

A GOVERNMENT-BINDING ANALYSIS OF VP SENTENTIAL
COMPLEMENTS IN EGYPTIAN ARABIC

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ABSTRACT

This paper examines VP sentential complements in Egyptian Arabic within a Government and Binding framework. Various types of finite and non-finite sentential complements are identified according to the distribution of the complementizer ?inn 'that' and the elements that fill the complement subject position. It is proposed that Case and Binding parameters are set differently in Egyptian Arabic than in English. In Egyptian Arabic, certain subject NPs are potentially Case-marked by two categories. In these instances the lexical Case-marker prevails, thereby establishing the governing category for the NP, and determining the NP's range of interpretation by the Binding principles.

1. Introduction

This paper is concerned with the sentential complements of the Verb Phrase in Egyptian Arabic (EA). The paper is both descriptively and theoretically oriented. Thus, although it gives a description of the various types of VP sentential complements, it presents such a description in a Government-Binding (GB) framework in an attempt to show how the different principles of GB (e.g., Government, Binding, Case, etc.) underlie the distribution of these complements and their structural patterns. For instance, various Case assignment and Binding principles are shown to explain why sentential complements with empty subject positions, pronoun subjects with free reference, reflexives, etc., are allowed with certain verbs, but not with others. The paper also illustrates how the parameters of sub-systems such as Binding or Case Theories may be adjusted so as to take account of cross-linguistic variation, as exemplified by the EA data.

2.1 Non-finite VP complements

With respect to their internal structure, the distribution of the complementizer ?inn 'that' and the elements that may fill their subject position, non-finite complements may be grouped into three basic types.

2.1.1 Complements of type I verbs

This group includes verbs like ?:az 'to want,' tawaqqa^c 'to expect,' Habb 'to like,' qarrar 'to decide,' talab 'to ask.'

The structure of the complements of such verbs is illustrated by the pairs of sentences given below. Thus, compare:

- 3) ha:ni biyHibb ?inn sa:mi yivanni
 Hani he-likes that Sami he-sing
 'Hani likes for Sami to sing.'
- 4) *ha:ni biyHibb ?inn yivanni
 Hani he-likes that he-sing
 *'Hani likes that he sing.'

In sentence 3, we have an overt NP subject sa:mi that does not seem to be governed since, given the fact that the embedded verb is non-finite, there is no tense in INFL to govern the subject position. Moreover, \bar{S} -deletion cannot apply here because of the presence of the complementizer ?inn. Hence, I propose that the complementizer ?inn in EA should be analyzed as the governor of the embedded subject position in a way comparable to the complementizer for in English. This should not be surprising at all, considering that it assigns objective case to the subject pronoun in the same way prepositions do:²

- 5) ?ana ?axat ?inn-u yivanni yawmeyyan
 I I-took that-him he-sing daily
 'I got used to him singing daily.'
- 6) ?ana ?axat minn-u ik-kita:b
 I I-took from-him the-book
 'I took the book from him.'

Moreover, since preposition stranding is not allowed in EA, as can be seen from sentence 7 below:

- 7) *^Cayza Hadd atkallim $\left. \begin{array}{l} \text{ma}^C \text{a} \\ \text{with} \\ \text{ma}^C \text{a}:-\text{h} \\ \text{with-him} \end{array} \right\}$
 I-want someone I-talk
 'I want someone to talk with.'

we are now able, if ?inn is analyzed as a preposition, to explain why sentence 4 is ungrammatical and why ?inn must always be followed by an NP, a fact that many linguists dealing with EA have tried but never managed to account for (Farghaly 1981:44).

Now, if ?inn is the governor of the embedded subject NP, thereby setting the lower \bar{S} as a governing category for that position, then sentences 8 and 9 below are just a simple illustration of the normal behaviour of pronouns and anaphors:

- 8) ha:ni biyHibb ?inn-u yivanni
 Hani he-likes that-he he-sing
 'Hani likes that he sing.' (i.e., 'Hani likes him to sing.')
- 9) *ha:ni biyHibb ?inn nafsu yivanni
 Hani he-likes that himself he-sing
 *'Hani likes that himself sing.'

As predicted by the binding principles (Chomsky 1981:188), the pronoun - u is free in its governing category (the embedded \bar{S}) and thus can be coreferential with the matrix subject; the reflexive nafsu, on the other hand, cannot occupy this position, since it will not be bound, as required, in its governing category, and the sentence is ruled out as ungrammatical.

Now, consider the sentences below:

- 10) ha:ni biyHibb sa:mi yivanni
 Hani he-likes Sami he-sing
 'Hani likes Sami to sing.'
- 11) ha:ni biyHibb-u yivanni
 Hani he-likes-him he-sing
 'Hani likes him to sing.'

Sentence 10 raises another problem, since in this sentence there is no tense in INFL to govern the subject, and, unlike sentence 3, there is no governing complementizer either. In this type of

structure we have to resort to the \bar{S} -deletion analysis proposed by Chomsky (1981:66) in order to allow the higher verb to govern the embedded subject and assign Case to it (S, unlike \bar{S} , is not a barrier to government). Notice that the embedded subject pronoun has an objective case (the case assigned by verbs) rather than a nominative one, as we can see from sentence 11.

The \bar{S} -deletion analysis, however, cannot be invoked for sentences such as 12 and 13 below:

- 12) ha:ni biyHibb yivanni
 Hani he-likes he-sing
 'Hani likes to sing.'
- 13) *ha:ni biyHibb nafsu yivanni
 Hani he-likes himself he-sing
 'Hani likes himself to sing.'

In sentence 12, we have yet another type of complement structure, since what we have here is an obligatory control structure with an embedded subject PRO. This means that in sentences where the higher and the lower subjects are coreferential, the rule of \bar{S} -deletion cannot apply (notice that the embedded subject pronoun in sentences like 11 must always be disjoint in reference from the matrix subject). In this type of complement, the subject position is always ungoverned and can only be filled by PRO; hence the ungrammaticality of sentence 13.

2.1.2. Complements of type II verbs

This group includes such verbs as Ha:wil 'to try' and wa^cad 'to promise.'

These verbs have the range of complement types illustrated below:

- 14) ?ana wa^cadt (ha:ni) ?adfa^c il-fulu:s
 I I-promised (Hani) I-pay the-money
 'I promised (Hani) to pay the money.'
- 15) *?ana wa^cadt (ha:ni) sa:mi yidfa^c il-fulu:s
 I I-promised (Hani) Sami he-pay the-money
 *'I promised (Hani) Sami pay the money.'

- 16) ?ana wa^Cadt (ha:ni) ?inn sa:mi yidfa^C il- fulu:s
 I I-promised (Hani) that Sami he-pay the money
 'I promised (Hani) that Sami will pay the money.'
- 17) *?ana wa^Cadt (ha:ni) ?inn ?adfa^C il-fulu:s
 I I-promised (Hani) that I-pay the-money
 'I promised (Hani) to pay the money.'

As can be seen from the above patterns, these verbs subcategorize for either an obligatory control complement (14-15) or an \bar{S} with the complementizer ?inn (16-17). Thus, sentence 14 has an embedded subject PRO, given that such a position is not governed:

- 18) S[NP_i[?ana]V[V[V[wa^Cadt]NP[ha:ni] \bar{S} [S[NP_i[PRO] INFL [-Tense]
 V[?adfa^C il-fulu:s]]]]]]

Sentence 15 is ungrammatical with an overt NP subject replacing PRO in such an ungoverned position, as can be expected by Binding Theory and the Case Filter.

In sentences 16 and 17, we find exactly the opposite. Since the embedded subject position is governed by ?inn, it cannot be filled by PRO (hence the ungrammaticality of 17), but only by an overt NP as in 16.

Notice that this group of verbs does not allow an ?inn-deletion rule (comparable to the for-deletion rule of English) to apply at PF, and thus, sentence 15 can never be grammatical.

2.1.3. Complements of type III verbs

This group of verbs includes causative and quasi-causative verbs in EA.³ The main causative verb in EA is xalla 'to make (causatively).'⁴ Other causative verbs include sa:b 'to let,' ?asab 'to force,' ?ittarr 'to oblige.'⁵

With regard to the type of complements they take, causative verbs are of two types: the first type includes the two verbs sa:b 'to let' and xalla 'to make;' the other contains all the rest. The difference between the two subgroups lies in the fact that while the latter subcategorizes for an [---NP_S] complement structure, the former subcategorizes for a sentential complement

only. Consider the structure of the second group, represented by the following sentences:

- 19) ha:ni ?aqna^c sa:mi yišrab iš-ša:y
 Hani he-persuaded Sami he-drink the-tea
 'Hani persuaded Sami to drink the tea.'
- 20) *ha:ni ?aqna^c yišrab iš-ša:y
 Hani he-persuaded he-drink the-tea
 *'Hani persuaded to drink the tea.'
- 21) *ha:ni ?aqna^c ?inn sa:mi yišrab iš-ša:y
 Hani he-persuaded that Sami he-drink the tea
 *'Hani persuaded that Sami should drink the tea.'
- 22) ha:ni ?aqna^c sa:mi ?inn-u yišrab iš-ša:y
 Hani he-persuaded Sami that-he he-drink the-tea
 'Hani persuaded Sami that he should drink the tea.'

From the above examples, we see that this group of verbs requires an NP object and a sentential complement (19 and 22). Thus, sentences 20 and 21 are ruled out because the subcategorization framework or the θ -grid of the verb is not satisfied (with the θ -role of patient being absent).

Notice that the complement yišrab iš-ša:y in 19 is clausal (not a VP), with PRO being the subject controlled by the matrix NP object. This analysis is supported by the binding facts concerning anaphors:

- 23) ha:ni_i ?aqna^c sa:mi_j yidrab nafsu*_{i/j}

If the complement is not sentential, we would have expected the reflexive to be able to have the same index as the matrix subject (both being in the same governing category). This, however, is not the case, as can be seen from 23 above, where the reflexive can be bound only by PRO within its governing category, the embedded S:

- 24) S_{[NP_i[ha:ni]]}_V[_V[_V[?aqna^c]]_{NP_j[sa:mi]]}_S[_S[_{NP_j}[PRO]]
 INFL [-Tense]_V[yidrab _{NP_j}[nafsu]]]]]]

This group differs from the complements of type II verbs in that it obligatorily assigns a patient θ -role to an NP as part of its θ -grid, while this NP is optional in the other group.

the Projection Principle, by allowing the NP sa:mi to have a dual θ -role as both agent to the lower verb and patient of the higher one.

Notice that unlike complements of type I verbs which may have an \bar{S} -deletion structure or an obligatory control one, these complements can have the former structure only; hence a sentence like 31 below is perfectly grammatical (compare with the ungrammatical 13):

- 31) hani xalla nafsu yišrab iš-ša:y
 Hani he-made himself he-drink the-tea
 'Hani made himself drink the tea.'

This concludes our discussion of the non-finite complements of VPs in EA; the next section deals with the finite complements.

2.2. Finite VP complements

Finite complements will be classified here into three groups, according to whether or not they allow the complementizer ?inn, and whether the latter's occurrence in such structures is optional or obligatory.

2.2.1. Complements with optional ?inn

Among the verbs that have such a choice are verbs like ?iftakar 'to think,' ?i^ctabar 'to regard,' and ?i^ctaqad 'to think.' These verbs may have sentential complements with or without ?inn, as in 32-33:

- 32) ha:ni ?iftakar sa:mi xarag
 Hani he-thought Sami he-went-out
 'Hani thought that Sami had gone out.'

- 33) ha:ni ?iftakar- $\left\{ \begin{array}{l} u \\ \text{him} \\ *huwwa \\ \text{he} \\ \text{nafsu} \\ \text{himself} \end{array} \right\}$ xarag
 Hani he-thought $\left. \begin{array}{l} \\ \\ \\ \\ \\ \end{array} \right\}$ he-went-out
 'Hani thought that he/*him/*himself had gone out.'

- 34) ha:ni ?iftakar ?inn sa:mi xarag
 Hani he-thought that Sami he-went-out
 'Hani thought that Sami had gone out.'

In sentence 32, an overt NP appears as the embedded subject, which is predicted by the theory, since it can be governed by INFL (the latter being [+Tense]) in the sentential complement. Sentence 33, however, raises some problems for such an analysis. First of all, the sentence is grammatical only with the embedded subject pronoun -u being disjoint in reference from the matrix subject:

- 35) ha:ni_i ?iftakar-u_j/*_i xarag

This is not expected if the pronoun is in a separate governing category from the matrix subject (which would be the case if it is governed by INFL). To account for these binding patterns in EA, which differ from their English counterpart, I propose that EA sets the parameters for Case and Binding in the following manner:

- a. Case assigners are V, P, Complementizer and INFL, but lexical categories prevail.

So, if the Comp position is empty, then a higher verb, being lexical, can reach down into the lower clause and assign Case (accusative), even though INFL is [+tense]. In a matrix clause, since there is no Complementizer, INFL is the Case assigner.

- b. Case domain is always concordant with Binding domain.

In other words, if an NP_a receives Case from an X, then the first S or NP with a subject accessible to the NP_a that contains X is the governing category of that NP_a for the Binding principles to apply.

Thus, in sentences like 32-33, according to a. above, the embedded subject is assigned Case by the higher verb since the neutralization of INFL has rendered the application of \bar{S} -deletion feasible.⁶ This explains why the pronoun filling this position has to have the objective, not the nominative form. This means that the governing category for the embedded subject is the matrix S, according to b, since it contains both the subject NP and its Case assigner the matrix verb.

Now all the facts about the binding patterns of the pronouns and anaphors in sentences like 32-33 fall into place. The embedded

subject pronoun cannot be coreferential with the matrix subject since, now, they are in the same governing category where pronouns must be free. On the other hand, a reflexive can occupy such a position because, now, it is bound in its governing category as required by the Binding principles.

In sentence 34, we have two possible Case assigners: the Complementizer ?inn and INFL. Being lexical, ?inn assigns Case to the embedded subject, thereby establishing the \bar{S} containing them both as the governing category.⁷ And, as expected, the subject pronoun will be free to either refer to the matrix subject or to be disjoint in reference from it, since in both cases the pronoun will still be free in its governing category:

36) ha:ni_i ?iftakar ?inn-u_{i/j} xarag

At the same time, reflexives are not allowed in embedded subject position:

37) *ha:ni ?iftakar ?inn nafsu xarag
 Hani he-thought that himself he-went-out
 *'Hani thought that himself had gone out.'

2.2.2. Complements with obligatory ?inn

These are complements to verbs like sadda? 'to believe,' ?akkid 'to assert,' ?a:l 'to say,' and nisi 'to forget.'

Here again we find two possible governors: ?inn and the [+Tense] INFL. Consider the following sentences:

38) ha:ni sadda? *(?inn) ^cali nigih
 Hani he-believed (that) Ali he-succeeded
 'Hani believed that Ali succeeded.'

39) ha:ni nisi *(?inn) il-maHall ?afal
 Hani he-forgot (that) the-store it-closed
 'Hani forgot that the store had closed.'

From sentences 38-39 above, we can see that this type of verb subcategorizes for ?inn-clauses⁸; therefore the embedded subject position is always governed and hence neither PRO nor a reflexive can occupy such a position:

structure of the head verb and the various sub-theories of the grammar, like Government, Binding, Case Theory, and Theta Theory.

By setting the parameters for Case and Binding in EA in a manner different from the way they are set in languages like English, we can accommodate the EA data. In English, the \bar{S} -deletion rule is needed to account for the fact that the subjects of some tenseless clauses are in fact governed; the data given here suggest that this rule is also operable in EA with respect to some tenseless complements, as in sentences 11 and 29. The difference between the two languages lies in the data concerning tensed complements. While in English there is no need to invoke the use of the \bar{S} -deletion rule with tensed clauses because the embedded INFL governs and assigns Case to the subject, the binding patterns in EA in sentences like 33 suggest that the subjects of such tensed complements are indeed governed by the matrix verb, despite the fact that their S_s contain a [+tense] INFL. However, the idea of having two governing categories for one NP at the same time, which would be the case if we allow \bar{S} -deletion to apply while the embedded INFL is a possible governor, would undermine the whole concept of Government. Therefore, I propose to set the parameters of Case assignment and Binding (and hence also Government) in the manner described in a and b in section 2.2.1., thereby allowing these rules to accommodate languages as different as English and EA. Thus, by adopting a and b above as the EA parameters for Case and Binding and by analyzing the complementizer ?inn as a governor in EA, we have been able to account for the various types of internal structures of VP sentential complements within the framework set by GB.

FOOTNOTES

¹George and Kornfilt (1981:125) state that in a language where personal agreement markers on the verb are obligatory and regularly precede the tense marker (as is the case in EA), neutralization of tense, rather than of personal agreement, is the marker for non-finiteness.

²Notice that the nominative form of the pronoun is used in EA as a strong form of the pronoun for emphasis, no matter what Case is assigned to the pronoun (see also Wahba 1984:65). Thus, in the sentence below, although the preposition min 'from' should assign a non-nominative case, we may have the nominative pronoun heyya 'she' for emphasis:

?ištare:t ik-kita:b min heyya is-sitt di
 I(I) bought the-book from she the-woman this
 'I bought the book from this woman.'

So, normally ?inn is followed by a non-nominative pronoun, except where emphasis is required.

³EA has also convert causative verbs, but these have phrasal rather than clausal complements (see Saad 1982, Chapter 4).

⁴I call xalla 'to make' the basic causative verb because it is the most semantically unmarked causative if compared with verbs like yasab 'to force,' which means to cause somebody to do something by force, or sa:b 'to let,' which has an indirect causation meaning.

⁵These verbs differ from quasi-causatives like sagga^c 'to encourage,' nasaH 'to advise,' ?aqna^c 'to persuade,' ?ayra 'to tempt' in that while the first group indicates that the action denoted by the embedded verb has actually taken place, the second group does not necessarily indicate this. Thus, compare sentences 1 and 2 below:

- 1) ha:ni xalla layla tina:m
 Hani he-made Layla she-sleep
 'Hani made Layla sleep.'
- 2) ha:ni nasaH layla tina:m
 Hani he-advised Layla she-sleep
 'Hani advised Layla to sleep.'

In 1, we are sure that Layla really has slept. In 2, she may or may not have done so, but at any rate the matrix subject has caused a state where a possible action may take place.

⁶It seems that in EA, when the Comp position is not filled, \bar{S} -deletion becomes the rule rather than the exception, since it is needed for both finite and non-finite complements. This casts strong doubts on the idea that \bar{S} is a barrier to government in EA; it does not seem to be a barrier except where obligatory control is involved as in sentences like 12. This line of thought needs to be pursued in more detail after further investigation.

⁷While a reflexive or a pronoun disjoint in reference from the matrix subject is allowed in sentences like 33 and 35 respectively, hence establishing the matrix S as their governing category, a

reflexive is not allowed in sentences like 37, which suggests that the lower \bar{S} that contains the governor ?inn is now the governing category for these NPs in EA. Compare the following English sentences with their EA equivalents:

I want myself to win the race
 ?ana^C ayza nafsi ?aksab issaba?
 I want myself win the-race

*I want me to win the race
 *?ana^C ayza:-ni ?aksab issaba?
 I want-me in the-race

I want for myself to win the race
 *?ana cayza nafsi ?aksab issaba?
 I want myself win the-race

*I want for me to win the race
 *?ana cayza ?inn-i ?aksab issaba?
 I want that-me win the-race

While in the English sentences the matrix S remains the governing category for the lower subject, even when the latter is governed by for, the EA data concerning the binding patterns of pronouns and anaphors suggest that the lower \bar{S} becomes the governing category for the embedded subject when it is governed by ?inn. Notice that ?inn is the only available governor, the lower INFL being [-Tense], and thus the lower \bar{S} itself does not contain a governor for its subject. The same can be said of sentences 8 and 9 in section 2.2.1.

⁸There is no reason, other than violation of strict subcategorization, to render these sentences ungrammatical.

⁹Other perception verbs have other subcategorization frameworks. Thus, lamas 'to touch' and da:? 'to taste' do not subcategorize for sentential complements, but rather for NP ones.

¹⁰These verbs in their basic perception meaning do not allow ?inn. When they occur with ?inn they have different meanings and belong to another type of verb. Thus, ša:f ?inn does not mean 'to see,' but 'to realize,' and simic ?inn does not mean 'to hear,' but 'to learn.' That is, when they occur with ?inn, they form different lexemes.

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