CASE ASSIGNMENT IN ARABIC
AND THE GB CASE THEORY

MOHAMMED AL-SHORAFAT
Yarmouk University, Irbid, Jordan

Abstract

One of the basic assumptions of the Government-Binding (GB) theory is that all human languages draw upon a Universal Grammar (UG). This UG consists of a finite set of principles and parameters which are reflected in the structure of human languages.

Thus, further inquiry into different human languages becomes a must and cross-linguistic evidence will have a great bearing on the structures of those principles and parameters.

Because English possesses a degenerate case system, the identification and formulation of case should be based on languages with a richer case system such as Arabic. This paper is intended to show that case assignment in Arabic constitutes a serious challenge to case theory as envisaged and developed by Chomsky and his collaborators within the GB framework. The facts of case assignment in Arabic call for drastically modifying the existing case theory, if it is to assume a universal character and successfully accounts for differing markings and manifestations of case in a variety of human languages.

1- Introduction

Before presenting the data concerning case assignment in Arabic, I believe it is only appropriate to delineate Chomsky's position on this issue. In a number of his writings, Chomsky (1981, 1982, 1986a, 1986b) has proposed a number of properties for case. His basic ideas on case, however, are to be found in Chomsky (1981), modified in Chomsky (1986a). Thus, my major discussion will center on case formulation as mainly expressed in Chomsky (1981,1986a) It will be very...
AL-SHORAFAT

helpful at this point to briefly summarize Chomsky's account of case assignment.

In his modular system of UG, Chomsky considers case as a subsystem of UG. Case is defined, or applies under government. He states that, "If the category α has a case to assign, then it may assign it to an element that it governs" (Chomsky. 1986a: 187) Government is taken in terms of minimal c-command(1). For example, in the following phrase marker:

1.

\[
S \quad ? \quad INFL \quad VP \\
\text{NP}_1 \quad \text{V} \quad \text{NP}_2
\]

INFL governs \(\text{NP}_1\) and assigns nominative case to it while \(\text{V}\) governs \(\text{NP}_2\) and hence assigns objective case to it.

Chomsky (1981,1981a) also proposes that case assignment requires adjacency. For instance, if a direct object is to receive accusative case, it must be adjacent to its case assigner, the verb in this case (cf. Aoun. 1985). Chomsky (1986a) further suggests that the principle of adjacency requires that if case is not morphologically realized, a case-marked element must be adjacent to its case assigner. Chomsky (1986a: 82) states that, "If a verb takes an NP and PP complement, the former will be closer to the verb ("put [the book] [on the table]"). ("*put [on the table] [the book]"). Since case is not morphologically realized on either NP or PP. NP must be closer to the verb because the verb will assign objective case to it, but not to the PP.

Furthermore, Chomsky (1986a) distinguishes between the structural cases: nominative and objective, which are assigned in terms of S-structure position, and inherent cases: oblique and genitive, which are assigned at D-structure position and
associated with θ-marking\(^{(2)}\). In Chomsky (1981) only [-N] categories (verbs and prepositions) are case assigners. In Chomsky (1986a) all major lexical categories (N, V, P, A) assign case. (N, A, P), according to him, assign inherent case at D-structure, whereas V and INFL assign stuctural case at S-structure.

Another property of case that Chomsky (1981: 171) posits is that each governor assigns only a single case. In other words, the lexical item assigned case receives only one case.

In brief, the properties that Chomsky (1981, 1986a) has proposed for case are: (a) government, i.e., the case assigner must govern the element to which it assigns case; (b) case assignment is subject to the condition of adjacency, i.e., the element assigned case must be adjacent to its case assigner, particularly, when case is not morphologically realized. This requirement is viewed as a universal condition. (c) case is assigned on two different levels: inherent case: oblique and genitive, at D-structure and structural case: nominative and objective at S-structure. (d) each governor assigns only a single case. (e) only lexical categories (N, V, A, P) can assign case. After this brief introduction, I turn now to case assignment in Arabic

2. Case assignment in Arabic

Case assignment in Arabic has attracted the attention of a number of early Arab grammarians as well as modern ones. For a brief, critical and interesting review of literature on this topic, the reader is directed to Farghal (1986). Although the facts of case assignment in Arabic are very obvious, there has been no general consensus among writers on this matter. It is worth noting, however, that the early Arab grammarians consider the verb in a verbal sentence as the case assigner for all the NPs in that sentence.

The verb, according to them, assigns nominative case to the subject NP as well as accusative case to the object NPs in the sentence (cf. Farghal, 1986: 8). Moreover, they have not reached an agreement on how to treat case in Arabic. Some approach it from a traditional perspective\(^{(3)}\). Others have attempted a GB account. Another area of disagreement among modern grammarians is the position and status of INFL\(^{(4)}\).

Arabic, a VSO language, possesses a rich, overt case system, and basically displays three grammatical cases: nominative, accusative, and genitive\(^{(5)}\). The following example illustrates these three cases.
In (2) the subject NP /Zayd/ carries the nominative case/-un/: the object NP/risalat/ carries the accusative case/-an/: and the NP/ ?ab/ carries the genitive case/-i(n)/. It should be noted that the genitive case is assigned either by a preposition/ ?ila/ as in the above example, or by a NP in a "construct construction" as in the following example.

3. kitāb-u zayd-in yādīd-un
   book-nom zayd-gen new-nom
   "Zayd's book (is) new."

As far as the notion of government is concerned, it is not clear that this notion is applicable for Arabic. A D-structure representation for a verbal sentence in Arabic is the following tree-diagram.

4.

It should be mentioned that the verb in Arabic can be viewed as a composite of a number of elements: the verb root or stem plus a number of affixes which denote Tense, AGREement and Gender.
Tense and AGREement are referred to in the GB theory as INFL\(^6\). INFL constitutes part (an affix) of the verb. So, though V and INFL have separate branches in the tree-diagram above, this does not mean that they are independent of each other.

Following the GB framework, it can be seen that both V and INFL in (4) govern NP\(_1\) and NP\(_2\). The question is: which is which? In other words, which NP does the V govern and which NP does the INFL govern? According to Chomsky (it has been quoted earlier), if a category has to assign case, then it assigns it to an element that it governs. Furthermore, Chomsky (1981:94) states that, "case assignment never" "skips a category" in a string". If one follows Chomsky literally, then the only candidate for assigning case in the tree-diagram in (4) is INFL. It assigns nominative case to NP\(_1\). As for the V, it can not assign case to NP\(_2\) because there are two categories intervening. As a matter of fact V governs INFL and vice versa. It should be noted, however, that according to the framework developed by Chomsky (1981), it is not clear where to posit the INFL node, i.e., before or after the verb (as a prefix or a suffix)\(^7\). Chomsky (1981: 27) posits the following base rule for the Semitic languages (including Arabic.)

5. \[ S \rightarrow (NP) \text{ INFL VP} \]

But this rule cannot be one of the base rules in Arabic because of word order considerations and because of the absence of a VP node as in (4) above. Besides, the INFL-as notated by Farghal (1986)-surfaces independent of the verb in certain contexts. In these contexts, INFL always appears before the verb. Examine (6) and (7) below taken from Farghal (1986: 153).

6. \begin{align*}
\text{kana-t} & \quad \text{?albint-u taktubu cindamā ra?aytu-ha} \\
\text{be+past-fem} & \quad \text{the-girl write when saw-I-her}
\end{align*}

INFL

"The girl was writing when I saw her."

7. \begin{align*}
\text{sa-yakunu r-ra?is-u yaxtubu Yadan} \\
\text{fut-be+masc def-president-nom give a speech tomorrow}
\end{align*}

INFL

"The president will be giving a speech tomorrow."
Another example which shows that the INFL precedes the verb is the following:

8. Huda kana-t taktub.
   Huda be-past-fem write
   "Huda was writing."

A third piece of evidence which shows that the INFL is prefixed to the verb is the following:

9. kataba
   wrote
   "He wrote"

9a Yaktubu
   pres(8)-write
   "He is writing."

Since it has been demonstrated that INFL can appear before the verb, there is no reason whatsoever which prohibits positing it before the verb, and in this case we will have a structure as in (10) below instead of that in (4).

10.
If we adopt the structure in (10) as D-structure, we will face more problems than those encountered in (4). Here INFL which governs and assigns nominative case to the subject NP1 is separated from it by V. Also, NP2 which is the object of the verb is separated from it by NP1. Hence, the adjacency requirement is not satisfied. In other words, the case assigner is not the head of the phrase that most properly contains the NP to which it assigns case. It should be mentioned that the case marking of NP2 in both structures (4) and (10) constitutes a problem to the case theory as will be shown later on. It should also be made clear that the structure in (4) can be viewed as S-structure because the mapping between D-structure and S-structure is trivial. Even though it has been seen that INFL can appear before the verb in certain contexts (6-9), the position of INFL in (4) will be adopted in this paper, i.e., immediately after the verb.

It has already been noted that structural case assignment in English takes place at S-structure, while in Arabic (as will be shown later) it takes place at D-structure, and this is a major difference between the two languages. In order to illustrate this, consider the following example taken from Van Riemsdijk and Williams (1986: 227)

11. * __________________ seems John to be sick.

(11) is ungrammatical, according to Van Riemsdijk and Williams, because the lexical NP /John/ appears in a position (the head of an infinitive structure) where it is not governed. The verb "seem" is not a governing verb; hence, it is not assigned case because there is no case assigner. In order for (11) to be grammatical "John" should move to a position where it can be governed and receive case as in (12) below. The case assigner that assigning nominative case to John is INFL.

12. Johni seems e_i to be sick.

So, it can be seen that case in English is assigned after movement has taken place, i.e., case is assigned at S-structure.

In Arabic, however, the opposite situation holds, i.e., case assignment takes place at D-structure. Consider the following example.

13. ?akala zayd-un ruzz-an
   ate Zayd-nom rice-acc
   "Zayd ate rice."
AL-SHORAFAT

13a. ruzz-an ?akala zayd-un
rice-acc ate Zayd-nom

13b. ?akala ruzz-an zayd-un
ate rice-acc Zayd-nom

It can be seen that "ruzz-an" which is assigned the accusative case retains the case after leftward movement has applied. In other words, case is assigned prior to syntactic movement. It can be concluded at this point that both INFL and the verb in Arabic assign case to their respective NPs (though over a distance and with elements intervening) in clear violation of the notion government as strictly formulated in Chomsky (1981).

Concerning the requirement advanced by Chomsky, that if case is not morphologically realized, a case-marked element must be adjacent to its case assigner, linguistic evidence from Arabic shows that this requirement cannot be maintained. By and large, case assignment in Arabic is morphologically realized as in the following example:

14. rakala zayd-un c'amr-an
kicked Zayd-nom Omar-acc
"Zayd kicked Omar."

where /Zayd/ carries the nominative marker /-un/ and /c'amr/ carries the accusative marker /-an/. Nevertheless, there is a class of nouns in Arabic where case is not and cannot be morphologically realized. This class involves some proper names that come from a non-Arabic origin(10). Observe the following:

15. rakala c'Issa musa
kicked Issa Musa
"Issa kicked Musa."

15a. *rakala c'Issa-un mus-an

(15a) Shows that case cannot be morphologically realized on either /c'Issa/ or /musa/. In other words, the Arabic Ns/c'Issa/ and/ musa/ show no case distinctions. Nevertheless, it is a well-known fact in Arabic that /c'Issa/ in (15) is the subject NP, and /musa/, which is governed by the verb and not adjacent to it, is the object NP. If
we apply Chomsky's requirement, then /musa/, which is not morphologically realized, should be placed adjacent to its case assigner the verb. If this happens, then the sentence will read:

16. rakala musa ^cIsa.
    kicked musa Issa
    "Musa kicked Issa."
And the sentence would mean that/musa/kicked/Issa/ and not vice versa. It is obvious from examples (15) and (16) that Arabic violates the case adjacency condition.

The facts of Arabic also show that Chomsky's proposal to consider adjacency as a UG principle is untenable; rather, it is language-specific. Observe the following example.

17. kataba sâlim-un kitâb-an
    wrote Salim-nom book-acc
    "Salim wrote a book."

The D-structure of this sentence would be something like:

18. [[v kataba] [INFL] [Sâlim] [kitâb]]

According to the GB framework, INFL (Tns, AGR) governs and assigns nominative case to/ Sâlim/. As for the verb/kataba/, it governs and assigns accusative case to the NP/kitâb/, though it is not adjacent to it.

Put differently, the case assigner, the verb, is not the head of the phrase that most immediately contains the object NP to which it assigns accusative case. Hence, the condition of adjacency is violated. In brief, since adjacency as formulated by Chomsky is word order dependent, then it is expected to vary according to the different word orders displayed by different languages. Before bringing this discussion to an end, a word about the base component of Arabic is in order.

Arabic displays two basic sentence patterns: verbal as in (19a) and nominal as in (19b).
AL-SHORAFAT

19a. \( S \longrightarrow V \text{INFL} \ NP_1 (NP_2) (NP_3) \ldots \)

19b. \( S \longrightarrow NP_1 \begin{array}{c}
NP_2 \\
AP \\
PP \\
AdvP
\end{array} \)

An example of (19a) is the following:

20. ?eğā Sālim-un ḍamr-an kitāb-an
gave Salim-nom Omar-acc book-acc

"Salim gave Omar a book."

An example of (19b) is the following:

21. ?aljáww-u bārid-un
def-weather-nom cold-nom

"The weather is cold."

In (19a) \( NP_1 \) carries the nominative case, while \( NP_2 \) and any other \( NP \) that might follow carry the accusative case. In (19b), on the other hand, \( NP_1 \) usually carries the nominative case and \( NP_2 \) and \( AP \) agree with the head \( NP \) and carry the nominative case, too. However, in the case of \( PP \) and \( AdvP \), case is not overtly realized, but it is assumed by the Arab grammarians that both \( PP \) and \( AdvP \) occupy the place of nominative \( NP \). In (19a) \( V \) can assign accusative case, with \( NP_1 \) intervening, to \( NP_2 \) and \( NP_3 \), and this is in direct conflict with the case theory as formulated within the GB framework. The case theory contends that each case assigner assigns one and only one case; moreover, case assignment cannot, "skip a category." In (19b), \( NP_1 \), \( NP_2 \) and \( AP \) each receives nominative case, though there is no governor to assign them case. This also runs counter to the requirement that for case to obtain there should be a lexical governor. However, it could be argued that case in (19b) could be inherently assigned. In other words, case is assigned at D-structure and it is associated with θ-marking (cf Chomsky, 1986a).

It should be mentioned, nonetheless, that inherent case assignment as formulated by Chomsky (1981) appears to be a rule saving device. Chomsky has proposed that \( V \) assigns one and only one case to its object. Faced with structures with two object \( NPs \), Chomsky (1981) proposes that the second \( NP \) receives its case in the base without a case assigner. Chomsky, however, does not justify his choice of inherent case assignment. In short, inherent case assignment seems unmotivated.
CASE ASSIGNMENT IN ARABIC AND THE GB CASE THEORY

One final aspect of case assignment in Arabic that the theory of case within the GB system does not provide for is the fact that not only major categories can assign case, but particles (like the copula "kana") and complementizers can as well. Examine the following sentences:

22a. ?aljaww-u bārid-un
def-weather-nom cold-nom

b kana ?aljaww-u bārid-an
be+ past def-weather-nom cold-acc
"The weather-nom was cold."

c ?inna ?aljaww-a bārid-un
def-weather-acc cold-nom
"The weather is (really) cold."

Where the introduction of /kana/ to (22a) has changed the nominative case on /bārid/ to accusative as in (22b). And the introduction of the complementizer/?inna/ to (22a) has changed the case on /?aljaww-u/from nominative to accusative. Thus, it can be seen that/kana/ and /?inna/ and similar particles and complementizers in Arabic can assign case, a fact that has not been entertained in the GB case theory.

3. Conclusion

It has been shown that case assignment in Arabic constitutes a serious set back to the case theory as developed by Chomsky within the GB framework. It has been demonstrated that for the notion of government to be applicable in Arabic, we have to stipulate which category governs which element. The principle of case adjacency has been proved inoperative in Arabic since the verb or INFL can assign case to an element which is not adjacent to it, even when case is not morphologically realized. It has also been shown that in nominal or equational sentences case is assigned without having an overt lexical case assigner. It has been seen that a case assigner can assign case to more than one element, a thing disallowed in the GB case theory. It has further been observed that in addition to major syntactic categories other elements such as complementizers and particles can assign case.

From the above, it can be established that there is an urgent need for modifying the existing case theory if it is meant to present a unified account of case across languages and attain a universal character.
Though it is not one of the main concerns of this paper, I will point the way to a modification of case theory along the lines suggested in Chomsky (1981). Chomsky (1981: 218) proposes a system of indexing which is of a different nature than indexing relevant to the binding theory. The binding theory indexing is expressed by subscripts as in the following example:

Mary$_i$ told me about herself$_i$

Where both Mary and herself are subscripted by (i). The second type of indexing that Chomsky suggests is what he calls cosuperscripting as illustrated in the following tree-diagram.

```
      S
     /|
    / \
   /   \
  /     \ 
 V$_j^i$ INFL$_i^i$ NP$_i^i$ NP$_j^j$
```

Where V governs, assigns case, and is coindexed with NP$_2$ by a superscript (j) and INFL governs, assigns case, and is coindexed with NP$_1$ by a superscript (i). It can be seen that with this system of superscripting the adjacency requirement is no longer needed. Not only this, but the possibility of superscripting other NPs in the same manner is available. It should be admitted, however, that this modification is in no way conclusive; it merits further research and investigation across languages.
Notes

(1) For more on this, see Chomsky (1981: 2.3 and 3.2.1)

(2) This is a modification of Chomsky's (1981) position where he considers that case assignment takes place at S-structure only.

(3) For more on this, check Abdul-Ghani (1981) and Wahaba (1986).

(4) Check Farghal (1986) for more on this.

(5) There is a fourth case which will not be discussed here and that is "jazm", "jussive case" which is a property of verbs only.

(6) It should be pointed out that INFL here does not include "aspect".

(7) It should be noted that in most recent formulations of GB theory INFL is seen as a property of not only the verb but the whole sentence.

(8) It should be mentioned here that INFL would have to be construed more broadly than [± Tense and AGR] in order to accommodate aspectual inflection as well.

(9) INFL and V c-command NP₁ and NP₂. In the case of INFL, V is not a maximal projection and there is no barrier to government in this case. In the case of NP₂, it is not clear if NP₁ is a maximal projection and thus prevents government. Nonetheless, the question remains of why, apart from stipulation, INFL and V assign case to both NPs.

(10) The problem with these nouns, I believe, is phonological. These nouns end in a long/æ/, so it is difficult to superimpose/-un/ or/ -an/ on them.
References


