b) because Case cannot be assigned to them under government. The verbs that select an infinitival CP-clause as its complement, disallowing phonologically overt DPs in the subject position of the infinitival clause, are called “control verbs.”¹¹

Returning to the examples in (10a), we can conclude from the prohibition of PRO at the subject position of the embedded infinitival clause that that position is indeed governed. Besides, we have already noted that Case is not available to the subject position of an infinitival clause in English from the inside of the clause. Thus, it must be that the Case of the phonologically overt DP at the subject position of the infinitival clause in (10a) is assigned under government from the outside of the clause; namely, from the matrix V. The fact that the matrix verbs in (10a) are all accusative Case assignors leads us to predict that the Case of the phonologically overt DP must be accusative. This prediction is borne out by the following example:

- (12) Mary believed/considered/reported [him/*he/*his to have loved her].

Next let us consider how the matrix verbs in (12) can assign accusative Case under government to the subject position of the infinitival clause that they

select as their complement. If they select a CP-complement just like control verbs, they can never govern that position, as argued above. Hence, the infinitival complement clause they select must be IP, as illustrated in (13):

- (13) ... believed/considered/reported [_{IP} him to [_{VP} love her]]

Since in (13), the verbs m-command *him*, and there is no head such that the verbs c-command it and it c-commands *John* (notice that the Infl *to* m-commands but does not c-command *him*), the verbs govern *him*, resulting in proper assignment of accusative Case to *him*, as required. The verbs that select an infinitival IP-clause as their complement, allowing phonologically overt DP in the subject position of the infinitival clause, are called “ECM (Exceptional Case Marking) verbs.” ECM verbs, too, and their constructions have raised a lot of interesting issues concerning Case in the history of Generative Grammar (cf. Postal 1974), some of which are still attracting much interest in the framework under the Minimalist program (cf. Koizumi 1993, Ura 1993, Bošković 1997b).

2.4 Case and DP-movements

In the previous subsection we observed that phonologically overt DPs cannot occur at a Case-less position, and that they are excluded as a violation of the Case Filter unless some means to supply them with Case (like inserting a preposition such as *for* or *of* in front of them) is provided. Therefore it is natural to deduce that a phonologically overt DP at a Case-less position can move from there to a position where Case is available in order to get assigned Case. This is the rationale of DP-movements in the GB theory with the G-CT as a module of Universal Grammar (see Baltin in this volume for more details on DP-movements). Vast numbers of studies in the GB era were devoted to confirming that DPs are moved on Case-theoretic grounds in a variety of constructions in a variety of languages (see, among many others, Marantz 1984, Baker 1988, Bittner and Hale 1996a). In this subsection I will sketch out some of the rudimentary applications of the G-CT to DP-movements.¹²

Looking back at the Case assignment rules stated in (2), we realize that (structural) Case assigners are all [−N]. When considering the examples in (7) above, we have already observed that adjectives and nouns, both of which are analyzed as [+N] under the categorial feature classification (cf. Jackendoff 1977), do not have the ability to assign Case to elements they govern. Now it is a traditional claim that past participles behave like adjectives in many respects. In accordance with this tradition, let us assume that past participles lack the specification concerning [±N]. Then, we expect that past participles like adjectives lack the ability to assign Case. Now consider what happens when a structure like the following is constructed at D-structure:

- (14) [_{IP} *e* Infl [_{VP} is loved Mary]]. (D-structure)

In (14) the subject position (i.e., the Spec of Infl) is empty (which is represented by *e*). The object *Mary* in (14) cannot get any Case if it stays there at S-structure because the past participle *loved* cannot assign Case. But the subject position, which is now empty, can be provided with nominative Case by the tensed finite Infl. Suppose that in order for *Mary* to get assigned Case by Infl under government to fulfill the Case Filter at S-structure, it is moved from the object position, where it is base generated, to the subject position. This derivation is illustrated in (15):

- (15) [_{IP} Mary_k Infl [_{VP} is loved t_k]]. (S-structure)
-
- The diagram shows a bracket under the object position t_k in the VP, with an arrow pointing left to the subject position $Mary_k$ in the IP.

This is the explanation of the derivation for passive clauses under the G-CT.¹³

Some kinds of adjective that subcategorize a clausal complement assign no theta-role to their subject position. In the theory for the architecture of phrase structures assumed in the GB era (called Projection Principle), the lack of theta-role at a position means that that position is empty at D-structure, and can serve as a landing site of DP-movements and host pleonastic elements like English *it* or *there* (see Roberts 1987, Shlonsky 1987, as well as Fukui in this volume):

- (16) a. It is certain/likely [that John has loved Mary].
 b. *e* is certain/likely [John to have loved Mary]. (D-structure)
 c. John_k is certain/likely [t_k to have loved Mary]. (S-structure)
-
- The diagram shows a bracket under the object position t_k in the VP, with an arrow pointing left to the subject position $John_k$ in the IP.

Given that adjectives cannot assign Case, *John* in (16b) gets no Case if it lingers in the subject position of the infinitival complement at S-structure. The same mechanism as in the passive formation applies here: the Case-less DP is moved from its Case-less base position to the Spec of finite Infl, where nominative case is provided by Infl under government. This DP-movement derives the S-structure illustrated in (16c) from the D-structure in (16b). This is the G-CT analysis of the kinds of DP-movement called “raising.”¹⁴

The analysis of raising with the G-CT gives an account of the reason why raising is prohibited from the subject position of a finite clause:

- (17) a. *e* is certain/likely [that John has loved Mary]. (D-structure)
 b. *John_k is certain/likely [that t_k has loved Mary]. (S-structure)
-
- The diagram shows a bracket under the object position t_k in the VP, with an arrow pointing left to the subject position $John_k$ in the IP.

In (17a) *John* is already located at a position where it can get (nominative) Case; therefore, it need not move any more to seek for Case. If the system of the grammar for human language has a Last Resort constraint which forces it to avoid any redundant operation (see Collins in this volume), the movement of *John* illustrated in (17b) violates this constraint, resulting in its degradation in grammaticality.

In this subsection I have sketched out a few instances of DP-movements that are claimed to be caused by Case under the G-CT.¹⁵ As is evident from the discussion presented so far, the G-CT, which consists of the Case Filter and the Case assignment rules stated in (1) and (2), depends crucially on notions such as government, the Projection Principle, the distinction between D- and S-structure, etc. Chomsky (1992), however, casts a strong doubt on these notions as a conceptual construct necessary for the system of the grammar for human language. Hence, in the Minimalist framework initiated by Chomsky (1992) and continuously elaborated in subsequent work (cf. Chomsky 1995b), an approach without resort to those conceptually unnecessary notions has been taken. In section 4 below, I will outline the Case theory assumed in the earlier Minimalist program, which is called “AGR-based Case theory.”

Before entering into the discussion on Minimalist Case theory, I will, first, take a look at the issue concerning the significant relationship between abstract Case and grammatical relations, an issue which is very traditional but still central to the study of case/Case in general linguistics.

3 Case and Grammatical Functions/Relations

3.1 Structural determination of Case and grammatical functions/relations

It is commonly held in the literature that every element (mostly, argument) in a clause has its own grammatical functions (hereafter, GFs). Each of the abilities to launch a quantifier floating, to control the missing subject in a subordinate adjunct clause, to bind a (subject oriented) reflexive, to induce subject agreement on the finite verb of the clause, to stand in nominative, etc. is regarded as a GF.¹⁶ Grammatical relations (GRs) such as SUBJECT and OBJECT have been used as a cover term to refer to a set of some of those GFs that a single argument in a clause is supposed to have in general.

A widely held view is that, if some argument *A* in a clause counts as having the GR SUBJECT (i.e., *A* assumes SUBJECTHOOD), then *A* is supposed to have the set of the GFs that are linked with the GR SUBJECT. And it is also widely assumed that, if *A* has one of the GFs linked to SUBJECTHOOD, then *A* counts as the SUBJECT of the clause. In English, for example, if a DP counts as having the GR SUBJECT, the DP is expected to have the GFs linked to SUBJECT, such as the ability to induce agreement on the finite verb in the clause and the ability to control the missing subject of a subordinate adjunct clause like the *without*-clause (cf. Postal 1990: 373–4):

- (18) a. They_k *has/have hired John_i [without PRO_{*i/k} having to commit themselves_k/*himself_i to that salary].
 b. John_i has/*have been hired (by them_k) [without PRO_{i/*k} having to commit *themselves_k/himself_i to that salary].

Inversely, by differentiating which argument has one of the GFs linked to SUBJECT, we can tell which argument should be the SUBJECT of the clause.

In section 1, we observed that the Case theory assumed in the *Aspect* model associates Case very closely with GRs. We also observed, in section 2, that under the G-CT assumed in the GB theory, the Case of a given DP is determined according to the structural position the DP occupies at S-structure. Independently of the G-CT, Chomsky (1981) proposed the idea that the GR of a given DP which is assumed to be a bundle of certain GFs is also determined according to the structural position of the DP at S-structure. According to this idea, the DP located at the Spec of Infl, for example, is regarded as having GFs linked with the GR SUBJECT. This idea about GFs/GRs has been commonly accepted under the GB theory.¹⁷ The important point is that Case is correlated with GRs through the mediation of structural relations under the GB theory.

3.2 *Problems for structural determination of Case*

Empirical studies on the relationship between Case and GRs/GFs, however, have demonstrated that there are lots of problems for any approach that correlates Case with GRs. Under the GB theory, structural relations are guaranteed to be invariant and universal thanks to the “conventional” X'-theory and the Projection Principle (see Fukui in this volume). Many researchers (e.g., among others, Keenan 1987, Comrie 1989, Palmer 1994, Givón 1997) have revealed that some GFs that an argument with a particular GR is believed to bear are neither absolute nor invariant ones, but they vary from language to language or even from construction to construction in a single language. These kinds of phenomenon (what I call GF-splitting phenomena) in which GFs are split up can hardly be given any consistent account under the theory that considers GRs to be uniformly defined through invariant structural relations. Now that Case is correlated with GRs through structural relations under the GB theory, such GF-splitting phenomena are problematic to the G-CT.¹⁸

A typical example of GF-splitting phenomena can be found in languages like Icelandic, where, in addition to an ordinary clause where the nominative marked DP has the functions to be associated with the GR SUBJECT (functions such as the ability to induce the agreement inflection, the ability to control, the ability to bind a subject oriented reflexive, etc.), we can find a clause in which a non-nominative marked DP, instead of the nominative marked one, seems to function as the subject of the clause. (This construction is called “Quirky-Subject Construction” (QSC).)

Among QSCs, constructions with a dative subject (Dative Subject Constructions (DSCs)) have been studied most intensively in the literature (see Harley 1995, Ura 1996, forthcoming, for the list of studies on DSCs in a variety of languages). Japanese is one of the languages that allow DSCs. Let us take a look at Japanese DSCs and see how this raises problems to the G-CT. DSCs in Japanese may occur when the predicate in the clause is a kind of so-called psych-predicate:

- (19) a. Taroo-ni hebi-ga kowa-i. (Japanese)
 Taroo-Dat snake-Nom fearful-Pres
 "Taroo is fearful of snakes."
 b. Taroo-ni eigo-ga dekir-u.
 Taroo-Dat English-Nom understand-Pres
 "Taroo understands English."

Many studies on Japanese DSCs have concluded that the dative marked DP in this construction must count as SUBJECT syntactically; that is, it has GFs associated with the GR SUBJECT (see, among many others, Perlmutter 1984 and references there). First, it can bind a subject oriented anaphor:

- (20) John-ni_k zibun-ga_k/zibun-zishin-ga_k simpai-da. (Japanese)
 John-Dat self-Nom/self-self-Nom worry-Cop
 "John_k worries about himself_k."

The subject oriented anaphora *zibun* and *zibun-zishin* cannot be coreferential with any non-subject even if it is c-commanded, as the ill-formedness of (21) shows:

- (21) John-ga_k Mary-o_i [zibun_{k/}_{s/}/zibun-zishin-no_{k/}_{s/} sensei]-ni (Japanese)
 John-Nom Mary-Acc self/self-self-Gen teacher-to
 hikiawaser-(ar)er-u.
 introduce-Pot-Pres
 "[Lit.] John_k can introduce Mary_i to self's_{k/}_{s/} teacher."

The well-formedness of (22) below, where the non-subject oriented reflexive *kanojo-zishin* is properly bound by *Mary*, shows that *Mary* in (21) indeed c-commands, but not binds, *zibun/zibun-zishin*:

- (22) John-ga Mary-o_i [kanojo-zishin-no_i sensei]-ni (Japanese)
 John-Nom Mary-Acc herself-Gen teacher-to
 hikiawaser-(ar)er-u.
 introduce-Pot-Pres
 "[Lit.] John can introduce Mary_i to herself's_i teacher."

The conclusion is that the dative marked DP in DSCs can bind a subject oriented anaphor in Japanese.

Second, the dative marked DP in DSCs can control the missing subject of a subordinate adjunct clause:

- (23) [PRO_k sutoraiki-o yat-tei-nagara], (Japanese: Perlmutter 1984: 321)
 strike-Acc do-Prog-while
 roodoosya-ni(-wa)_k sono mokuteki-ga wakara-nakat-ta.
 workers-Dat(-Top) its purpose-Nom understand-Neg-Past
 "[Lit.] While PRO_k being on strike, the workers_k did not understand its purpose."

As the ill-formedness of (24) shows, PRO in the Japanese *-nagara* construction cannot be controlled by any non-subject (Perlmutter 1984):

- (24) [PRO_{k/i} ongaku-o kiki-nagara], John-ga_k Mary-o_i (Japanese)
 music-Acc listen to-while John-Nom Mary-Acc
 damasi-ta.
 cheat-Past
 “While PRO_{k/i} listening to music, John_k cheated Mary_i.”

It is interesting to notice that, as shown in (21) and (24), it is the nominative marked DP that has the ability to bind a subject oriented reflexive, and the ability to control the missing subject of a subordinate adjunct clause when the clause is an ordinary transitive clause with the nominative–accusative pattern. From these observations, it can be justly said that it is not always the case, contrary to Chomsky’s (1981) theory of GFs/GRs, that nominative Case is assigned to the DP with the GR SUBJECT.

Far more interesting to our concern is the fact that there is evidence which indicates that the dative marked DP in Japanese DSCs is located at the Spec of Infl at S-structure. Consider (25), in which subject honorification is involved:

- (25) a. Yamada-sensei-ga seito-o o-tasuke-ni nar-ta. (Japanese)
 Prof. Yamada-Nom student-Acc Hon-help-to become-Past
 “Prof. Yamada helped a student.”
 b. *Seito-ga Yamada-sensei-o o-tasuke-ni nar-ta.
 student-Nom Prof. Yamada-Acc Hon-help-to become-Past
 “A student helped Prof. Yamada.”

Harada (1976) claims that the so-called subject honorification in Japanese is induced solely by the element with the GR SUBJECT. Toribio (1990), recasting this claim under the GB theory, proposes that subject honorification is induced by Spec–head agreement between Infl and the Spec of Infl. According to this hypothesis, the ill-formedness of (25b) results from the fact that *seito-ga* “students-Nom,” the DP which is not regarded as honorable, is situated at the Spec of Infl at S-structure with the honorable DP *Yamada-sensei-o* “Prof. Yamada-Acc” being located at the object position of V.

Given Toribio’s (1990) proposal, the well-formedness of the following example, therefore, shows that the dative marked DP in Japanese DSCs is indeed located at the Spec of Infl at S-structure, as expected:

- (26) Yamada-sensei-ni [sono mondai]-ga (Japanese: Perlmutter 1984: 323)
 Prof. Yamada-Dat that problem-Nom
 o-wakari-ni nar-u.
 Hon-understand-to become-Pres
 “Prof. Yamada understands that problem.”

This conclusion, if correct, counts as a lethal problem for the G-CT commonly assumed in the GB theory. This is because the DP which is located at the Spec of Infl at S-structure is usually assigned nominative Case but can sometimes be assigned dative Case. Moreover, it is not possible to hold that the dative Case assigned to the DP found in a DSC is a mere exception to the G-CT, for the dative marked DP in DSCs assumes the GR SUBJECT, and it is the widely accepted assumption of the GB theory that the GR SUBJECT is linked tightly with nominative Case (in accusative languages; cf. Marantz 1984, Bittner and Hale 1996a). Since QSCs including DSCs can be found in a lot of languages in the world (Korean, Tamil, Quechua, Icelandic, Russian, Spanish, Georgian, Hindi, etc.; see Ura 1996), the problems raised by the GF-splitting found in those constructions cannot be neglected in the theory of the grammar for human languages.

3.3 *Ergative languages and split ergativity*

One of the best-known GF-splitting phenomena is split ergativity. Studies on ergativity (cf., among many others, Dixon 1979, 1994, Marantz 1984, Bittner and Hale 1996b) have revealed that ergative languages can be divided largely into two types: morphologically ergative languages and syntactically ergative ones. Those of the former type have the so-called ergative Case system for the morphological marking on nominals, but some of them have syntactic properties common to those of the canonical accusative languages like English or Japanese. According to Dixon (1994) no syntactically ergative language with the morphologically accusative Case system has ever been attested so far. Thus, all syntactically ergative languages are morphologically ergative, but some morphologically ergative languages are not syntactically ergative.

To be brief, the ergative Case marking pattern is summarized as follows: the logical, underlying subject in an active transitive clause (most typically, Agent) has a Case marker morphologically different from the logical, underlying subject in an (active) intransitive clause, which has the same Case marker as the logical, underlying object (typically, Patient or Theme) in an active transitive clause. The morphological Case marking for Agent (or Actor) in an active transitive clause is called ERGATIVE, and the one for the subject in an intransitive clause and Patient in an active transitive clause ABSOLUTIVE.

In syntactically pure ergative languages like Dyirbal, DPs have in common a certain set of GFs, most of which are believed to be possessed by a DP with the GR SUBJECT in ordinary accusative languages, if they are marked as absolutive (Dixon 1979, 1994). In languages with only morphological ergativity like Walmatjari (Dixon 1994), Chukchee (Comrie 1979), and Enga (Van Valin 1981), on the other hand, the ergative marked DP in an active transitive clause and the absolutive marked DP in an intransitive clause have in common the GFs that are supposed to be associated with the GR SUBJECT (such as the ability to control, to be a victim of omission, to be relativized, etc.), despite the evident fact that they are differently encoded from a morphological point of view.¹⁹

Under the hypothesis of GFs/GRs assumed in the GB theory, it must be the case that two elements are located in the same structural position at S-structure if they have those GFs in common, for their sharing of those GFs means that both of them bear the GR SUBJECT, and they must be located at the Spec of Infl at S-structure in order for them to bear the GR SUBJECT. Now that they are located at the Spec of Infl at S-structure, the G-CT demands that they must be marked as the same type of Case whatever the morphological shape of the Case type may be. Put differently, no matter which Case, ergative or absolutive, in ergative languages may correspond with nominative in accusative languages, the G-CT demands that they must be uniformly marked as either ergative or absolutive regardless of whether the clause in which they function as SUBJECT is transitive or intransitive. Therefore, the fact that the ergative marked DP in an active transitive clause and the absolutive marked DP in an intransitive clause have the GFs in common seriously challenges the G-CT on empirical grounds.

In this subsection as well as the previous one I have pointed out some of the empirical problems for the G-CT under the GB theory. After sketching out the conceptual and technical fundamentals of the Minimalist program initiated by Chomsky (1992) and elaborated by subsequent work, I will, in the next section, demonstrate the conceptual and theoretical problems for the G-CT, and propose an alternative theory of Case under the assumptions of the Minimalist program, which is expected to be free from the empirical and conceptual problems involved in the G-CT under the GB theory.

4 Minimalist Case Theory

4.1 *The Minimalist program and the theory of formal features*

Putting aside many technical details of other modules in addition to the general issue of the entire validation of the Minimalist framework as the theory of the grammar for human language (see Chomsky 1992, 1995a, 1998b), I will, in this subsection, briefly sketch out the fundamental conceptions of the Minimalist program and the theory concerning formal features.

According to Chomsky (1992, 1995a), the Minimalist program (hereafter MP) for linguistic theory aims at establishing the theory of the grammar for human language by postulating only minimal assumptions that are necessary and essential on conceptual grounds alone. As a consequence, there exist a few (hopefully, only one) set(s) of universal principles and a finite array of options as to how they apply (namely, parameters). This is the way to approach the so-called Plato's problem or the "perfectness" of language (or the language faculty of human being) under the MP. Now the task of the MP is to show, by utilizing these highly restricted options in Universal Grammar, that the apparent richness and diversity of linguistic phenomena is illusory and epiphenomenal

and that it results from the interactions of the principle(s) and limited sets of fixed parameters.

In the Minimalist framework advocated by Chomsky (1992, 1994, 1995a), two linguistic levels are postulated and only those levels are assumed: they are necessary and essential for linguistic theory as interfaces with the performance systems (namely, articulatory–perceptual (A–P) and conceptual–intentional (C–I) systems). It is also assumed that there is a single computational system C_{HL} for human language and only limited lexical variety, where variations of language are essentially morphological (Chomsky 1994: 3). C_{HL} should be interpreted as mapping some array A of lexical choices to a pair (π, λ) , a linguistic expression of a particular language L , where π is a PF representation and λ is an LF representation, each consisting of legitimate objects that can receive an interpretation. Chomsky (1995a: 223) maintains that C_{HL} is strictly derivational, but not representational, in that it involves successive operations leading to (π, λ) .²⁰ Thus, C_{HL} (namely, computation) typically involves simple steps expressible in terms of natural relations and properties, with the context that makes them natural “wiped out” by later operation, hence not visible in the representation to which the derivation converges. Thus in syntax, crucial relations are typically local, but a sequence of operations may yield a representation in which the locality is obscured (cf. Collins 1997, Chomsky 1998b).

A particular language L is an instantiation of the initial state of the cognitive system of the language faculty with options specified, and L determines a set of derivations (= computations). A derivation converges at one of the interface levels if it yields a representation satisfying Full Interpretation, a condition which requires that every entity at an interface level be interpreted. A derivation converges if it converges at both interface levels; otherwise, it crashes.

The array A of lexical choices, which is mapped to (π, λ) by C_{HL} , is the thing that indicates what the lexical choices are and how many times each is selected by C_{HL} in forming (π, λ) . Let Numeration be a set of pairs (LI, i) , where LI is an item of the lexicon and i is its index, which should be understood to be the number of times that LI is selected. Then, A is a numeration N ; C_{HL} maps N to (π, λ) . C_{HL} proceeds by selecting an item from N , reducing its index by 1. C_{HL} crashes if all indices are not reduced to zero.

At some point in the computation to LF (i.e., the computation from N to l), there is an operation Spell-Out, which applies to the structure S already formed. Spell-Out strips away from S those elements relevant only to π , leaving the residue S_L , which is mapped to λ by syntactic operations. The subsystem of C_{HL} that maps S to π is called the “phonological component,” and the subsystem of C_{HL} that maps S to λ is called the “covert component.” The pre-Spell-Out component is called the “overt component.” In this system, therefore, there is no direct relation between λ and π (cf. Chomsky 1995a).

Given the numeration N , the operations of C_{HL} recursively construct syntactic objects from items in N and syntactic objects already formed. One of the operations of C_{HL} , which we will call Select, is a procedure that selects a lexical item LI from N , reducing its index by 1, and introduces it into the derivation.

Another operation, which we will call Merge, takes a pair of already formed syntactic objects and replaces them by a new combined syntactic object. The operation Move forms a new syntactic object Λ from two already formed syntactic objects κ and α , where κ is a target and α is the affected, by replacing κ with $\{\Gamma, \{\alpha, \kappa\}\}$ ($= \Lambda$). Since (syntactic) structures are formed only by these three operations, they are built derivationally in a bottom-to-top fashion.

The leading idea about formal features is proposed in Chomsky (1992, 1994) and, especially, Chomsky (1995a), which may be summarized as follows:

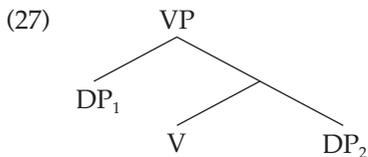
- I Formal features (Fs) are the features that have the following properties:
 - (i) they are the only syntactic objects accessible in the course of C_{HL} , and
 - (ii) they are encoded in (or assigned to) a lexical item. Among them, phi-features like gender, person, or number, Case features like nominative or accusative, and categorial features like D-feature play important roles in Minimalist syntax.
- II Fs undergo the operation Feature checking, which motivates syntactic movements under the Last Resort condition (see Collins in this volume). By feature checking, a relation (called Checking Relation) is produced.
- III Feature checking always takes place between two features of the same sort (cf. Ura 1994, Chomsky 1995a).
- IV Feature checking is possible only when the element (= checkee) that possesses the feature to be checked is in the Checking Domain of the element (= checker) that possesses the checking feature.²¹
- V Checked Fs are deleted when possible. Deleted Fs are erased when possible. Deleted Fs are invisible at LF, but accessible to syntactic operations. Erased Fs are not accessible at all in C_{HL} .
- VI There are [+interpretable] and [-interpretable] Fs. [-interpretable] Fs must be checked and deleted at LF, while [+interpretable] ones may not be checked or deleted because they are interpreted at LF; hence, the existence of them at LF does not yield a violation of Full Interpretation at LF. [-interpretable] Fs that remain undeleted at LF cause the derivation to crash. Presumably the interpretability of Fs is universal and invariant among languages: it is universally true that Case features like nominative Case feature are [-interpretable] and categorial features like D-feature are [+interpretable], for example (Chomsky 1995a). As for phi-features, their interpretability depends both on their individual nature and on the morphological characteristics in a given language (see Ura forthcoming for more discussion).
- VII There are strong Fs and weak Fs. Strong Fs must be checked and deleted before Spell-Out, while weak ones can be checked at LF. Strong Fs that remain unchecked at PF cause the derivation to crash.
- VIII Chomsky (1995a) proposes the stipulation that elements introduced (base generated) by Merge in its theta-position cannot undergo feature checking unless they move somewhere other than their base-generated position.²²

4.2 Agr-based Case theory

Now let us return to the theory of Case. First, recall that the G-CT under the GB theory depends crucially on the structural notion government, the distinction of the abstract syntactic levels D- and S-structure, and the principles that constrain the way of forming syntactic structures (i.e., the “conventional” X'-theory and the Projection Principle). Arguing that they lack any virtual conceptual necessity, Chomsky (1992) makes the claim that government, D- and S-structures, and the Projection Principle should be discarded under the assumptions of the MP, which aims at establishing the theory of the grammar for human language by postulating only minimal assumptions that are necessary and essential on conceptual grounds alone.²³ Besides, Chomsky (1994) shows that it is possible to dispense with the “conventional” X'-theory, which should also be discarded due to its lack of virtual conceptual necessity. Thus the MP is seeking for a new theory of Case without recourse to those conceptually unnecessary notions.

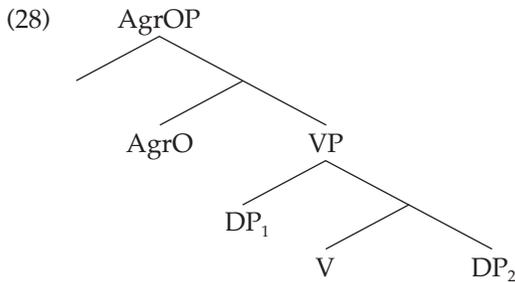
Chomsky (1992) has first incorporated both the Split Infl Hypothesis, initially developed by Pollock (1989) and extended by Chomsky (1989), and the VP-Internal Subject Hypothesis (e.g. Kuroda 1988, Koopman and Sportiche 1991, among others)²⁴ into the checking theory of formal features, the rudiments of which were outlined in the previous subsection. And then he has proposed the first guiding model of a Minimalist theory of Case. Under this theory, Case is given a syntactically more concrete status than under the G-CT: it counts as a kind of formal feature that has an individual property concerning strength. Moreover, by the LF interface condition (i.e., Full Interpretation), Case is required to be properly licensed (i.e., checked, deleted, and erased) in accordance with the mechanism of feature checking under a certain structural condition (cf. the previous subsection); for Case-feature is universally [-interpretable], and no [-interpretable] features can enter into the interpretation at the conceptual-intentional (C-I) system (i.e., LF level).

To make the discussion more concrete, let us see how Case checking takes place in an ordinary active transitive clause. First, the structure illustrated in (27), where DP₁ is assigned the external theta-role and DP₂ the internal one by V, is built up by Merge according to the VP-Internal Subject Hypothesis:

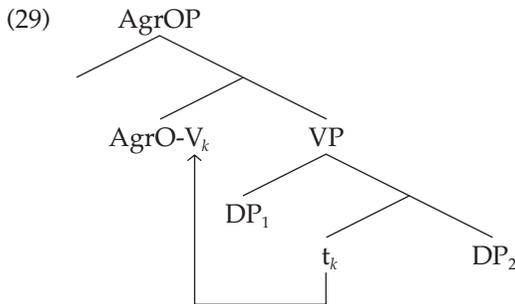


Now V in (27), being a transitive verb with an external theta-role, has an accusative Case feature to be checked with the same type of Case feature in

the course of derivation. Although V and the two DPs in (27) seem to be very close to one another, Case checking can never happen in this configuration because (i) DP₂ is not in the checking domain of V, and (ii) DP₁, though in the checking domain of V, cannot enter into any checking relation for the reason that it is located at the position where it is assigned a theta-role (cf. the property (VIII) of formal features stated in the previous subsection). Then, the functional head AgrO, which is assumed to be the locus of object agreement under the extended version of the Split Infl Hypothesis (see Belletti in this volume), is added to (27) by Merge, deriving (28):

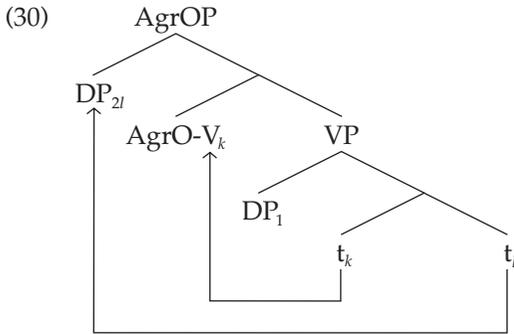


Now suppose that the accusative Case feature of V is strong and, hence, must be erased before Spell-Out. Then, V must move out of VP before Spell-Out in order to have its Case checked off (recall that the checking of V's accusative Case feature is never fulfilled if V stays in VP). Hence, V moves onto AgrO by head movement:



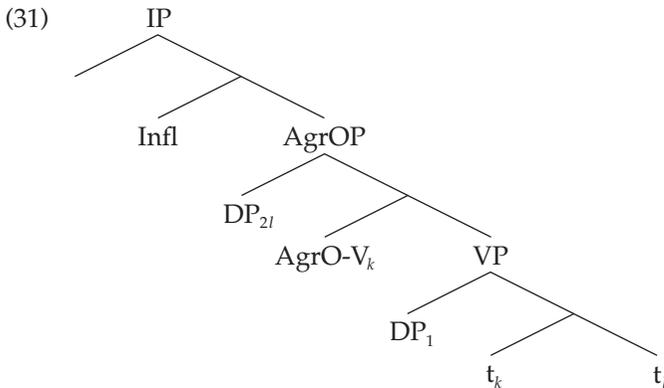
In (29), the Spec of AgrO is empty and, more importantly, it now counts as the checking domain of V, for V is merged with AgrO by head adjunction. At this stage in the derivation illustrated by (29), both DP₁ and DP₂ are eligible to check off the strong accusative Case feature of V if they have the equivalent Case feature.

First, suppose that DP₂ has an accusative Case and DP₁ has a nominative Case. Then, DP₂ can check off the strong accusative Case feature of V by moving to the Spec of AgrO, which is illustrated in (30):



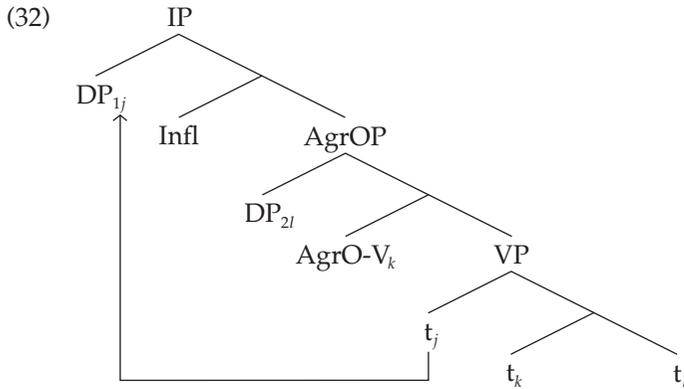
Note that in general, α , an element situated at a position Π_1 , cannot move beyond β , another element situated at Π_2 , to another position Π_3 if (i) α and β belong to the same type of category and (ii) Π_1 is more remote from Π_3 than Π_2 is (Rizzi's 1990 Relativized Minimality; see Rizzi in this volume). However, by hypothesizing that any two elements α and β are equidistant from a third position γ if α and β are in the same minimal domain, Chomsky (1992) claims that the movement of DP₂ from the complement position of V to the Spec of AgrO beyond DP₁ at the Spec of V is legitimate in (30). Since the Spec of AgrO in (30) falls in the checking domain of V as the result of V's head movement onto AgrO, DP₂ successfully checks off the strong accusative Case feature of V.

As the next step of the derivation, finite Infl with a nominative Case feature is introduced by Merge, as illustrated in (31):



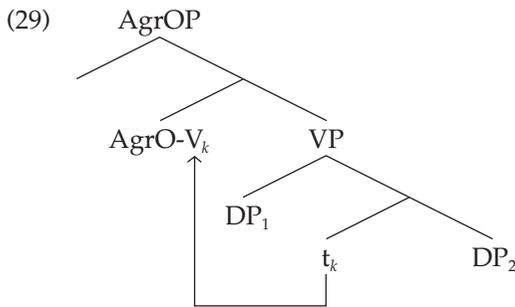
If the commonly assumed hypothesis that every clausal projection has a subject at the surface level is universally true, the Spec of IP must be filled with an argument by LF regardless of the strength of Infl's nominative Case feature, let alone the strength of the other formal features of Infl.²⁵ In (31), DP₁ and DP₂ are eligible to move to the Spec of Infl to fill it because they are equidistant from the Spec of Infl (they are situated in the minimal domain of V). But even if DP₂ moves there, the nominative Case feature of Infl cannot be checked off

by it: DP₂ has already entered into the accusative Case checking relation with V and lost its Case feature. Therefore, DP₁ moves to the Spec of Infl to fill it, deriving (32) from (31):

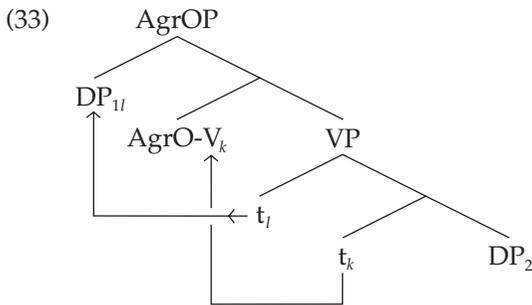


Now that DP₁ has a nominative Case feature, it successfully checks off the nominative Case feature of Infl.²⁶

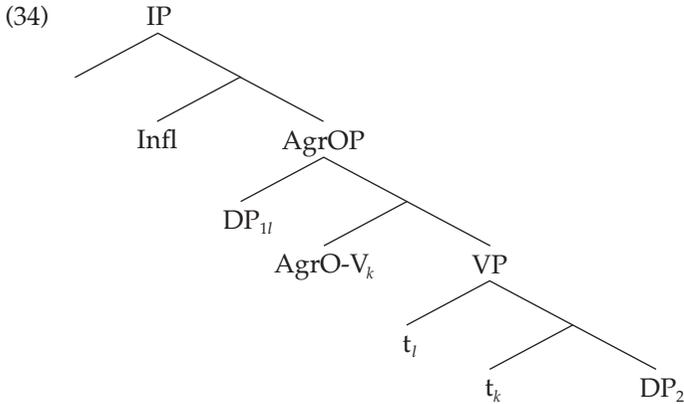
Suppose, instead, that DP₁ has an accusative Case and DP₂ has a nominative Case in (29), which is repeated here:



Then, DP₁ moves to the Spec of AgrO to check off the strong accusative Case feature of V, deriving (33) from (29):²⁷



The derivation up to this stage is legitimate. As the next step of the derivation, finite Infl with a nominative Case-feature is introduced by Merge, as illustrated in (34):



For the purpose of checking the nominative Case of Infl in (34), DP_1 is no longer available because its Case feature is not nominative and, moreover, it has lost its Case feature by entering into a Case checking relation with V. In (34), DP_2 is the only element available for checking off the nominative Case feature of Infl. But DP_2 cannot move to the Spec of Infl beyond DP_1 at the Spec of AgrO, because DP_1 is closer to the Spec of Infl than DP_2 is. Note that in (34), DP_1 is in the minimal domain of V but DP_2 is not located in the minimal domain of V. Therefore, in (34), there is no way to check off the nominative Case feature of Infl (independently of its strength) at LF. Since all Case features are [-interpretable] and must be checked off at LF, this derivation inevitably crashes at LF. This is the reason why the logical, underlying subject is always marked as nominative and the logical, underlying object is always marked as accusative, and not vice versa, in an active transitive clause (in accusative languages). This is the rudiment of the theory of Case under the MP introduced by Chomsky (1992), which is called the Agr-based Case Theory (henceforth, A-CT). This is so named because it depends crucially on the Agr-projections.²⁸

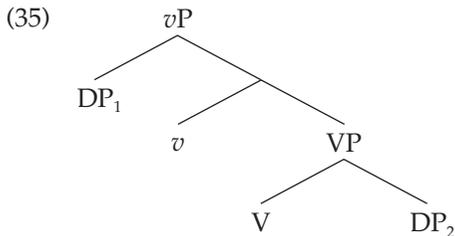
One of the most remarkable empirical profits the A-CT brings is its neat treatment of the phenomenon called "Object Shift."²⁹ It was first noticed by Holmberg (1986) that overt V-movement is prerequisite for the object in the clause to move overtly out of VP in Scandinavian languages (Holmberg's generalization). If Object Shift is caused by some Case reason, this generalization follows immediately from the A-CT: under the A-CT, the accusative Case checking always takes place outside of VP, as we observed thus far. That is to say, in order to fulfill the accusative Case checking between V and the object DP before Spell-Out, both V and the object DP must move out of VP before Spell-Out; therefore, Holmberg's generalization follows.³⁰

4.3 *Agr-less checking theory*

Indeed, the A-CT has overcome several conceptual problems involved in the G-CT, as argued above, and it has also brought a fair amount of empirical advantage.³¹ Nevertheless, Chomsky (1995a) points out that the A-CT has a serious technical problem for the implementation of the theory.

Chomsky (1995a) claims that the Agr-projections, which play a significant role in the A-CT, should be discarded on conceptual grounds, for they do not receive any interpretation at the interface levels (i.e., PF and LF): they have no meaning and no phonological realization. They function only in syntax and their function is to mediate checking operations. In this subsection, I will outline the core ideas of the Agr-less Checking Theory (henceforth, A-less CT), which is so named because it is a checking theory without recourse to Agr-projections.

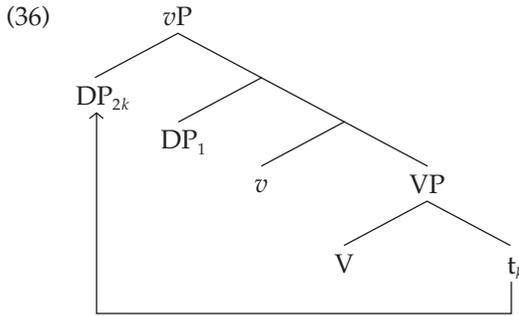
In the previous subsection, it was argued that AgrO serves to mediate the accusative Case checking between V and the object DP outside of VP. Then, how is it possible for the strong accusative Case feature of an active transitive verb to be checked off by the object DP in a configuration without AgrO? The A-less CT, first, adopts Hale and Keyser's (1991, 1993) two-layered VP-shell for a simple active transitive verb (Chomsky 1995a), which is illustrated in (35):



Chomsky (1995a), basically following Hale and Keyser (1991, 1993), assumes that *v* in (35), which is meant to stand for the higher head of the two-layered VP-shell, has an external theta-role (usually Agent) to be assigned to its Spec and selects as its complement the maximal projection of a simple intransitive verb with only an internal theta-role (usually Theme), which is represented by VP in (35). Thus, the so-called Burzio's generalization (cf. n. 8) can be recaptured by saying that *v* is the locus of an accusative Case feature. Now that *v* in (35) has an accusative Case feature, then how and where can its accusative Case feature, if strong, be checked off by the logical, underlying object (DP₂ in (35))?

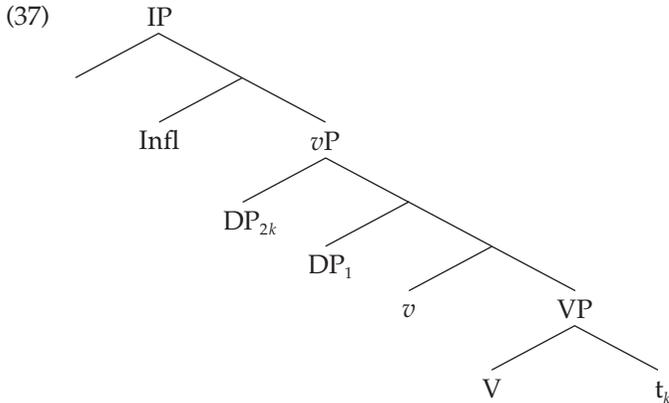
The Minimalist theory of phrase structure (the idea of Bare Phrase Structure presented by Chomsky 1994) allows multiple Specs to be projected by a single head (see Ura 1994, 1996, as well as Chomsky 1994 for extensive discussion). Given this, it is allowed for DP₂ in (35) to move to an outer Spec of *v* in order

to check off the strong accusative Case feature of v before Spell-Out. This step of derivation is illustrated in (36):

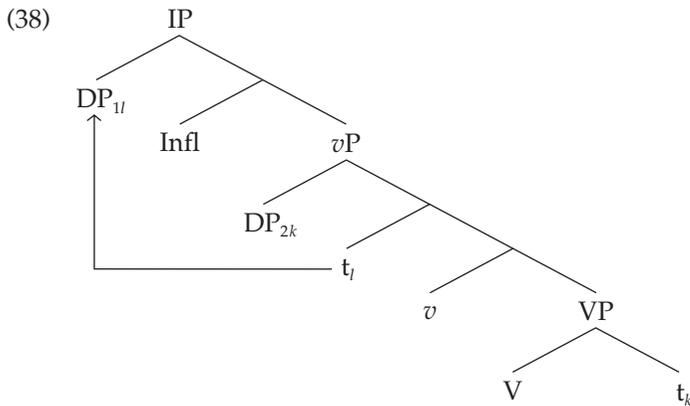


Note that DP_1 at the innermost Spec of v does not prevent the movement of DP_2 out of VP to the outer Spec of v in (36). This is because the target of the movement of DP_2 in this case is in the same minimal domain as the position of DP_1 . In fact, Chomsky (1995a) defines this as follows: if β c-commands α and τ is the target of raising, then β is closer to τ than α unless β is in the same minimal domain as (i) τ or (ii) α . Given this, DP_1 does not induce a Relativized Minimality effect on the movement of DP_2 in (36). In (36) DP_2 is now in the checking domain of v and, hence, can check off the accusative Case feature of v .

As the next step of the derivation, finite Infl with a nominative Case feature is introduced by Merge, as illustrated in (37):



Although DP_1 and DP_2 are both eligible to move to the Spec of Infl to fill it because they are equidistant from the Spec of Infl, it is no use raising DP_2 to that position, for DP_2 has already entered into the accusative Case checking relation with v and lost its Case feature. Instead, DP_1 moves to the Spec of Infl to check off the nominative Case feature of Infl, deriving (38) from (37):



Now that DP_1 is in the checking domain of Infl, it successfully checks off the nominative Case feature of Infl. This is the core idea of the A-less CT and its rudimentary application to a simple active transitive clause.

4.4 *Agr-less checking theory vs. Agr-based Case theory*

Although it might seem that the A-less CT differs drastically from the A-CT in its technical implementation, it is indeed easy to reanalyze the A-CT into the A-less CT, as noted by Watanabe (1996), Collins (1997), and Ura (forthcoming). Nonetheless, it is worth noting that it is not only that the A-less CT surpasses the conceptual problem concerning the *raison d'être* of Agr-projections, but also that there are several empirical advantages of the A-less CT over the A-CT, a few of which I will briefly sketch out in this subsection. The important point is that what the A-CT captures can be also captured by the A-less CT, but not vice versa.

The most remarkable technical difference between those two Case theories under the MP is the (non-)use of multiple Specs. The most explicit advantage of the utilization of multiple Specs is its application to multiple subject constructions (MSCs), in which more than one DP in a single clause stand in the same Case (usually, nominative in accusative languages) and all of them equally function as SUBJECT in the clause (i.e., have the GFs that are typically associated with the GR SUBJECT).³² Those constructions are found in lots of languages in the world (Arabic, Persian, Uzbek, Alutor, Chukchee, Japanese, Korean, Lahu, Quechua, etc.; see Ura 1994 for a list of languages with MSCs). Under the A-CT, it is imperative to assume multiple Infs (or, more precisely, AgrSs; cf. n. 28) to provide a nominative Case to each of the multiple subjects in a given clause. But there is a serious problem in this account: in languages like Alutor, where subject agreement is morphophonologically represented on the finite verb in a clause, it is usually the case that only a single subject agreement (which is always induced by the innermost subject) appears on the

finite verb even when multiple subjects appear in the clause. If multiple Infs in accordance with the number of multiple subjects exist in the clause with multiple subjects, it must be the case that multiple subject agreements appear on the finite verb, just as multiple nominative cases are morphophonologically realized by multiple subjects; however, this is not the case. On the other hand, this fact is given a consistent account under the A-less CT: in a clause with multiple subjects, there is only a single Infl with the ability to enter into multiple nominative Case checking relations,³³ and multiple subjects, located in Specs which are projected by the single Infl, have their nominative Case features checked off by the Infl, which, in turn, enters into a phi-feature checking relation with the innermost subject.^{34, 35}

Another empirical advantage of the A-less CT in terms of the utilization of multiple Specs comes from super-raising. Super-raising is the name of the operation by which DP is moved up beyond the subject of a clause to an A-position in a higher clause. (39) exemplifies the operation:

(39) *John_i seems [_{CP} that [_{IP} it was told t_i [that Mary is a genius]]]

The ill-formedness of (39) is believed to be attributed to a Relativized Minimality effect. But, in Ura (1994), I reported that the following generalization holds true:

(40) If a language allows MSCs, then it also allows super-raising.

If the aforementioned claim under the A-less CT is true, the generalization stated in (40) follows naturally: under the analysis of MSCs under the A-less CT, it is argued that languages that allow MSCs also have a parametric property to allow multiple Specs to be projected by a single Infl. Thus, an outer Spec of Infl is available for a host of DP in addition to the canonical (i.e., innermost) Spec of Infl in those languages. Furthermore, it is also possible to say that this outer Spec can serve as a landing site of a DP-movement. Then, the super-raising can be schematically illustrated as in (41):

(41) $DP_{1k} \dots [_{IP} t'_k [_{IP} DP_2 \text{ Infl } [_{VP} v [_{VP} V t_k]]]]$

Notice that neither the movement of DP₁ from the complement position of V to the outer Spec of Infl, nor its subsequent movement from the outer Spec of Infl to the sentence initial position, is illegitimate in terms of Relativized Minimality; that is, DP₂ does not induce any Relativized Minimality effect on those movements. This is because the outer Spec of Infl, which is the target of the first movement and the origin of the second one, is in the same minimal domain as the position where DP₂ is located (i.e., the innermost Spec of Infl). Recall that α never induces a Relativized Minimality effect on the movement of β targeting the position γ if α is in the same minimal domain of (i) β or (ii)

γ (Chomsky 1995a). If some reason is provided why DP_1 is first attracted to the Spec of Infl in (41), the mechanism of super-raising is explained this way under the A-less CT with special recourse to multiple Specs.³⁶

5 A Minimalist Approach to GFs/GRs and Ergativity

In section 3 we observed that in applying the theory of Case to the issues concerning GFs/GRs and the ones concerning ergativity and ergative languages, we find several problems immanent in the Case theory under which Case is correlated with GFs/GRs through the mediation of structural relations. Let us see, in this section, how the Case theory developed under the MP, which was sketched in the previous section, can cope with those problems.

5.1 *Case-feature, feature checking, and grammatical functions*

The problems of the G-CT concerning GFs/GRs lie in its way of defining GRs uniformly in terms of structural relations. Under the theory of phrase structure in the MP (Bare Phrase Structure), however, the structural relation of a given element is defined in terms of the relation the element holds in connection with other elements in the structure (cf. Chomsky 1994, Ura 1994). To put it differently, structural positions are defined not in an absolutely deterministic manner, but relationally. Thus, we can no longer relate GRs and GFs to structural relations in a uniform and deterministic fashion under the assumptions of the MP.

Nevertheless, there is a relationship that can be unambiguously determined in an absolutely deterministic way under this framework; namely, relationship that is created by formal feature checking. In the checking theory of Chomsky (1995a), it is assumed that formal features such as Case features or categorial features are syntactic primitives and that they play the role of entering into checking relations. Therefore, it is quite natural to hypothesize a theory of GFs (and GRs) under this framework, a theory under which GFs (and GRs) are unambiguously defined or determined by checking relations. Here it is important to note that, as long as the feature checking theory is free from conceptually unnecessary assumptions, the theory of GFs (and GRs) just sketched above is also free from them.³⁷

Since this idea, together with the theory of multiple feature checking, enables us to expect that two distinct DPs α and β appearing in different constructions may differ from each other in terms of their GFs even if α is located at the same structural position as β , or even if α is marked as the same Case as β , it opens up the possibility of giving a natural account to GF-splitting

phenomena as found in QSCs, which seriously challenge the G-CT under the GB theory.³⁸

5.2 *A Minimalist approach to ergativity*

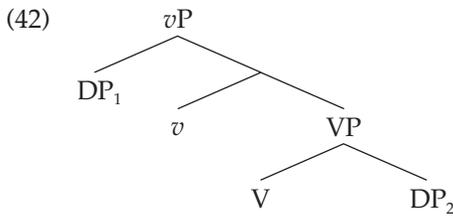
In this subsection I will succinctly outline an A-less CT account of the Case marking patterns found in ergative languages, which have been attracting much interest in studying the theory of Case (cf. Marantz 1991, Murasugi 1992, Bobaljik 1993, Bittner and Hale 1996a, 1996b, among many others).

The mystery concerning the Case marking pattern in ergative languages comes from the fact that the logical, underlying subject in an active transitive clause differs from the logical, underlying subject in an (active) intransitive clause in terms of its Case in spite of the fact that they show the same syntactic behaviors (i.e., they have the same GFs) and they occupy the same structural position (i.e., the Spec of Infl). As repeatedly pointed out thus far, this is very difficult to resolve under the G-CT theory. In fact, several proposals have been made under the assumptions of the MP to this mystery, but I will outline, here, an approach by utilizing the A-less CT which is reinforced by the hypothesis of GFs introduced in the previous subsection.

The A-less CT that is reinforced with the theory of multiple feature checking enables us to expect that α and β may differ from each other in their Case shapes even if α in one construction is located at the same structural position as β in another construction. This is because under this theory, DP may have its Case feature checked off at a position which is different from that where it has its phi-features and/or EPP-feature checked off. Aside from the technical details, this theoretically opens up the possibility of giving an account to the ergative Case marking pattern.

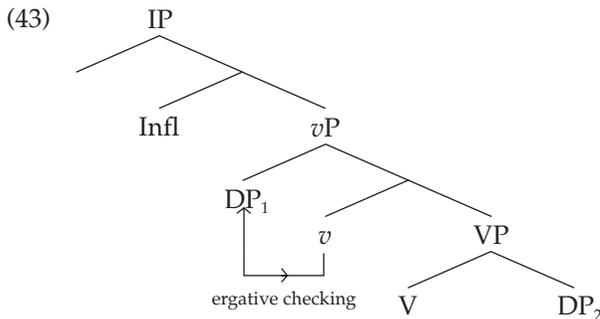
Now the question is: how is it possible to implement the technical mechanics to derive the Case marking pattern in ergative languages? Here I would like to propose to hypothesize, contrary to Chomsky's (1995a) stipulation about the ban on the checking of an element at its theta-position, that elements can undergo feature checking in their theta-positions in some languages, while they cannot in other languages. To put it differently, I propose that Chomsky's (1995a) stipulation – viz., that elements introduced (base generated) by Merge in theta-position cannot undergo feature checking – should be parametrized. And I am claiming that elements can undergo feature checking at their theta-positions in ergative languages, while they cannot in accusative languages.

To make the story more concrete, let us see how this hypothesis works by looking at the derivation of a simple active transitive clause and that of a simple active intransitive clause in ergative languages. As argued in section 4.3, the A-less CT adopts Hale and Keyser's (1991, 1993) two-layered VP-shell (illustrated in (42)) as the core structure of a simple transitive verb:

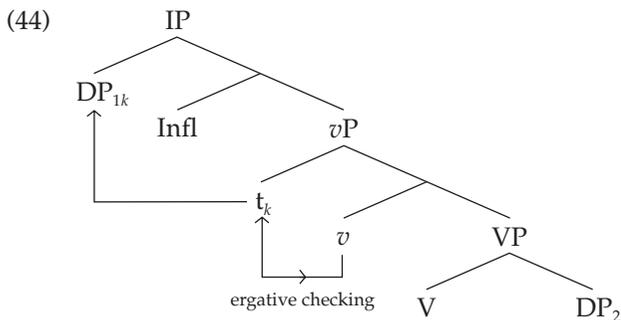


Given the parameter in ergative languages which allows an element to enter into a checking relation at its theta-position, the logical, underlying subject of a transitive verb (DP_1 at the Spec of v in (42)) can enter into a Case checking relation with v at the Spec of v without moving anywhere. Suppose that ergative is the name of the Case that is provided by v in ergative languages and, hence, corresponds to accusative in accusative languages. Then, DP_1 in (42) has entered into an ergative Case feature checking relation with v without moving anywhere.

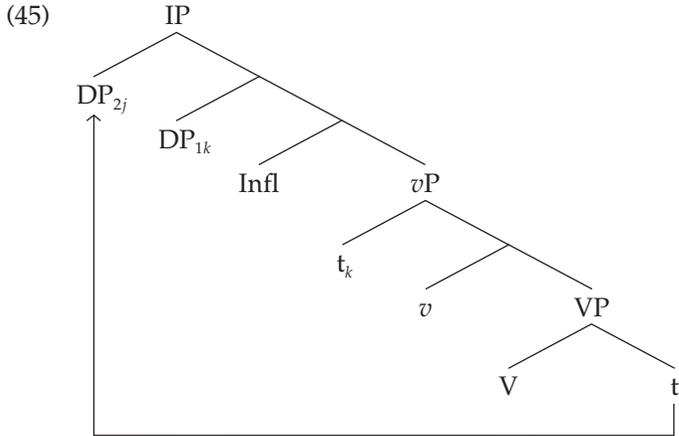
As the next step of the derivation, finite Infl is introduced by Merge, deriving (43):



For the reason discussed in section 3, some argument must fill the Spec of Infl before Spell-Out (cf. n. 25). DP_1 is closer to that position than DP_2 is; therefore, DP_1 is moved there to fulfill the above requirement on the clausal subject position. This derives (44) from (43):



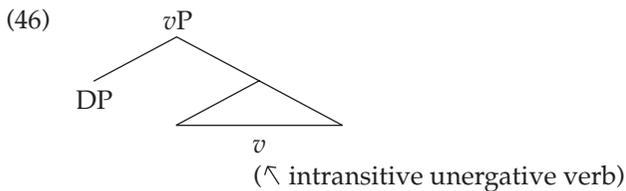
It is important to note that DP_1 can never check the Case feature of Infl in (44), though it may check other formal features of Infl, because it is deprived of its Case feature by having entered into an ergative Case feature checking relation with v . DP_2 is the only element that can check off the Case feature of Infl in (44). Thus, DP_2 is moved to the outer Spec of Infl to check off the Case feature of Infl. But notice that the movement of DP_2 to the outer Spec of Infl depends on the strength of the Case feature of Infl: if it is strong, DP_2 moves to the outer Spec of Infl before Spell-Out, which is illustrated in (45):



If the Case feature of Infl is weak, then the Case feature of DP_2 is attracted by Infl at LF under Chomsky's (1995a) feature checking theory. So there is no morphophonological output visible at the surface structure in this case. The important point here is that it is the logical, underlying object that enters into a Case checking relation with Infl in a simple active transitive clause in ergative languages, regardless of the strength of the Case feature of Infl.

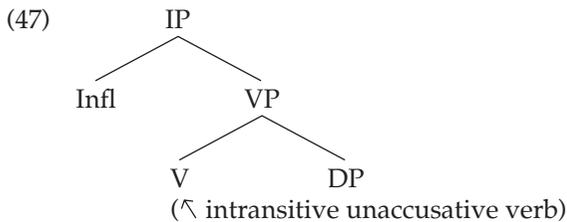
Now suppose that absolutive is the name of the Case that is provided by finite Infl in ergative languages and, hence, corresponds to nominative in accusative languages. Then, from the above discussion, the fact naturally follows that the logical, underlying subject is marked as ergative and the logical, underlying object is marked as absolutive in a simple active transitive clause in ergative languages.

Next let us consider how a simple intransitive clause is derived in ergative languages. According to Hale and Keyser (1991, 1993), the structure of an unergative verb looks like this:



That is, the sole argument of an intransitive unergative verb (i.e., the logical, underlying subject of such a verb) is introduced at the Spec of *v*, the locus of an ergative/accusative Case feature. Then, just as in the case of the logical, underlying subject of a simple active transitive clause, the sole argument of an intransitive unergative verb, too, can enter into an ergative Case feature checking relation with *v* without moving anywhere. But, when finite Infl is introduced later in the derivation, a problem arises: Infl has its own Case feature (absolutive), and it must be checked off by LF because it is [–interpretable]. In some ergative languages, the logical, underlying subject of an intransitive unergative verb enters into an absolutive Case feature checking relation with Infl by moving to the Spec of Infl without entering into an ergative Case feature checking relation with *v* at the Spec of *v*.³⁹ But it is possible to predict that, if some ergative languages have the parameter setting that allows their finite Infl not to have its Case feature checked off,⁴⁰ they also allow the logical, underlying subject of an intransitive unergative verb to enter into an ergative Case feature checking relation with *v*, leaving the absolutive Case feature of Infl unchecked. This consistently explains why the logical, underlying subject of an intransitive unergative verb is always marked as absolutive in ergative languages that disallow null subjects, while it can be marked as ergative in ergative languages with null subjects. See Ura (forthcoming) for more discussion.

On the other hand, there is no *v* in the structure of an intransitive unaccusative clause, according to Hale and Keyser (1991, 1993). The core of the structure of an intransitive unaccusative structure looks like this:



Thus, there is no way for the sole argument of an intransitive unaccusative verb to enter into an ergative Case checking relation with *v*. (Recall that V has no Case feature.) Rather, it always enters into an absolutive Case feature checking relation with Infl; otherwise, the derivation crashes at LF because the Case feature of the sole argument in an unaccusative clause, being [–interpretable], remains unchecked at LF. This is the reason why the logical, underlying subject of an intransitive unaccusative verb is always marked as absolutive in every ergative language, regardless of whether it allows null subjects or not.⁴¹

6 Further Issues and Concluding Remarks

Thus far the following have been observed:

-
- I The G-CT assumed under the framework of the GB theory involves conceptual and empirical problems, though by explicating the role of abstract Case in the theory of syntax, it gives us an insight to an approach to a variety of syntactic phenomena, especially the distribution of nominals and the properties of DP-movements. The conceptual problems lie in its crucial dependence on the notions whose conceptual necessity seems to be highly dubious in the theory of the grammar for human language, and the empirical problems come from its failure to cope with GF-splitting phenomena such as those found in DSCs and ergative languages.
- II The A-CT under the framework of the MP, though it surpasses the G-CT thanks to its abandonment of most conceptually unnecessary notions, is still to blame for utilizing Agr-projections, which are regarded as conceptually unnecessary because of their absence of meaning and form at the interface levels.⁴²
- III The A-less CT, a modified version of the A-CT, is conceptually superior and brings a wide range of empirical advantages.

I will conclude this chapter by touching upon some residual problems that are expected to be given an explanation by the Case theory.

6.1 Case and expletive

Since the beginning of the development of the G-CT into the current theory of Case under the assumptions of the MP, the issues concerning the expletive *there* and its associate have been one of the most controversial topics (cf. Chomsky 1981, 1986a, 1992, 1995a, Shlonsky 1987, Belletti 1988, Lasnik 1992, 1995b, Frampton 1997, to list only a few).

Aside from the problem the expletive *there* itself raises in terms of the general economy condition (see Collins in this volume and references there), there remain several questions about the Case of the associate of *there*:

- (48) a. There *is/are strangers in that garden.
 b. There *is/are arriving three men at that station.

As is evident from (48), the associate enters into a phi-feature checking relation with Infl at LF. Then, what about the Case feature of the associate? The seemingly easiest answer to this question is that it also enters into a nominative Case feature checking relation with Infl at LF. But, as Lasnik (1992) points out, it fails to capture the following contrast:

- (49) a. I consider [there to be a man in that garden].
 b. *I consider [there a man in that garden].

This fact strongly shows that the associate of the expletive has some connection with the existential *be* in terms of Case, as Belletti (1988) first noted. It is,

however, less clear how to implement Belletti's idea about partitive Case under the A-CT or the A-less CT.

Another question concerning the relation between the expletive *there* and Case can be found in the following examples, where the expletive can occur at the position where Case seems to be unavailable (cf. Postal 1974, Ura 1993):

- (50) a. They alleged [there to have been many strangers in that garden].
 b. *They alleged [many strangers_k to have been t_k in that garden].
 c. John wagered [there to have been a stranger in that haunted house].
 d. *John wagered [a stranger_k to have been t_k in that haunted house].

This puzzle, too, is worth pursuing for the purpose of elaborating the Case theory.⁴³

6.2 *Null case and PRO*

As was hinted in section 2 above, it was assumed under the GB theory that PRO must not be governed (i.e., PRO Theorem). Many researchers pointed out, however, that PRO Theorem involves conceptual and empirical problems, and Chomsky and Lasnik (1993) has proposed under the A-CT that PRO has a Case feature of its own (called null Case) and, hence, is required to have its null Case feature checked off by an appropriate checker.

Chomsky and Lasnik (1993) has only hinted that PRO's null Case feature can be checked off by the infinitival Infl, leaving to future research the issue as to exactly what kind of Infl can check it (see Martin 1996 for more discussion on PRO and null Case in the MP). It is obvious that it is not always the case that any kind of infinitival Infl can check the null Case feature of PRO:

- (51) a. *It is believed/considered [PRO to be intelligent].
 b. *It seems/appears (to John) [PRO to be intelligent].
- (52) a. John tried/managed [PRO to kiss Mary].
 b. John persuaded/told Mary [PRO to kiss him].
- (53) a. It is illegal/possible [PRO to park here].
 b. *It is certain/likely [PRO to park here].

Some researchers attempt to relate the null Case feature with the existence of the functional head that introduces a complementizer (= C) (e.g. Watanabe 1993, 1996), while others attempt to relate it with the aspectual/temporal meaning of the infinitival clause (e.g. Martin 1992). In addition, it is interesting, in this respect, to consider other languages in which PRO can appear in a finite clause (cf. Martin 1996, Terzi 1997).

Another interesting question comes from the gerundive construction.⁴⁴ There are three types of gerund in English: POSS-ing, PRO-ing, and Acc-ing:

- (54) a. **POSS-ing:**
They will discuss [John's protesting against the nuclear test by France].
- b. **PRO-ing:**
I will never forget [PRO kissing Mary].
- c. **Acc-ing:**
I remember [him hitting Mary].

With respect to the Case theory in connection with null Case, it is interesting to note that some predicates can take both PRO-ing and Acc-ing, though some others can take either of them:

- (55) a. I remembered/reported [PRO/him having kissed Mary].
- b. I enjoy/detest [PRO/*him taking a bath].
- c. I saw/noticed [*PRO/him kissing Mary].

Currently, there seems to be no decisive explanation of the situation where both null Case and accusative Case are equally available.⁴⁵

6.3 Conclusion

Needless to say, many questions and puzzles about Case and its relevance to syntax, which are too numerous to mention here, remain unsolved yet. Nonetheless, Case continues to be one of the hottest topics in the theory of syntax, and the importance of Case theory in studying human languages will be increasing in the future inquiries of linguistic theory, especially when a variety of languages in the world is examined and investigated in a uniform fashion under the assumptions in the MP.

NOTES

* I wish to thank Mark Baltin and Chris Collins for their generous help, which enabled me to write up this chapter. Thanks also go to Noam Chomsky, Ken Hale, Howard Lasnik, Maki Ura, and Akira Watanabe for their comments on an earlier version. Usual disclaimers apply.

1 There are, of course, important issues concerning case with respect to morphology, which I omit discussing here, however. For these

morphological issues around case, see Spencer and Zwicky (1998) and Blake (1994).

2 Note that "NP" referred to in Chomsky (1981) corresponds to what I call "DP" in this chapter (see Bernstein in this volume). The definition of government and those of related notions can be stated as in the following manner:

(i) **Government:** A head α governs β iff α m-commands β

- and there is no γ , γ another head, such that α c-commands γ and γ c-commands β .
- (ii) **M-command:** α m-commands β iff every maximal projection that dominates α also dominates β .
- (iii) **C-command:** α c-commands β iff every branching node that dominates α also dominates β .
- Note that the definitions of those notions given above are somewhat different from the standard ones commonly assumed in the literature. They are so defined here as to avoid other complications irrelevant to the discussion in this chapter. For the standard definitions of those structural notions and their applications to syntactic analyses, see Fukui (this volume) and references cited there.
- 3 Instead of “objective,” I will use, in this chapter, the more traditional and widely accepted term “accusative” to refer to the same type of Case referred to in (2b).
- 4 For theta-roles, see Gruber (this volume) and references cited there. For discussion about relationships between theta-roles and Case, see Fillmore (1968), Jackendoff (1972), and Stowell (1981), among others.
- 5 For details of the DP-hypothesis, see Bernstein and Longobardi (both this volume).
- 6 There are many interesting issues peculiar to genitive Case assignment and its morphophonological realization, which I will omit discussing in this chapter. For discussion on those issues, see Bernstein (this volume) as well as Chomsky (1986a), Abney (1987), and Siloni (1997).
- 7 See Fukui (this volume) for detailed discussion on the nature of phrase structures and X'-theory.
- 8 Precisely speaking, as Burzio (1986) reveals, transitivity is not relevant to V's ability to assign accusative Case; rather, V with an external argument has the ability to assign accusative Case. See Burzio (1986) for more discussion.
- 9 Thus, we correctly predict that in languages like European Portuguese, whose infinitival Infl may agree (i.e., Infl may have [+AGR]-feature), phonologically overt DP can appear at the subject position of an infinitival clause in which Infl agrees (see Raposo 1987).
- 10 Notice that the lack of Case assignment is a necessary but not a sufficient condition for the occurrence of PRO. For instance, the examples in (i) below where PRO occurs at a Case-less position are to be excluded as ungrammatical:
- (i) a. *John is fond PRO. (meaning “John is fond of someone.”)
 b. *There was known PRO to everyone. (meaning “Someone was known to everyone.”)
- Chomsky (1981), assuming that PRO is a pronominal anaphor obeying both A and B of the Binding Theory, maintains that PRO must not be governed, independently of any Case theoretic reason. In (i) PRO occurs at a Case-less but structurally governed position, resulting in their ungrammaticality. For the distribution and referentiality of PRO, see Chomsky (1981, 1986b) and references there. Later in this chapter I will return to the issue concerning the Case of PRO.
- 11 It is curious that the phonologically overt DP at the subject position of the infinitival complement clause selected by some control verbs cannot be saved in the same way as the phonologically overt DP at the

infinitival complement clause in the examples in (9) is saved, viz., by inserting the prepositional complementizer *for* in front of the phonologically overt DP. Why are examples like (i) ungrammatical?

- (i) *Mary tried/managed [for John to go abroad].

Still more mysterious is the fact that the phonologically overt DP at the infinitival complement clause selected by other control verbs can be saved by inserting the prepositional complementizer *for*, as shown in (ii):

- (ii) Mary intended/desired [for John to go abroad].

It seems that there has been no satisfactory answer ever provided in the GB era. See Chomsky and Lasnik (1993) and, especially, Martin (1992, 1996) for a Minimalist approach to this question.

- 12 See, again, Baltin (this volume) for much detailed discussion on DP-movements.
- 13 There are, of course, not a few technical problems that need resolving. For example, we have to ensure that the subject demotion (i.e., to evacuate the Spec of Infl by making the subject disappear from syntax) can coincide only with past participles; otherwise, we cannot prevent DP-movements from taking place from the object position of adjectives to the subject position (cf. Baker et al. 1989):
- (i) a. *Mary is fond. (meaning "Someone is fond of Mary.")
 b. [_{IP} *e* Infl [_{VP} is fond Mary]]. (D-structure)
 c. [_{IP} Mary_k Infl [_{VP} is fond t_k]].
- └──────────────────┘
 (s-structure)

In addition, we also have to ensure that the Case-less object of past participles cannot be saved just in the same way as the Case-less object of adjectives or nouns can be saved, viz., by inserting the preposition *of* in front of it (cf. (7) above in the text):

- (ii) *There/*It was loved of Mary. (meaning "Mary is loved (by someone).")

See Chomsky and Lasnik (1993) for relevant discussion.

The analysis of the passive formation I presented in the text is based on the one suggested by Rouveret and Vergnaud (1980) and Chomsky (1981). As the G-CT developed in the course of the GB era, the analysis of passive also became sophisticated (see Jaeggli 1986, Baker 1988, Baker et al. 1989 for discussion). For a more recent study on passive under the Minimalist framework, see Watanabe's (1996) comprehensive work, in which the question as to why some auxiliaries like English *be* must be accompanied with the passive formation in most languages – a question which has been almost ignored in the previous studies – is extensively discussed in addition to other interesting questions concerning passive in general.

- 14 Below are some other kinds of raising construction:

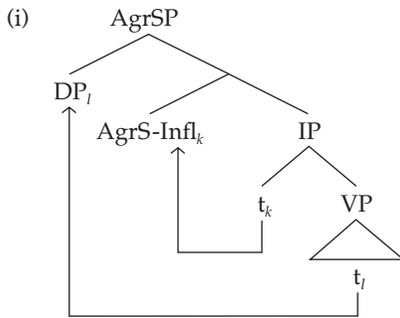
- (i) a. John_k seems/tends/appears [t_k to have loved Mary].
 b. John_k is believed/considered/reported [t_k to have loved Mary].

It is evident from the following examples that verbs like *seem/tend/appear* allow a dethematized subject:

- (ii) It seems/appears [that John has loved Mary].

- This means that these verbs (called raising verbs) have no external argument as their lexical property. As stated in n. 9 above, verbs that lack external theta-roles have no ability to assign accusative Case (see Burzio 1986). Thus, *John* in (ia) moves from the subject position of the embedded infinitival clause, where Case is not available, to the matrix subject position, where (nominative) Case is provided by finite Infl under government, just the same way as in the case in (16c). The same reasoning applies to the case illustrated in (ib), where ECM verbs are deprived of (accusative) Case assigning ability under passivization. See Baltin (this volume) for details of raising constructions.
- 15 Unaccusative constructions are often claimed to be another instance that shows a close relation between Case and DP-movements. Assuming that unaccusative verbs assign a theta-role to their internal argument but do not have the ability to assign Case due to their lack of external theta-role, Burzio (1986) shows that the so-called Unaccusative Hypothesis, which says that the subject of a clause whose main predicate is unaccusative is derivative in the sense that it is derived from the underlying object by a syntactic operation (cf. Perlmutter 1978), is subsumed under the G-CT. See, in addition to Burzio (1986), Shlonsky (1987) and Levin and Rappaport (1995) for further discussion.
- 16 Thus, GFs should be distinguished clearly from grammatical roles, semantic functions, or semantic roles, all of which are called theta-roles under the GB theory. There are vast numbers of studies concerning GFs in a variety of linguistic theories (see, among many others, Partee 1965 for the Standard Theory, Anderson 1976 for the Extended Standard Theory, Perlmutter 1982 for Relational Grammar, Bresnan 1982a for LFG, Gazder et al. 1985 for GPSG, Baker 1988 in the GB theory, and Ura forthcoming in the Minimalist program). See Palmer (1994), Givón (1997), and Van Valin and LaPolla (1997) for more general discussion on GFs and GRs.
- 17 See Baker (1988) for more discussion on the standard approach to GFs/GRs under the GB theory (cf., also, Marantz 1984, Williams 1984, Harley 1995, Bittner and Hale 1996a).
- 18 See Ura (1996, forthcoming) for extensive discussion on GF-splitting phenomena and their implications in the theory of Universal Grammar.
- 19 Interestingly enough, in some of these languages only the absolutive marked DP, but not the ergative marked DP, can induce the subject agreement on the finite verb in the clause regardless of the transitivity of the clause (see Comrie 1979, DeLancey 1981, Dixon 1994, Palmer 1994, and references there for more details). In other words, the GFs that the absolutive marked DP assumes in an intransitive clause are split up in an active transitive clause. Some of them (the ability to induce the subject agreement on the finite verb, the ability to stand in absolutive, etc.) are inherited by the absolutive-marked DP (i.e., Theme or Patient in an active transitive clause), and the rest (the ability to control, to be relativized, etc.) by the ergative marked DP (i.e., Agent or Actor). This is clearly a kind of GF-splitting. See Ura (forthcoming) for extensive discussion on split ergativity and its relevance to Case and GFs/GRs.

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- 20 For the issues concerning the representational vs. derivational approaches and their relevance to the general economy condition, see Ura (1995) and Collins (1997) in addition to Lasnik and Collins (both this volume).
- 21 Relevant definitions are as follows: $MAX(\alpha)$ is the least full-category maximal projection dominating α . The category α dominates β if every segment of α dominates β . The category α contains β if some segment of α dominates β . The domain of α is the set of the nodes contained in $Max(\alpha)$ that are distinct from and do not contain α . The complement domain of α is the subset of the domain reflexively dominated by the complement of α . The residue of α is the domain of α minus the complement domain of α . X is in the minimal domain of α iff X is contained in $MAX(\alpha)$, and X is dominated by no elements in the domain of α other than itself and the elements not distinct from α . Thus, the minimal complement domain of α is the intersection of the minimal domain of α and the complement domain of α . Finally, the checking domain of α is the minimal residue of α . See Chomsky (1992: 15–16) for more.
- 22 See Ura (forthcoming) for the proposal that this should be parametrized; that is to say, in some languages, elements can undergo feature checking in their theta-positions, while they cannot in the other languages. See section 5.2 in this chapter for more discussion.
- 23 Due to the space limitation, I omit repeating Chomsky's (1992) argument against those notions. See Lasnik (1993) and Marantz (1995) in addition to Chomsky (1992).
- 24 For more discussion on the Split Infl Hypothesis and the VP-Internal Subject Hypothesis, see Belletti and Bowers (both this volume) and references cited there.
- 25 Under the GB theory, this hypothesis was believed to be derived from the Extended Projection Principle (which merely states that every clause has a subject), which has now lost its rationale under the Minimalist assumptions. For recent discussion on the issue as to how this hypothesis is to be technically implemented, see Chomsky (1992, 1995a) and Rothstein (1995).
- 26 The story presented in the text is fairly idealized and simplified, because we concentrate our attention on Case feature checking. Checking operations involved in a simple transitive clause are far more complicated, for checking operations concerning phi-features and categorial features are involved. See Ura (1996, forthcoming) for details.
- 27 Even though DP_1 is in the checking domain of V before V head-moves onto $AgrO$, it cannot enter into an accusative Case feature checking with V . This is just because it is assigned a theta-role at that very position. Recall that we are tentatively assuming that no element can enter into any checking relation if it is located in its theta-position.
- 28 For extensive discussion on the A-CT and its applications to a variety of phenomena, see Watanabe (1993, 1996). It is commonly assumed under the A-CT, incidentally, that the nominative Case checking between Infl and the DP with a nominative Case feature takes place at the Spec of $AgrS$, the functional head responsible for subject agreement, as illustrated in (i):



- For the sake of brevity of discussion, I omit mentioning this in the text. For discussion, see Belletti (this volume) and Lasnik (1993), Marantz (1995), and Watanabe (1993, 1996) in addition to Chomsky (1989, 1992).
- 29 See Thráinsson (this volume) and references there for details of Object Shift.
- 30 A vast number of studies address their attention to Object Shift in various languages. See Watanabe (1993), Bobaljik (1995), Holmberg and Platzack (1995), and references there, in addition to Thráinsson (this volume), for more discussion.
- 31 For empirical advantages of the A-CT, see, among others, Watanabe's (1993, 1996) extensive studies on a variety of phenomena relevant to Case.
- 32 For extensive discussion on MSCs and their syntactic properties, see Ura (1994).
- 33 See Chomsky (1995a) and, especially, Collins (1994b) and Ura (1996, forthcoming) for the technical implementation for the idea that a single head can enter into multiple checking relations.
- 34 Under the theory of multiple feature checking (cf. Collins 1994b, Ura 1996, forthcoming), it is assumed that formal features that belong to a single head may differ from one another in terms of their properties. Thus, it is possible under this theory

that the phi-features of a head α are strong and can enter into multiple feature checking relations but the Case feature of α is weak and cannot enter into more than one feature checking relation. See Ura (1996, forthcoming) for more discussion.

- 35 Another argument in favor of the A-less CT in terms of MSCs is provided by Chomsky (1995a), who proposes to analyze the so-called "transitive expletive construction" into a variant of MSCs. According to him, this construction can be explained more explicitly under the A-less CT than under the A-CT. For more discussion, see Chomsky (1995a). For discussion on transitive expletive constructions, see Bobaljik and Jonas (1996) and references there.
- 36 It is probable that some (strong) formal feature of Infl other than Case feature (possibly, phi-feature) attracts DP_1 to the Spec of Infl to enter into a checking relation before Spell-Out. See Ura (1994) for more discussion.
- 37 The next question to ask is: in which way is each of the GFs defined in terms of checking relations? Ura (forthcoming) has proposed that the ability to control the missing subject of a subordinate adjunct clause and the ability to bind a subject oriented reflexive, for instance, result, respectively, from a phi-feature checking relation with Infl and from an EPP feature checking relation with Infl. See Ura (forthcoming) for more discussion.
- 38 Due to the limitations of space, I refer the reader to Ura (1996, forthcoming, in press) for extensive discussion on GF-splitting phenomena under the A-less CT.
- 39 Note that it is permitted for the Case feature of an intransitive

unergative verb not to be checked off. It is a well-known fact that an intransitive unergative verb sometimes assigns Case but sometimes not (see Burzio 1986 for more discussion).

- 40 Ura (forthcoming) maintains that this parameter corresponds to the so-called “null subject parameter;” that is, the Case feature of finite Infl need not be checked off in languages with null subjects. See Ura (forthcoming) for details.
- 41 See Ura (forthcoming), where it is argued that the application of the A-less CT to ergative languages enables us to explain some other issues concerning ergative languages, such as anti-passivization, split-ergativity, GF-splitting, etc.
- 42 In fact, it is certain that Agr-projections are conceptually problematic, as Chomsky (1998b) points out, but it is also certain that they can provide us with a lot of empirical advantages (see Belletti (this volume) and references there). Nevertheless, tensions of this kind between conceptual merits and empirical ones, which have often emerged in the history of Generative Grammar, are expected to be resolved by giving priority to conceptual merits over empirical ones.
- 43 In this respect, it might be interesting to touch on the somewhat surprising fact about *wh*-movements and their relevance

to Case checking. As shown in (i) and (ii) below, some ungrammatical examples, which are supposed to be degraded for a Case theoretic reason, can be salvaged by the *wh*-extraction of the offending DP (cf. Postal 1974, Kayne 1984):

- (i) a. *They alleged [John to have kissed Mary].
 b. Who_k did they allege [t_k to have kissed Mary]?
- (ii) a. *They assured Mary [John to be a nice man].
 b. Who_k did they assure Mary [t_k to be a nice man]?

See Ura (1993) and Bošković (1997b) for further discussion.

- 44 Thanks to Maki Ura for bringing my attention to this construction.
- 45 It is also interesting, in passing, to note that the accusative marked subject of the embedded gerundive clause cannot be promoted to the matrix subject by passivization:
- (i) a. *John_k was reported [t_k having kissed Mary].
 b. John_k was reported [t_k to have kissed Mary].

This indicates that the accusative Case feature of the subject in the embedded gerundive clause has no connection with the matrix verb. Then, how does it have its accusative Case feature checked off? It seems not so easy to give an explicit answer to this question and related puzzles.