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ON THE SYNTAX OF SMALL CLAUSES IN ARABIC

by

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A thesis
submitted to the School of Graduate Studies and Research
University of Ottawa
in partial fulfillment of the requirements for
the M.A degree in linguistics.

University of Ottawa

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Dedication

This thesis is dedicated to the memory of my father, and to my mother, my brothers, and my sisters.

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This work would not have been completed without the great help and support of various people. I would like to take this opportunity to thank all these people for the time and effort they gave to help bring this thesis into being.

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ABSTRACT

This thesis examines the syntax of small clauses in Modern Standard Arabic (MSA, henceforth). It will take as its starting point the recent work done in the generative tradition. This thesis consists of an introduction and four chapters.

Chapter One is an overview of the literature on small clauses since the time interest in such constructions began. Three main analyses of small clauses are reviewed: Stowell's (1981, 1983), Williams' (1975, 1980, 1983), and that of Hornstein and Lightfoot (1987).

Chapter Two first follows up the idea of "root" small clauses suggested in the literature for languages like Hebrew (cf. Rapoport (1985), Doron (1986)) among other languages. This idea is explored with reference to the facts of Arabic, and it is concluded that Arabic supports and provides examples for the existence of "root" small clauses. Arabic root small clauses are found to be those constructions known to traditional Arab grammarians as "nominal sentences". They are analysed as IPs with an initial abstract INFL in D-structure. At S-structure, raising applies to move the subject NP to the empty subject position of the IP immediately dominating the small clause. This is shown in (1a-b):

(1)a. [[[[al-baab-u maqfuul-un]]]]
IPI'I SC

b. [al-baab-u [[[[t] maqfuul-un]]]]
IP i I'I SC i

c. al-baab-u , maqfuul-un.

the-door-nom. closed-nom.

"The door is closed"

The following part of the chapter is devoted to identifying "dependent" i.e embedded small clauses as manifested by the facts of MSA. It is shown that these small clauses are IPs subcategorized by a small group of verbs known by traditional grammarians as the "incomplete verbs" or "Kaana and its 'sisters'". It is shown that the traditional distinction between this group of verbs and other verbs in Arabic will be more clearly explained in terms of the analysis proposed here. This is because, the "Kaana"-type of verbs are base-generated under INFL and subcategorize for a small clause rather than an NP. Verbs other than this small group are base generated under V and take an NP so as to form a VP. Various distinctions are drawn between types of embedded small clauses with reference to their S-structure subjects.

The rest of Chapter Two examines the proposed distinction between subcategorized and non-subcategorized small clauses in the light of the Arabic data. This part starts by looking at the distinction idea as proposed by Stowell (1981, 1983) and others. It then turns to Arabic subcategorized small clauses as analysed in the first part of the chapter. Though Arabic non-subcategorized small clauses will be dealt with later, some criteria for distinguishing these characteristics of the non-subcategorized small clause constructions are discussed in contrast with those of the subcategorized ones.

Chapter Three takes up the issue of Arabic adverbials. It offers a small clause analysis that is seen as a way to explain the phenomena observed in these constructions. It is claimed that the structures of these adverbials assign them a big PRO subject exclusively. An attempt is made to explain the case marking of the predicate of the small clause by combining both the traditional and the generative approach to come up with a condition under which the accusative case is assigned to these small clauses. These clauses are assigned the internal structure in (2):

(2)a.[muniir-u[[[waSala [[PRO][raakib-an]]]]]]
IP I'I VP SC NP XP

b. munir-u waSala raakib-an.

Munir-nom. arrived riding-acc.

"Munir arrived riding"

The thesis concludes in the fourth chapter with a general discussion of issues such as licensing, Case, constituency, transportability, and extraction in the light of the analysis proposed throughout the thesis. Some concluding remarks are made in the last section of the chapter to tie up some loose ends and point out the questions that are still open for further consideration in the light of the claims made in the thesis.

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INTRODUCTION

0.1 The Language

Modern Standard Arabic (henceforth MSA), also known as Modern Written Arabic and Modern Literary Arabic, is the uniform variety of Arabic which is used all over the Arabic speaking world as the usual medium of written communication in books, periodicals, journals, magazines, newspapers, signs, business, and personal letters. MSA is also used as the medium of oral communication on the stage, in radio and television brodcasts, in formal speeches, public and university lectures, learned debates, conferences, in some songs, and in general on occasions accompanied by some degree of formality and solemnity (Saad, 1982).

This variety of Arabic is the one that concern us in this work. Other types of Arabic include: a) Classical Arabic (henceforth CA), which is the revered language of the Holy Koran, and the language of pre-islamic poetry and post-islamic poetry, literature, philosophy, theology, mathematics, sciences, etc. b) The colloquial Arabic dialects, which differ considerably among themselves and from place to place, are used for everyday oral communications by all the people in each dialect area.

MSA differs from CA mainly in lexicon and style and to a much lesser extent in grammar; both differ from the colloquials in lexicon, style, phonology, syntax and sociolinguistic function.

0.2 The Problem

In the recent generative literature, in English sentences such as (1a-b) the bracketed items are called a "Small Clause":

(1)a. John considers [Bill sick].

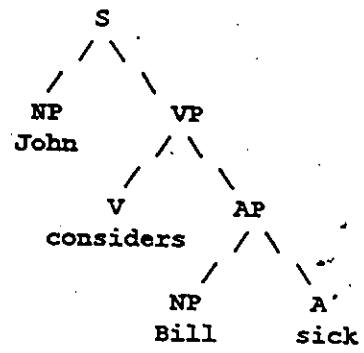
b. Max ate [the meat raw].

Two main views exist in the literature concerning the debate over the constituency of these bracketed items.

The first view is represented by Rothstein (1983) and Stowell (1981, 1982, 1983), who argue that the part [Bill sick] and [the meat raw] , among other similar structures, have the status of a constituent which is a projection of the head.

A syntactic tree showing this view would be as in (2). Stowell (1983) maintains that AP is a constituent with [Bill] as its subject.

(2)



The second view, represented by Williams sees the same phenomenon as an example of predication where sick is a predication of the subject Bill, and hence the structure between brackets is part of the VP headed by consider which is on its part a predicate of the matrix subject John. Under this view, Bill and sick do not form a syntactic constituent (Williams (1980, 1983)).

An analysis expressing Williams' view of (1a) is as in (3):

(3) John [considers [[Bill] [sick] AP VP
i j j i

Williams uses a coindexing mechanism to express the predication relation that exists between Bill and sick on one side, and between the matrix subject John and the whole matrix VP [Considers Bill sick] , on the other side, as shown in (3).

Cross-linguistic studies of small clauses have resulted in support and rejection for both views. The present study initiates the discussion of Standard Arabic small clauses in a generative framework. To my knowledge, this topic has not been discussed before in the recent literature on Arabic.

0.3 Transliteration

The transliteration of the Arabic writing system is given in table 1. The definite article will be always transliterated as al- in spite of the fact that it has a hamza(') in the Arabic system of writing.

Table 1

Transliteration of the Arabic Writing system

Arabic letter	Transliteration.	Phonetic Value
	consonants	
أ	'	[ʔ]
ب	b	[b]
ت	t	[t]
ث	th	[θ]
ج	j	[ʒ]
ح	H	[ħ]
خ	x	[x]
د	d	[d]
ذ	dh	[ð]
ر	r	[r]
ز	z	[z]
س	s	[s]
ش	sh	[ʃ]

ص	S	[ṣ]
ض	D	[ḍ]
ط	T	[ṭ]
ظ	Z	[ẓ]
ع	9	[ʿ]
غ	gh	[ġ]
ف	f	[f]
ق	q	[q]
ك	k	[k]
ل	l	[l]
م	m	[m]
ن	n	[n]
ه	h	[h]
و	w	[w]
ي	y	[y]

Vowels

Short :

a	[a]
u	[u]
i	[i]

long :

aa	[a:]
uu	[u:]
ii	[i:]

CHAPTER ONE

1.1 Introduction:

This chapter is a review of the literature of three major approaches to the analysis of small clauses. These three approaches are those of Stowell (1981, 1983); Williams (1980, 1983); and Hornstein and Lightfoot (1987).

Safir (1983) notes that ever since the appearance of Williams (1974), "Small Clauses" have been entities of considerable theoretical interest. In this chapter, different viewpoints in the theory of small clause will be reviewed.

(1)a. [I consider [the matter clear]].

b. [We left [the silverware clean]].

Chomsky's (1981) first argument for the constituency of the portion after the verb in structures such as those in (1) is based on the Projection Principle, and it goes like this: Since there must be a subject-predicate relationship between "the matter" and "clear" at LF, it must be that the relationship holds at all levels; consequently, at D- and S-structure, the subject and the predicate must form a constituent. This argument, however, begs the question, since it assumes that the subject-predicate relationship is necessarily structural.

1.1.1

Stowell (1981) considers the following structures:

(2)a. I consider[John to be very stupid] (Stowell's(12))
S

b. I expect[that sailor to be off my ship (by midnight)]
S

c. We feared [John to have been killed by the enemy]
S

(3)a. I consider[John[---very stupid]] (Stowell's(13))
AP A

b. I expect[that sailor[---off my ship (by midnight)]]
PP P

c. We feared[John killed by the enemy]
PrtP

He thinks that each verb in (2,3) above takes a complement that is assigned the theta-role of a propositional object. In each case, the "Small Clause" in (3) is assigned exactly the same theta-role as the full infinitival clause in (2). Suppose that the structures in (3) are as indicated. Then, we find that a lexical NP appears in the subject position of these phrases in exactly the environment that we ought to expect given Case theory, i.e adjacent to a governing verb. Just as the verb assigns Case across the S-boundary in (2), it is able to assign Case across the phrasal boundaries in (3). This permits theta-role assignment to proceed, satisfying the theta-criterion. Hence, the structural description in (3) is accurate. We have confirmation of the Case theory account of the distribution of lexical subjects across syntactic categories, since under traditional assumptions such structures should be impossible. Section 1.2 is a more detailed examination of this first view of small clauses.

1.1.2

Williams (1983) notes that the main issue connected with small clauses is the definition of "subject". He has argued against the small clause analysis of the complements in the CONSIDER, SEEM class, and other constructions. To the extent then that he wants to say that JOHN is the subject of SICK in (4):

(4) Bill considers John sick.

he argues that we must appeal to some other notion of "subject" than a structural one, on pain of having to define NP, as a VP structural subject. In the absence of small clauses, the appropriate notion of "subject" seems to be "external argument of a maximal projection", as proposed in Williams (1980).

One may ask, is the notion "subject" needed at all? According to Williams, the single clearest need acknowledged by all parties concerns the opacity-inducing effects of subjects. These effects are found in the CONSIDER constructions:

(5) *John considers Mary [mad at himself].
i j i APj

Predication theory, according to Williams, recognizes not only subjects, but also predicates. In fact, "subject" is really defined in terms of "predicate" in that it is defined as the single argument external to some (maximal projection) predicate phrase. Given this, we may define "opacity" in terms of predicates, instead of subjects: "predicates are opaque". We may then say that the reflexive in (5) is ungrammatical because it is free in the predicate APj. (See Williams (1980) for details on this proposal).

Williams remarks on the consequences this theory has for the Projection Principle of Chomsky (1981), the principle requiring that the possibilities of theta-role assignment and subcategorization be the same at all levels of representation. This is an important principle as trace theory follows from it. This second view of small clauses is the topic of section 1.3 of the present chapter.

1.1.3

In a paper on "Predication and PRO", Hornstein & Lightfoot (1987, henceforth H&L), propose an alternative analysis of Small Clauses.

It is well known that Chomsky (1981) treats PRO as a pronominal anaphor, and therefore, by the "PRO theorem", as always ungoverned. In contrast, Bouchard and Sportiche have argued that PRO should sometimes be treated as an anaphor, governed but not case-marked. PRO differs from the trace of NP movement, which is also governed and not case-marked, in that trace is always coindexed with another NP which has no theta-role. PRO, however, is either coindexed with another NP which has an independent theta-role, or receives an "arbitrary" reading. In agreement with Bouchard, Sportiche, and Koster, H&L (1987) make the further claim that, when PRO is governed, it behaves like an anaphor, bound within its governing category; and that an ungoverned PRO receives the arbitrary interpretation.

H&L assume the definition of government of Aoun & Sportiche (1981), augmented by the idea that what is governed is a projection. Aoun and Sportiche say that A governs B if all maximal projections above A dominate B, and vice versa. Aoun and Lightfoot take B to be a projection. Thus, if A governs a phrasal category , it also governs that category's head. The definition of government which H&L adopt is (6a) and the governing category is defined in (6b), where they assume the definition of accessibility of Aoun and Hornstein (1985).

(6)a. A (X) governs B iff A and B share all maximal projection. If A governs XP, then A governs the corresponding X.

b. A governing category for A is the first clause or NP which contains a governor for A and a subject accessible to A.

Section 1.4 of this chapter has more on this third analysis.

1.2 Stowell's Analysis

1.2.1 The Structure of the Small Clause

Stowell argues that the available evidence suggests that the structures shown in (3) are exactly correct. Consider first the constituent structure of the complement, ignoring the categorial labels. As with the exceptional Case-marking constructions, the clausal structure is implied by the Projection Principle, since the governing verb assigns just one theta-role (to a propositional complement) at LF.

According to Stowell (1981), if structures such as (3) are treated as cases of control, as for instance in Bresnan (1982), then the theory of control must be weakened so as to allow for theta-role transmission to a controlling NP; similarly the theory of subcategorization would have to allow for subcategorization features that are entirely independent of thematic structure of the verb.

As in the exceptional Case-marking construction, adverbial material may not intervene between the subject and the rest of the "small clause":

(7)a. * I consider John myself to be very stupid.

b. * I expect that sailor sincerely off my ship by midnight.

c. * We feared John with great concern killed by the enemy.

(Stowell's(14))

Although an adjacency requirement is well-motivated for the rule of Case assignment, it is normally not required of either raising or control structures. On the

other hand, the ill-formedness of (7) follows automatically if the complement structure is as indicated in (3).

Suppose that we accept that the complement structure in (3) does involve "Small clause", must it be accepted that these have categorial status of AP, PP, PrtP , etc.? Stowell's answer appears to be: Yes. Arabic facts discussed in this thesis seem to support this answer, too, but only in D-structure. Stowell supposes these clauses have the categorial status of S, as sometimes has been assumed. The verb assigns a theta-role to the clause as a whole, since subcategorization features simply fill into slots in thematic grids. The verb is unable to specify the categorial features of anything other than the entire complement. This is the "locality" property of strict subcategorization. It then follows that the governing verb should be indifferent to the categorial status of the predicate phrase within the small clause. In other words, the complements in (3) should be freely interchangeable, but this is not true (Stowell, (1981)(1983)):

(8)a. * I consider John off my ship.
* I consider John killed by the enemy.

b. * I expect that sailor very stupid.

c. * We feared John very stupid.
* We feared John off the ship already.

(Stowell's(15))

Thus, if the "locality" of strict subcategorization is to be maintained (i.e if subcategorization features are linked to specific slots in thematic grids), then the clausal status of the complements in (3) forces the conclusion that APs, PPs, and Participial Phrases may contain lexical NP subjects where the principles of Case theory and theta-role assignment are satisfied.

Arabic small clauses as discussed here tend to have lexical subjects only in D-structure. In Phonetic Form they appear only as trace, little pro, or PRO (cf. Chapter Two).

There is one major category that has been ignored thus far: VP. In Stowell's words: "Although Jackendoff (1977) assumes that NP may contain a subject, this is because he treats S as a projection of V. Nevertheless , we do find VP complements with lexical subjects, namely the complements to perception verbs and causative verbs" (P. 259).

(9) a. I heard [Jack [come into the kitchen]]
VP
b. Jane watched [Mary [open the letter]]
VP
(10) a. Nancy made [Scott [take out the garbage]]
VP
b. Anne let [Peter [wash the dishes]]
VP

(Stowell's 16&17)

The complements of perception verbs and causative verbs have some peculiar properties which suggest that they may have a special status. No Arabic structures equivalent to those in (9) & (10) are discussed in this thesis.

As Stowell puts it, this analysis of the small clause complements makes it unnecessary to stipulate by means of base rules that there is a PRED position in VP immediatelly following the NP object position. By virtue of the structural integrity of the small clause complement, it is impossible for other complements of the governing verb to appear between its subject and predicate, while the Adjacency Condition on Case assignment guarantees that the entire clause must appear immediately to the right of the governing verb. Thus, no special assumptions are required to derive the position of these complements in VP. The facts follow automatically from the principles that

account for simple NP and S' complement structures. Quite apart from the fact that this is the optimal solution, given the assumption that the categorial component does not exist, it is advantageous for other reasons as well.

As observed by Jackendoff (1977), the traditional phrase structure label associated with the PRED position has no categorial content. In his words "Postulating this node is as much a mistake as postulating the node agent" (p.67). The traditional motivation for the category-neutral PRED position comes from the fact that the position is characterized by a logical function rather than by the categorial features of the phrase in question.

In a theory which derives the order of complements by means of categorial rules, this is problematic, since apparently necessary reference to the logical function of the phrase violates the principle of autonomy of syntax. Jackendoff proposes that the PRED position should be replaced by a slot that is reserved for an NP and an AP complement; he suggests that this position is also made use of in the double-object and verb-particle construction. Quite apart from the fact that this type of solution is incompatible with the theory of grammar advocated by Stowell (1981) it is troublesome even within the terms of traditional assumptions. By grouping the AP complement structure together with the double object and the verb-particle constructions, this account loses the generality of the small clause complement structures, and is forced to assign the PP, VP, and PartP predicates to a distinct syntactic position, despite the fact that they are directly parallel in their position within VP. Moreover, it is doubtful that there is a genuine generalization captured by grouping [+N] predicate complements together with the double-object and the verb-particle complement structures, since the latter constructions have very special properties which suggest that they have a radically different structure.

The analysis of the small clause complements proposed by Stowell, as he argues, avoids the problems inherent in the previous approaches. The apparent violation of the autonomy of syntax is an artifact of the assumption that PRED position is defined by the categorial rule for V'. In fact, the "PRED" position is no more than the predicate within the small clause since any syntactic category may project to include a subject position, thus forming a clause. This is exactly the position I try to support for Arabic small clauses. Consequently, it follows that there is no subset of the categorial features which define this position, even with the framework of a theory that follows for a component of phrase structure rules. A category-neutral PRED position is a natural corollary of a category-neutral subject position, one the LF notions of "clause" and "object" are assumed to be defined exclusively in terms of hierarchical structure, the categorial status of the predicate determined entirely by the subcategorization features associated with the clause as a whole.

1.2.2 The subject of the Small Clause

Thus far, only structures in which a lexical NP appears in subject position of a small clause have been considered. When the subject position of the small clause is properly governed by a lexical head, we ought to expect trace to occur in this position. In fact, this is what we find:

(11)a.[John]I consider[[e] very stupid]
i AP i
b.[who]do you expect[[e] off your ship by midnight]
i PP i
c.John is the one[who] we feared[[e]killed by the enemy]
i PrtP i
d.[which man] did you hear[[e] come into the kitchen]
i VP i

(Stowell's (18))

Moreover, if the matrix verb is a raising verb or passive participle, and governs without assigning case, then the NP-trace appears in the subject position of the complement: -

```
(12)a.[Rachel] seems [  [e] very tired]
            i      AP   i
   b.[The solution] proved [  [e] ridiculously simple]
                 i        AP   i
(13)a. [The sailor] is expected[ [e] off the ship by midnight]
                 i             PP  i
   b. [John] was feared [ [e] killed by the enemy]
         i          PrtP   i
                                                (Stowell's(19&20))
```

Raising plays a major role in the analysis of both dependent and independent Arabic small clauses presented in this thesis. By raising we obtain an NP-trace subject for all independent small clauses, and for embedded small clauses with kaana-type verbs as matrix verbs. Chapter Two is the analysis proposed for these constructions.

1.2.3 Asymmetry

Stowell (1981) also points out that there are a number of curious asymmetries among the small clause complements with respect to the possibilities of structures such as (12) and (13). None of the true raising verbs appear to allow for clausal complements other than S' and AP, while passives formed from VP complement structures appear to be ungrammatical.

```
(14)a. *[John] seems[ [e] in his bedroom]
           i     PP  i
   b. *[Jack] was heard[ [e] come into the kitchen]
           i          VP  i
                                          (Stowell's(21))
```

The ill-formedness of these examples does not arise from the fact that the meaning of the predicate violates the selectional restrictions of the matrix, as is shown by the fact that a simple switch to infinitival copular structure renders them fully grammatical:

(15)a. [John] seems [[e] to be in his bedroom]
i i
b. [Jack]was heard[[e] to come into the kitchen]
i i
(Stowell's (22))

The systematic exclusion of examples such as (14) raises some interesting issues that are not to be discussed here.

More complex issues arise when we consider the possibility of PRO occurring in the subject position of a small clause. When the clause appears as a subcategorized complement, it may never contain a PRO subject, thus there are the small clause counterparts to infinitival control complements, as there are to infinitival raising and exceptional case-marking complements.

(16)a. * I expect [PRO off this ship (by midnight)]

b. * Nancy tried [PRO nice to her brother]

c. * I was hoping [PRO released tomorrow]

d. * Peter was unable to see [PRO do that]

(Stowell's(23))

On the other hand, small clause adjuncts appear to allow PRO to occur in the subject position:

(17)a. Scott wandered home [PRO drunk] (Stowell's (24))

b. The farmer loaded the truck [PRO full of hay]

c. Jack rolled the dough [PRO into a ball]

d. John emerged from the meeting [PRO confused by their

In this regard, I argue that Arabic adverbial adjuncts are exclusively of the type where the subject position is always reserved for PRO. It is also worth noting that this PRO is always controlled in its reference by an NP in the matrix. This is made clear in Chapters Two and Three. Some of the consequences of this claim are discussed in Chapter Four.

Thus there appears to be an asymmetry holding between subcategorized complements and adjuncts with respect to the possibility of PRO appearing in subject position. This is part of the discussion in Chapter Two.

It is reasonable to attribute the ungrammaticality of the subcategorized examples in (16) to the binding theory in some way. Recall that for Chomsky and Stowell PRO may never be governed, by virtue of its dual status as a pronominal and as an anaphor. We know independently that the subject position of a subcategorized small clause is governed, by virtue of the constructions discussed above. Stowell's concern is to account for why government always holds in such structures, while providing a principled distinction between these examples and adjuncts in (17).

Consider first the subcategorized clauses in (16). Assuming that these examples are ruled out by virtue of PRO being governed, we must now ask what the governing element is, bearing in mind that government apparently does not hold in (17). In Stowell (1983), it was suggested that the relevant governor is the matrix verb. Following this suggestion, the subject of the small clause after expect cannot be PRO. Here I make the argument that the relevant governor is the matrix INFL which governs the subject of the small clause by virtue of governing the position labelled SC. In

English, Small clauses apparently differ from infinitival S' complements in always being transparent to government from the matrix. For this reason, Exceptional Case-marking structures are considerably more rare cross-linguistically than their small clause counterparts. Exceptional Case-marking depends upon S'-deletion or some analogous process which is triggered by a proper subset of verbs taking infinitival S' complements in English; in contrast, small clause complements with lexical subjects are very common cross-linguistically, appearing in languages such as French among others:

(18)a. * Je crois [Jean être malade]

I believe Jean to be sick

b. * J'imagine [son frère être intelligent]

I imagine his brother to be intelligent

(19)a. Je crois [Jean malade]

AP

"I believe Jean sick"

b. J'imagine [son frère intelligent]

AP

"I imagine his brother intelligent."

Suppose then that small clause boundaries never function as barriers to government. The possibility of structures such as (3) and (19) would be exclusively dependent on a Case assigning verb subcategorizing for the appropriate categorial features while the control structures in (16) would be ruled out by the binding theory. If small clause adjuncts in (17) fall outside the domain of government of the verb, then the possibility of PRO subjects is accounted for. It is worth noting here that this topic is discussed by H & L, whose position will be discussed later in this chapter.

However, Stowell points out that there are two problems with this account. First, it is far from obvious that all of the small clause adjuncts in (17) appear in ungoverned positions. In particular, it seems that object control is obligatory in (17b,c), suggesting that the adjunct appears in VP, cf. Williams (1980a). Second, if a head of phrase governs within all of its projections, as implied by the definition of government proposed by Aoun and Sportiche (1983), then the subject position of a small clause ought to be governed internally by its lexical head, regardless of its lexical enviroment.

Aoun & Sportiche's (1983) definitition of government:

x governs y iff for all α, α a maximal projection, α dominates x <=> α dominates y.

Chomsky (1981) proposes an alternative account of the asymmetry holding between the subcategorized small clauses and their adjunct counterparts. He assumes that the domain of government of a lexical head projects through X-bar structure, thus ruling out the examples in (16) without reference to the external governing verb. The adjunct control structures are permitted, under the additional assumption that these clauses are not in fact projections of AP, PP, PrtP etc., but rather have the categorial status of S. As Chomsky observes, the issue of the locality of strict subcategorization does not arise with the adjunct clauses, so there is no compelling reason to assume that they are projections of the lexical categories of the heads of their predicates.

According to Stowell (1981), in order for this story to be accepted, we must somehow rule out the possibility of a verb subcategorizing for an S-type small clause, which would trivially circumvent the effects of government. Various possibilities suggest

themselves. For instance, we might assume that it is only possible for a verb to subcategorize for a maximal projection; then if S is not maximal, subcategorization for S-type small clauses is impossible. Alternatively we might assume that S, like all categorial phrases, is endocentric. Then if the adjunct small clauses are not headed by a lexical category, they would have to be headed by INFL. Supposing now that INFL of a small clause is equivalent to PRO in some sense, then such clauses could never appear in a governed position, by virtue of the binding theory.

There is one final possibility that has rather intriguing consequences which go far beyond the scope of this discussion. Specifically, we might accept Chomsky's suggestion that the lack of strict subcategorization is crucial in permitting the clause to be a projection of the lexical category of its predicate. However, we can take this approach one step further by assuming that the adjunct clauses have no categorial features at all. In other words, we might assume that the categorial status of the S-system is directly linked to the tense feature, which is clearly absent from the small clause adjuncts in (17). Then these clauses cannot have the categorial features of S. But the binding theory prevents them from being projections of their predicates, since PRO may not be governed. In Arabic, I assume that they are projections of their own predicates because PRO must be governed and coindexed with either the subject or the object of the matrix, or an NP in a PP in the matrix. If there is no categorial component, and if X-bar theory defines pure hierarchical structures without categorial content, then categorial features may not be assigned to phrasal constituents by virtue of "percolating" through the X-bar projection of a lexical head. Suppose now that this percolation is optional, applying only where required by the principles of strict subcategorization. Then the adjuncts in (17) would lack categorial features entirely, accounting for the lack of government of the subject position and the impossibility of such a complement satisfying subcategorization requirements of a governing verb. The

lack of categorial features on the clause would not prevent the configuration from being interpreted as a control clause at LF, since the LF notions of "subject", "predicate", and "proposition" (or "clause") are all defined in category-neutral terms. The assumption that phrasal constituents might lack categorial features entirely in structures such as these does not appear to cause any obvious problems, and there is no principled basis for assuming that such structures are impossible, within the framework of a category neutral base assumed in Stowell (1981).

Various asymmetries in Arabic small clauses will be the topics of certain sections in Chapter Two as well as the whole of Chapter Three of this thesis.

1.2.4 Subjects Across Categories

In Stowell (1983), it was argued that subjects should be generalized across syntactic categories, so that the subject position is defined by the X-bar component of the grammar in category-neutral terms. It was also argued that the actual realization of this position is determined by the interaction of the X-bar component with other sub-components of grammar, including principles of Case theory, Binding theory, and the theories of government, subcategorization, and theta-role assignment. This proposal is consistent with a general program of restricting the stipulative power of the base component of the grammar, as he has noted elsewhere. Moreover, this category-neutral definition of the subject position allows for an account of the properties of small clause constructions which is consistent with a highly restricted theory of subcategorization and its relationship to the theta-role assignment. Finally, Stowell proposed and justified a reformulation of the definition of government, incorporating a directional orientation which allows for the subject position of every lexical category to be ungoverned by the head (for details see Stowell (1983)).

The existence of subjects across Arabic small clauses will be a major claim of the analysis provided in this work. My analysis of Arabic small clauses will also support many of Stowell's claims regarding small clauses in general.

1.3 Williams' Analysis

1.3.1 Against Small Clauses

As mentioned in section 1.1.2 above, Williams argues for a non-small clause analysis for small clauses. This analysis is based on his theory of predication, first proposed in (1980).

Chomsky (1981) says that the Projection Principle rules out the analyses proposed in Williams (1983). Specifically, he says that it rules out the following analysis of one of Williams' examples:

(20) I [consider [John]NP [intelligent]AP]VP

(S-structure)

Chomsky's reasoning runs as follows. Semantically, CONSIDER takes a single clausal complement. Thus at LF (20) looks like this:

(21)I [consider [[John]NP [intelligent]AP]S]VP (LF)

If this is correct, then the possibility of theta-role assignment and subcategorization is different in (20) and (21), and the Projection Principle is therefore violated.

Williams asks why it should be considered that (21) is the correct LF for (20). Trying to answer this question he notes that one reason might be to retain the structural definition of "subject" (the NP dominated by S) needed for the opacity condition. But, as Williams notes, there is another way to do this (Williams, 1980). Another reason might be to reflect the intuition that the complement of CONSIDER is a semantic unit. But what is a semantic unit? Must it be a syntactic constituent? suppose we take a subject and its predicate to be a semantic unit. Then we do not have to insert an S node in LF to reflect the unithood of a subject-predicate pair. Thus we may take (20) to be its own LF, and the projection principle is obeyed.

1.3.2 Small Clause Theory and Predication Theory

Williams (1983) suggests that it is perhaps accurate to characterize the difference between the Small Clause theory and the Predication theory as a difference with regard

to the question: "Which is the primitive notion, the subject-predicate relation or the clause?" The small clause theory clearly takes clause as the more primitive. Subject is defined in terms of clause, and predicate perhaps not at all. The predication theory takes the subject-predicate relation as primitive and clause is then simply a phrase that instantiates the subject-predicate relation (for details, see Williams (1983)).

1.3.3 Chomsky's Principles & The Predication Theory

If what Williams argues for is correct, then there is no reason at all under the Predication theory to surround the subject and the predicate in (20) with square brackets as in (21). Thus, Williams argues, it appears that the projection Principle can be maintained in the predication theory as well.

This is not so for another principle in Chomsky (1981), namely, the principle that if a verb subcategorizes a position, it must theta-mark it (p.37). Call this principle STM (i.e, Subcategorization Theta-Marking). STM prevents (20), since the NP JOHN appears in the subcategorization domain of the verb CONSIDER, but does not get a theta role from it.

STM also prevents movement into NP positions in VP, movements needed in the predication theory for deriving (22a) from (22b):

(22) a. I [consider [John]NP[certain [t to win]]AP]VP

b. I [consider[e]NP[certain [John to win]]AP]VP

According to Williams (1983) the Predication theory actually entails the elimination of NP movement (though not NP-trace, see Williams (1984)) so the role of STM in eliminating these movements is moot.

STM, then, is incompatible with the predication theory. STM is merely compatible, though, with Government-Binding theory. Williams' theory will not be discussed any further in this thesis.

1.4 Hornstein & Lightfoot's Analysis:

Adopting the view of PRO held by Bouchard, Sportiche, and Koster; and following Andrews (1982), H&L can assign (23b-c) the structures in (24). Andrews argues that so-called sentential adverbs and PP's, as in JOHN LEFT AFTER THE CONCERT, are best analyzed as VP internal. However, they do not have the same structure as so-called VP adverbs, which are sisters of V or V' and cannot be preposed to clause-initial position. H & L refer to items which are sisters to a VP, as in (23a), as sentential, following traditional usage:

(23) a. JOHN is SAD.

b. JOHN ate the meat NAKED.

c. John ate THE MEAT RAW.

d. John made BILL MAD.

e. John loaded THE WAGON FULL.

f. John loaded THE HAY into the wagon GREEN.

g. John kept IT NEAR HIM.

h. JOHN DIED.

(24) a. John INFL [[ate the meat]VP [PRO INFL [naked]AP]S]VP.

b. John INFL [[ate the meat]V' [PRO INFL [raw]AP]S]VP.

In each case, PRO is governed in the matrix clause, and therefore must be coindexed with a c-commanding NP in its governing category, i.e with JOHN in (24a), or with

THE MEAT in (24b). No special rule of predication will apply here. Note that in (24b) both JOHN and THE MEAT c-command PRO. A tighter restriction is needed. This problem is common to many theories, and several ideas have been suggested. One such as Rosenbaum's (1967) Minimal Distance Principle would make THE MEAT the only possible (or at least the unmarked) antecedent. One might require a PRO in a structure like (24b) to be normally coindexed with a theme. These latter two ideas are adaptations of Williams, (1980) restrictions on his rule of predication. Under H & L's approach, whatever reason makes JOHN an impossible or marked antecedent for PRO in (24b) will also make JOHN an impossible antecedent for PRO in: JOHN PERSUADED BILL [PRO TO LEAVE].

1.4.1 Notes on The Analysis

As H&L put it, several things should be noted about the analyses in (24) outlined. I will try to go over these things as stated in H & L's (1987) paper.

First, for H&L S and S' are projections of INFL, S' is the maximal and S is the nonmaximal projection. INFL may contain [+ Tense], [- Tense], or nothing at all, just as an NP may contain a lexical material in D-structure. An empty INFL is written as INFLo, and occurs only where there is no S' node. As usual only an INFL which contains [+ Tense] can govern.

Moreover, a base rule is assumed by this analysis where S (or INFL')—> NP INFL XP, where INFL, like all other heads, can be followed by any phrasal category as a complement. If INFL is [+ or - Tense], the complement must be a VP; if INFL is empty–as in the constructions under discussion, and in small clauses with a lexical subject (see below)– the complement may be NP, PP, or AP, but not VP.

The analysis of Arabic small clauses offered here does have an empty INFL, but this INFL is not internal to the small clause. It is the matrix INFL in both the root and the embedded small clauses. In the subcategorized embedded small clauses, this INFL contains AGR features and Tense. Verbs that subcategorize for small clause complements in Arabic are base-generated under this INFL (cf. Chapter Four, Section 4.6.).

Second, since there is no intervening S', PRO is governed by the verb ATE in both (24a,b). The verb assigns its Case to THE MEAT, and therefore cannot assign case to PRO on the reasonable assumption that governors can assign case only once (Rizzi 1982).

Third, and most important for the purposes of this analysis, the subordinate S occurs in adverbial positions. The structures needed to be as in (24) given the c-command restriction on the interpretability of PRO; and these are also the positions for sentential and VP adverbials. So by the usual "transportability" conventions, "sentential" adverbs which, following Andrews (1982), are to be analyzed as Chomsky-adjoined to VP, can occur at the front of the sentence, unlike VP adverbials (25-27) and the same holds for the small clause in (24a) but not that in (24b). This can be seen in the following:

(25) a. John ate the meat, apparently.

b. Apparently, John ate the meat.

(26) a. John ate the meat elegantly.

b.*Eagerly John ate the meat.

(27) a. Naked, John ate the meat.

b.*Raw, John ate the meat.

According to H&L, it seems that there is only one position at the end of a VP, so one is not surprised now that small clauses are in complementary distribution with simple VP adverbs in that position:

(28) a.*John ate the meat quickly elegantly.

b.*John ate the meat elegantly quickly.

c.*John ate the meat gracefully nervously .

The examples in (30) are adaptations of those of (23a-h), repeated here as (29), which H & L propose to analyse with a PRO subject:

(29)a. JOHN is SAD.

b. JOHN ate the meat NAKED.

c. John ate THE MEAT RAW.

d. John made BILL MAD.

e. John loaded THE WAGON FULL.

f. John loaded THE HAY into the wagon GREEN.

g. John kept IT NEAR HIM.

h. JOHN DIED.

(30)*John ate the meat raw quickly.

*John loaded the wagon full quickly.

*John loaded the hay into the wagon green quickly.

*John kept it near him carefully.

The Arabic equivalent of (29a), as analyzed here, does not have a PRO subject (cf. Chapter Two). The Arabic equivalent of (29h) will not be analyzed along the lines

of H & L proposals either. Part of the reason for this disagreement is that H & L's analysis treats English verbs like is in (29a) and, for instance, ate in (29b,c), alike as to the kind of argument structure they can take.

H&L note that the sentences become quite natural if the adverb is at the front of VP, John quickly ate the meat raw or if the small clause which is VP-internal is replaced with one which is Chomsky-adjoined to the VP, John ate the meat quickly naked. The sentences in (28)-(30) seem equivalent in status: highly anomalous, if not entirely ungrammatical.

Arabic adverbials, that are to be analyzed later as small clauses with a PRO subject, have the property of being transportable in a similar fashion. This is discussed in Chapter Four (cf. section 4.4).

Fourth, if these small clauses always occur in adverbial positions, it is automatically explained why they never show up inside NP or PP (e.g 7-8), which never allow an adverb internally (e.g 9).

(31)a. *John's arrival dead.

b. *John's acceptance of the gift happy.

(32)a. *I presented John with it dead.
i i
(cf. I presented it to John dead)
i i

b. *John loaded the wagon with hay green.

c. *John loaded the hay into the wagon full.

d. *John's acceptance of the gift unwrapped

(33)a. *John's acceptance gracefully

b. *We spoke about John's election overwhelmingly.

H&L claim that this gives them an advantage over Williams, who attributes the ungrammaticality of (32) to the fact that the predicate (DEAD, GREEN, etc.) is not c-commanded by its subject (IT, HAY,etc.). But this is only half the story, say H&L, since Williams also does not explain why the predicates do not occur inside the internal NP where they might be c-commanded by their subject –i.e why the structural analysis is not [with [it dead]NPi] PPi etc.

It is worth noting that regarding the Arabic equivalents of examples (31), (32), and (33), all but (32c) sound grammatical and acceptable only with small clauses having PRO subjects controlled by an NP in the matrix which is a subject, an object, or an object of a preposition.

Fifth, it is correct, according to H&L, to assume that in small clauses like those of (29), we would want to know why a PRO subject never has an arbitrary interpretation. As noted above, it is assumed that PRO may be governed, and that a governed PRO acts like an anaphor and is bound in its governing category. So in (34), PRO is governed by TRIED and ATE respectively. The governing category is the higher clause, which contains an accessible subject. Note that the lower clause is dominated by S not by S':

(34)a. John INFL [tried [PRO to leave]S]VP.

b. John INFL [[ate the meat]V' [PRO INFLo naked]S]VP.

However, in their view, PRO is not always governed, and when ungoverned it receives an arbitrary interpretation. There are three major contexts in which a PRO is ungoverned: where the COMP is lexically filled (e.g (35)), and where the clause containing PRO seems to act like a subject (e.g (38)), or is in extraposed position (e.g (37)):

(35) It is unclear [how [PRO to behave oneself in public]].

(36)a. [PRO to behave oneself in public] is a social requirement.

b. John knows that [PRO to behave oneself in public] is a social requirement.

(37) It is a social requirement [PRO to behave oneself in public].

In each case the clause containing PRO is dominated by S' which is a barrier to government.

H&L follow Manzini (1983) that PRO in (37)-(39) has no domain governing category, and therefore must have the arbitrary reading.

Extending Koster's (1978) analysis to (36), the clause indicated is actually in TOPIC position, coindexed with the subject position presumably via an abstract operator in the intervening COMP. But whether the clause is in TOPIC or subject position, it is not governed by a lexical item and therefore cannot be a bare S. That there can be only a maximal projection in these contexts, i.e. S' for clauses, need not be stipulated: it follows from the facts that (a) a TOPIC must be coindexed with some argument position, and a subject must be coindexed with INFL, (b) such coindexing affects only maximal projections. Similarly in (37), the extraposed clause is not governed by a lexical item if we assume that it dangles from S, assuming with Baltin (1982) that the extraposed clause is part of the VP, and so is governed by the verb. It must nontheless be a maximal projection because of being coindexed with IT.

Note that another context exists in which PRO is ungoverned, and therefore, by H & L's theory, arbitrary in reference, namely as subject of an infinitival main clause. Such constructions occur quite freely in many languages and have an exclamatory interpretation. An empty subject must have arbitrary reference as in (38):

(38) a. Oh, PRO to be in England now that November's here.

b. Oh, PRO to live in New York [PRO INFLo naked]S

Due to the different nature of the system of complementation, syntactically; Arabic has no exact equivalents to (38).

The subject of a main clause infinitival can be governed if there is a FOR in COMP (39a). A PRO in such a context would be governed, hence an anaphor. (38b) does not occur because the anaphoric PRO has no antecedent:

(39)a. Oh, for us to live in New York.

b.*Oh, for PRO to live in New York.

Having partially outlined their treatment of predicative adjectives involving a small clause with a PRO subject, we turn now to small clauses with overt or trace subjects. They are to be analyzed similarly:

(40) a. I consider [Susan INFLo smart]S

b. Susan was considered [t INFLo smart]S
i i

c. I want [Susan INFLo in New York]S

d. I want [Susan (as) linebacker]S

The only relevant difference is that, unlike TRY etc., CONSIDER and WANT may assign case to an NP that they govern, here SUSAN. Therefore when these verbs occur with passive morphology, they do not assign case, and following what has come to be known as "Burzio's generalization" (1981), do not assign a theta-role to the subject: in (40b), the subject of SMART is bound by a non-thematic position and hence shown as

"trace". Incidentally, that WANT assigns case directly, not via the complementizer FOR. Since there is no COMP, there is no position from which FOR can govern SUSAN . If a FOR complementizer is lacking with small clause, then we predict that passives will occur (SUSAN IS WANTED IN NEW YORK, SUSAN IS WANTED AS LINEBACKER).

1.4.2 Criticisim of Contrary Views

Before presenting their detailed analysis, H&L give a critique of previous views. The idea that Susan smart is a constituent in (40a), and that naked has a PRO subject in (34b) was rejected by Williams, however, Stowell (1983) argues that Susan smart is a constituent in (40a)– but an AP, not an S. H & L argue that their position is distinguished from both Stowell and Williams in the theory of PRO that H&L adopt. Williams and Stowell assume PRO to be a pronominal anaphor and therefore ungoverned, as in Chomsky (1981), but, as H&L argue, if we adopt the analyses of Bouchard and Sportiche, treating PRO as an anaphor when governed and as arbitrary when ungoverned we can steer a course between Stowell's Scylla and Williams' Charybdis.

Stowell (300-301) provides some arguments for treating, say, Susan in New York of (40c) as a constituent. Thus it can occur as the apparent subject of be in (41), and no higher-clause item may occur in the middle of these expressions: cf. (42). One would not want to claim that a subject (in Williams' extended sense) must be adjacent to its subject, because that is not generally so, cf. (43) (see Safir (1983) for more arguments on the constituency of these expressions [1,2]):

(41)a. Susan in New York is what we must avoid.

b. Workers angry about pay is a situation to avoid.

(42)a.*I consider the mayor myself very stupid.

b.*I want him with all my heart off the ship.

(43)a. John, I am afraid, is upset again.

b. John tried with all his might to lift the crate.

However, Stowell claims that the relevant constituents in (41) are PP and AP respectively, and that lexical categories generally can have an NP in the specifier position, hence a 'subject', which is sometimes lexical and sometimes an ungoverned PRO. H&L think that with such assumptions, Stowell commits himself to some complications which range from unnecessary to unacceptable. I will review these briefly, following H & L (1987).

First, the unnecessary:

a) The Projection principle needs to be amended: Susan in New York is a PP at S-structure but is treated as a proposition at LF and propositions at LF are normally identified as S.

This does not happen in Arabic, as will be seen in this thesis. This example is a full IP in Arabic with an empty INFL of which the whole structure is ultimately a projection, as shown in Chapter Two.

b) Stowell defines a subject cross-categorially as the category directly dominated by a maximal projection (this need not necessarily be an-NP in (41) a PP and an AP act as subjects), hence S needs to be treated as a maximal projection (of INFL). Since Stowell adopts a directional theory of government, subjects must be governed and so receive their Case from the left in English– thus from COMP. This in turn entails that the maximal projections S, VP, AP, and PP but not NP (at least when it is a referring expression; (cf. Stowell, 307), are transparent to external government.

c) The acceptability of I consider [John completely stupid] AP or I want [him all the way off my ship] PP raises questions about the internal structure of the specifier of the AP and PP – which, under Stowell's assumptions, now contain two elements.

Then the unacceptable consequences:

(i) Stowell systematically separates subcategorization from Case-marking, at least for the expressions under discussion. So, in I expect [that man [off my ship]]PP, he claims that expect subcategorizes for a PP but that it governs and assigns Case to the 'subject' of the PP, that man. He argues for such a subcategorization relation by claiming that the sentences in (44) are ungrammatical, and that the verbs are sensitive to the choice of category in the predicate of the small clause:

(44)a. *I consider [John OFF MY SHIP].

b. *I proved [the weapon IN HIS POSSESSION].

c. *I expect [that man VERY STUPID]

d. *We all feared [John UNFRIENDLY]

According to H&L, this argument is highly questionable. It is not hard to imagine contexts where (48a, c-d) might be said, e.g As soon as he sets foot on the gangplank, I'll consider John off my ship. Similarly, (22c,d) become quite natural if one substitutes the adjectives angry, made-up, drunk, or naked. The unacceptability of (44b) seems to reflect not a subcategorization restriction that "prove" cannot be followed by a PP, but rather the fact that prove can hardly ever be followed by a small clause of any kind. There ARE examples of small clauses after prove–One might say He proved the picture a fake–but the unacceptability of the parallel forms *He proved the picture a Gainsborough or *He proved her a murderer strongly suggests that this is not a productive type.

As H&L put it, rather than motivating a subcategorization relation, the oddness in (25) seems analogous to the oddness of John tried to {receive the gift/ know the answer} etc., which do not entail that try selects the lower verb. Not only is there a highly questionable factual basis for claiming that verbs may subcategorize for the predicate of a following small clause, but the claim also has some odd and expensive consequences. Most linguists would agree that expect subcategorizes for a clause or NP "I expect that result", but Stowell requires the added complication that it cannot allow an NP with a subject if there is no possessive marker *I expect him president (e.g I consider him president). Whatever the eventual explanation for the ungrammaticality of this sentence (and H&L have nothing to offer in way of an explanation), it is hard to see how it can be made to follow from subcategorization frames.

(ii) This relates to what H&L see as a second unacceptable consequence. If Stowell is right, a verb like consider, reckon, or deem may subcategorize for NP whose head is itself a maximal projection. This requires a radical revision of the theory of phrase structure rules:

(45)a. I consider [[John]NP [a friend]NP]NP.

b. I consider [[John]NP [Bill's best friend in New York]NP]NP.

Furthermore, such a verb assigns Case to the subcategorized NP, to its subject (here JOHN), and to the lowest maximal projection (A FRIEND)– three distinct NP's.

The assumption that expect is subcategorized for an AP complement in I'm expecting him drunk is crucial to Stowell's claim about the nature of the subjects. However, for adjunct clauses those of (46), where the structural analyses of Stowell are indicated, the subcategorization argument is not relevant to their categorial status.

(46)a. John [cleaned his room]VP [PRO to please his mother]S

b. Sally [delivered the package]VP [PRO wearing an old flight jacket]

c. John [arrived]VP [PRO completely exhaused]AP

d. Kevin [came home]VP [PRO in a red shirt]PP

Stowell is therefore free to adopt a clausal analysis for all these cases. H&L argue that he should. Given this subcategorization argument and the fact that he adopts an AP and a PP analysis for (46c-d), he divides small clauses into those which are clausal and those which are headed.

It might be that if we wanted to look at the distinction Clausal vs. Headed small clauses in the light of Arabic data, it would be to assume that clausal small clauses would be root small clauses and subcategorized small clauses as discussed in Chapter Two. On the other hand, headed small clauses would be the adjunct type of small clauses which attach to IP or to VP as discussed in Chapter Four.

For H&L, holding that S and NP are the only categories that can have lexical subjects entails that only S and NP constitute opaque domains, i.e. can be governing categories (given that a governing category is the minimal domain containing a governor and an accessible subject).

Stowell is equally elegant in this regard because he claims that all maximal categories have subjects and constitute opaque domains. So in John told a story [about himself]PP, the PP is an opaque domain for Stowell, but himself is bound by the PRO subject of the PP, which in turn is coindexed with John. For H&L, a PP, having no subject, is not an opaque domain. H&L see that there are empirical reasons to suppose that Stowell is right in claiming that a single constituent dominates these small clauses, but that he is wrong to invoke categories other than S in these contexts.

Williams (1983), by contrast, assumes with Chomsky (1981) and Stowell (1983) that PRO must be ungoverned, therefore he criticizes previous treatments of small clauses because they predict [PRO XP] to occur only in ungoverned positions. H&L predict almost the reverse: that such constituents will occur in governed or ungoverned positions– but that the PRO will be an anaphor if governed, and will receive the arbitrary interpretation if ungoverned. We have seen how this works in certain central cases, but what about contexts which Williams defines in his critique of small clause analyses? He notes the grammaticality of (47) and the ungrammaticality of (48):

(47) [[PRO to leave]S]S' INFL would be fun.

(48)*[PRO bashful]S INFL would be a shame.

Here, as noted earlier, the clauses might be treated as subjects, or we could claim, with Koster (1978), that clauses characteristically do not occur in subject position- where they appear to do so, as in (47), they are in fact in TOPIC position. H&L further assume that TOPIC can only contain categories which are maximal projections. Therefore, (48) can be analyzed as (49):

(49) [[[PRO to leave]S]S']TOPIC [[e]NP INFL would be fun].

Under H & L's analysis [PRO bashful] in (48) must have INFLo as its head. Hence, it cannot be part of a maximal projection, and can have no S' node immediately dominating it. Therefore, it cannot occur in TOPIC, and bashful would be a shame will not be generated.

In Arabic, as will be shown in the analysis in the coming chapters, the equivalent of bashful will have to be a D-structure predicate XP of a small clause with a lexical subject which is to be coindexed with it in S-structure after raising has applied from

subject of SC to subject of the immediately dominating IP. Consequently, the S-structure subject of bashful cannot be PRO but must be NP-trace in a subcategorised small clause.

In an adjunct small clause, PRO in the Arabic equivalent of PRO bashful must behave like an anaphor in the sense of H&L.

Similarly, Williams' *Sad to surprise Mary would be unfortunate is ungrammatical, not because of a failure to meet requirements of government, but because PRO sad is an S, a non-maximal projection, and thus cannot occur either as a TOPIC or as the subject of another clause.

(50) [[[PRO sad]S to surprise Mary]S]TOPIC [[e]NP would be unfortunate]

Another approach is to claim that INFLo, the head of a small clause, must–like other empty categories–be properly governed at P[honetic] F[orm]. This would entail that small clauses occur only in properly governed positions, and not as subjects or topics.

Williams identifies other problems for small-clause analyses which assume that PRO must always be ungoverned. Thus, if PRO must be ungoverned, then it cannot occur inside a VP, where it would be governed by the V. This suggests that John ate the meat raw must have the following structure:

(51) John INFL [ate the meat]VP [PRO raw]S.

This entails two problems: (i) PRO is now governed by INFL, which is [+TENSE], and (ii) PRO is not c-commanded by the meat, despite the fact that it must be coindexed

with it. Since H&L, in contrast, treat anaphoric PRO as governed, they analyse PRO raw as part of the VP, so that PRO is governed by the verb and c-commanded by the meat.

Williams (1983) points out that infinitives are unique among predicative phrases in that they may have arbitrary subjects and are "thematically independent" in argument position (i.e, they assign independent theta-roles to their subjects). Unlike earlier treatments of small clauses, H&L claim that their analysis unifies these properties in ways that are not subject to Williams' criticisms. Thus INFLo, which has no morphological realization, and hence no TO- can be followed by any maximal category except VP (disregarding for this perceptual and causative verbs). INFLo occurs only where S' (i.e INFL") is absent. Non-maximal projections do not occur in TOPIC or subject positions, hence inside S- therefore their subjects never have the arbitrary reading. The governed position in which the small clause occurs may or may not be an argument position. If it is an argument position the subject of the small clause will be Case-marked, therefore it must be lexical, not PRO (cf. 52a-b). If the small clause is in a (governed) non-argument position the subject does not receive Case and is, therefore, empty. If it is coindexed with an NP in a theta-position, it is PRO (52c). If it is not coindexed with any NP the PRO (which, being governed, is an anaphor and cannot be arbitrary) fails to be bound, and the structure is ill-formed (cf.52d):

(52)a. I consider [John crazy]S.

b.*I consider [PRO crazy]S.

c. I ate the meat [PRO raw]S.

d.*It is a shame [PRO bashful]S.

For this reason, such small clauses, with INFLo as head and a PRO subject, always occur in non-argument positions. This means that we come very close to deriving

earlier observations that these constituents occur in adverbial positions. We do not quite achieve that derivation, because we do not explain why they fail to occur internal to NPs and PPs- unless there are independent reasons why the relevant non-argument position occurs only in S' and VP but not in NP and PP.

Much the same holds for ordinary infinitival clauses– except that infinitivals whose INFL node is [-TENSE], may occur inside an S', and hence with an ungoverned PRO subject which will have the arbitrary interpretation. Thus one finds infinitives in the contexts of (3-19), and as complements to N (the desire [PRO to win]S'). These are all S' contexts. H&L argue that an S' node need not be deleted from the complement of an N. They argue also that their treatment of PRO makes the appropriate predictions. Williams' notion of an Argument Complex, or the associated definition of "The Restricted theta-criterion" need not be invoked .

Note that, as Chomsky (1986) has observed, reciprocals and reflexives require overt antecedents to be acceptable, as in (53 a-b). Small clauses also appear to require an overt antecedent, as in (53 c-d):

(53)a. They decided to hit {each other/ themselves}
i i

b.*Damaging testimony was given about {themselves/each other}

c. They left the room ANGRY.
i i

d.*The room was left ANGRY.

e. The boat was sunk in order [that he could collect the insurance]S'

f. The boat was sunk [PRO to collect the insurance]S'

In H & L's analysis, the indicated phrase is actually a small clause with a PRO subject, i.e. S PRO angry'. It hangs from VP. Hence, given H1 assumptions that S is

not a maximal-projection, the PRO is governed. Since a governed PRO is anaphoric, we can now generalize and say that all anaphors require overt antecedents. Pronouns, of course, do not require overt antecedents (53e), nor does an ungoverned PRO (53f), which is not an anaphor. This explains the parallelism of (53a,c) with (53b,d). In short this predicts that small clauses MUST have overt antecedents precisely because they have PRO subjects which are governed and thus anaphoric.

The Arabic small clauses examined in the following chapters do not have verbal elements internal to them. All the examples dealt with have an AP, NP, or a PP predicate. H & L's examples in (53e, f) are not the types of small clauses I will be dealing with in my analysis of Arabic small clauses. The antecedent of a small clause subject in Arabic is the subject or object NP of the dominating IP or the object NP of a Preposition in the matrix clause.

In adopting analyses like (24), and in treating PRO as an anaphor when governed and as pronominal when ungoverned, H&L derive the basic properties of Williams' "predication structures" (henceforth, PS). They also distinguish properties of obligatory an non-obligatory control in terms of arguments. However, the redundancies in the notion "subject", and, according to H&L, the false generalizations entailed by a PS level are avoided. Further, whereas Williams subsumes NP-movement under his predication relation requiring that antecedent-trace relations be subject to the conditions which hold at his PS– H&L have no predication relation under which cases of NP-movement can be subsumed. This affords them some advantages they use for other purposes.

In my analysis of Arabic small clauses I try to incorporate some of H1 views and argue against some of their arguments where they apply to Arabic.

I argue for a unified analysis of Arabic small clauses as IPs, not CPs. I also argue that the empty INFL is external to the small clause and may contain tense and AGR and that it heads the IP dominating the small clause.

Other analyses of small clauses in English and other languages exist in the literature arguing for and/or against the two major approaches to small clauses, namely Stowell (1981, 1983) along with Chomsky (1981), and Williams (1975, 1980, 1983). Of these analyses are Kitagawa (1985) and Contreras (1987).[3,4,5]

The following chapter will start by looking at the "Root" small clause idea as it applies to Arabic. It will also discuss an analysis of subcategorized small clauses using Arabic data. A proposal to analyze matrix nominal sentences and embedded nominal sentences as small clauses is made.

NOTES

1)In English, Stowell (1981) points out that the copular verb be allows phrasal categories to appear in subject position that are not otherwise permitted in NP positions as in (1) & (2):

(1)a. Under the bed is a cozy spot.

b. Angry/unwanted is a terrible way to feel.

(2)a.*Under the bed pleased the cat.

b.*Unwanted would please the cat.

As shown in (2), the same phrases are ungrammatical as subjects for other predicates where a plausible meaning is available (e.g for (2b) "To be unwanted would please the cat").

2) Safir (1983) notes that it seems that the subjects in (1) are "honorary NPs" (hereafter, HNPs) in copular constructions, though they are not NPs in any other context and are hence excluded in (2). Further, Safir observes that in other respects HNPs act exactly like normal NP subjects in that they appear in subject-auxiliary inversion structures as in (3a,b). Moreover, Stowell further notes, HNPs undergo raising from clauses where they are the subject of be. Raising, of course, does not improve the ungrammatical examples shown in (2), as shown in (3 c, d, e, f):

(3)a. Is angry such a terrible way to feel?

b. Is under the bed a nice place to hide?

c. Under the bed seemed to be a cozy spot.

d. Angry/unwanted seems to be a terrible way to feel.

e.*Under the bed seemed to please the cat.

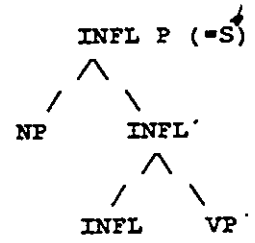
f.*Unwanted/angry seemed to have pleased the cat.

Safir concluded that that small clauses with clausal readings can be HNPs, but not regular NPs, indicates on the one hand that clausally interpreted small clauses can be constituents, and on the other that they are not really NP constituents.

3) Kitagawa (1985) drew the following conclusions. First, small clauses, at least in some cases, behave as syntactic constituents with respect to quantifiers. Second, small clauses need not and must not be analyzed as predicate phrases with respect to semantic selection of higher predicates and Wh-movement, respectively. Third, analyzing small clauses as sentential provides us with simple accounts for the obligatoriness of pleonastic and copulative interpretation in some small clauses. Finally, by assuming that small clauses are S's containing a COMP position, Kitagawa claims that he generalizes the path theory to explain the subject condition and the clause complement. This analysis is also compatible with the Subjacency Condition, and the Projection Principle suggesting that all complements receiving a clausal theta-role can now be analyzed as S-bars.containing COMP.

4) It is worth noting here that Kitagawa adopts the following analysis of S in English proposed by Stowell(1981) and Pesetsky (1982) :

(4)



5) Contreras (1987) argued, contra Williams, that small clauses are constituents, and (contra Chomsky (1986), Hornstein & Lightfoot (1984), and Kitagawa (1985), that

they are projections of their predicates. He has suggested that the simplest version of this approach to small clauses that S does not have an obligatory subject position, and that what we normally think of as subject of S should be reinterpreted as subject of VP. Finally, he has shown that this approach is compatible with current versions of the null subject parameter, and that it makes possible an account of postverbal subjects in Spanish which is simpler than the standard account (for details see Contreras (1987)).

CHAPTER TWO

2.1 Copular constructions

Consider sentences like (1) in English:

(1)a. John is my best friend.

b. I consider [John my best friend].

c. I consider [John to be my best friend].

In (1a), the verb is is crucial to the subject and the predicate in order for the sentence to be grammatical. The copula verb is and the predicate NP my best friend together form a complex predicate and assign a theta-role to the subject NP John. In (1b) the presence of is is not needed between the subject John and the predicate inside the brackets. (1c) has an unconjugated verb. Only (1a) is an English copula construction that can stand on its own as a matrix clause. When to be is absent or unconjugated in an independent clause like (1a), the sentence is not grammatical, as can be seen when we compare these sentences to those in (2):

(2)a.*John my best friend.

b.*Bill teacher.

c.*Fred young.

The structures in (2) show that English lacks independent small clauses.

2.1.1 Arabic Copular Constructions

In contrast with English, Arabic, like other languages (e.g Hebrew and Russian), has present tense sentences of the form shown in (3):

(3)a. zayd-un mudarris-un.

Zayd-nom teacher-nom.

"Zayd is a teacher"

b. zayd-un fi al-madrasat-i

Zayd-nom in the school-gen

"Zayd is in school"

c. zayd-un wasiim-un.

Zayd-nom handsome-nom

"Zayd is handsome"

Each of these sentences is a string of [NP XP] with no verb just like the ungrammatical English examples in (2). XP can be an NP, PP, or AP as shown in (3a,b,c) respectively. In the case of (3a,c), both the subject NP and the predicate XP show morphological realization of nominative case, number, person, and gender.

2.2 Copular Constructions as "Root" Small Clauses

It is proposed in the literature to distinguish between root small clauses and non-root small clauses. The idea of "root" small clause is used by authors such as Rapoport (1985), Doron (1986), among others. Root small clauses are those known as nominal sentences in languages like Arabic, Hebrew, and Russian. They are also known as copular structures and they differ from those in English by the fact that these sentences do not have a verb in their present tense equivalent to is, am, are.

Doron (1986) notices that languages have various devices for allowing a referring NP to occupy something like a predicate position. English and many other languages use a copula. The copula assigns a theta-role to its subject. This point is obscured by the fact that English requires a copula to appear in conjunction with verbless predicates, even if they are not necessarily referring, as in (1a) vs. (2a).

However, the requirement for an obligatory copula is loosened in certain complement clauses. Thus, (1b) is possible, and the complement in (1b) is like a small clause.

2.3 On the Syntax of Copular Constructions

In the following sections of this chapter, I will discuss different syntactic analyses presented to account for the properties of copular structures in English, among other languages. The equivalent facts of Arabic are examined in an attempt to see how far those analyses will go in providing the right explanations for the facts observed in Arabic. An alternative analysis is attempted which is supported by Arabic data. This is done in the hope of being able to support the idea of "root" or "independent" small clauses and argue henceforth that those are to be treated as subcategorized small clauses when embedded as arguments of kaana or one of its "sister" verbs.

2.3.1 Doron's Analysis

As noted by Rapoport (1985), the English equivalent of the sentences in (1) necessarily contain a verb "be", as can be seen in the ill-formedness of (2a-c) & (4b) examples in which the verb is absent.

(4)a. Mary is a genius. b.*Mary a genius.

a. John is innocent. b.*John innocent.

In these main clause predication structures "be" is required, since a verb is necessary for the realization of the tense and the AGR features of INFL.

Doron (1986) and Rapoport (1985) discuss constructions in Hebrew similar to those Arabic examples in (3). Doron proposes a D-structure for a sentence like (5a) as shown in (5b). She assumes that an S-structure such as (5c) is filtered by a

surface filter, since its INFL node contains features that at no stage of the derivation are realized as part of any morpheme. However, surface string (5a), which would seem to have (5c) as its S-structure, is a grammatical sentence; a fact that poses a problem for the proposed filter in Hebrew.

(5)a.Dani more.

Dani teacher.

"Dani is a teacher"

b.[INFL [[person][number][gender]] Dani more.
AGR

c.[INFL [[3rd][sing.][masc.]] Dani[Nom] more
AGR

2.3.2 Arabic Nominal Sentences

Following what Doron (1986) assumes for similar constructions in Hebrew, let us assume that the D-structure for Arabic constructions in (3) is as in (5b). Assume further that what she calls free-indexing of the subject NP with the nominative case in AGR applies here, too. This could account for the nominative case being assigned to the subject NP of (3). With Move-alpha applying vacuously to the subject NP "zayd" of (3a), we obtain the S-structure as shown in (5c).

As for the surface filter that Doron claims structures like (5c) are subject to, the Arabic examples have no problem with it because the AGR bundle of features, which don't get realized in Hebrew at any stage of the derivation, do get realized in Arabic through the morphological indication of agreement between the subject and predicate in person, number and gender. It would make sense to claim that the lack of INFL forces these features to cliticize to both the subject and the predicate of such sentences. Alternatively, one could say that they cliticize to one (i.e either the subject or the predicate) and the other agrees with it.

Notice that the Arabic predicate NP also has nominative case morphology. These predicative NPs display other Case properties, once the whole construction is embedded in a larger sentence that contains a verb which subcategorizes for such copular constructions. This is shown by sentences like (6):

(6) kaana zayd-un mudarris-an.

was Zayd-nom teacher-acc

"Zayd was (or used to be) a teacher"

The predicate NP mudarris-an "teacher" is assigned accusative Case, as shown by the morphology, as a consequence of the embedding of the whole construction [NP NP] as a complement of the verb kaana "be".

Another aspect of sentences like (3) is that the corresponding sentences for such constructions in the past tense exhibit the copular verb kaana "was" preceding the predicate NP, PP, or AP. This is as in (7):

(7)a. zayd-un kaana mudarris-an.

Zayd-nom was teacher-acc

"Zayd was a teacher"

b. zayd-un kaana fi al-madrasat-i.

Zayd-nom was in the-school-gen

"Zayd was in school"

c. zayd-un kaana wasiim-an.

Zayd-nom was handsome-acc

"Zayd was handsome"

It could be argued here that from (6) and (7) we can claim that both types of sentences have the underlying D-structure with the verb "was" base generated in VP. It is then raised to INFL later for type (6) sentences and stays in VP for type (7) sentences. This enables us to account for the accusative case assigned to the predicate NP in both groups of sentences. This can be done by claiming that the accusative case of the predicate XP is assigned by kaana when it stays in VP, and by INFL when kaana raises to adjoin to IP as in (6) where the nominative of kaana is assigned to the subject NP and the accusative of INFL to the predicate of the small clause. This can be seen later in my analysis in (14) and other examples.

Arabic nominal sentences can also be introduced by a small class of verbs, to which kaana belongs, known by traditional grammarians as "the sisters of kaana". These are linking verbs that have their subject in the nominative case and their predicates, if inflected, in the accusative (as in (6) and (7)). They include verbs of becoming like 'asbaHa "to become", of remaining, like baqiya "to remain", and maazaala and Dalla "to continue, to to keep on", and negation, like laysa "is not". In formal prose, laysa is also used to negate a verb in the imperfect indicative, equivalent in meaning to the imperfect negated with laa. This is only a representative list of this group of verbs and not an exhaustive one.

2.3.3 S-Bars

Abdul-Ghany (1981) (p.18) claims that "kaana and its sisters" is a class among other classes of verbs in Arabic that take a complement introduced by an empty COMP. His examples are given here as (8a,b):

(8)a. kaana zayd-un ya-qra'-u l-jariidat-a.

was Zayd-nom reading-ind the-newspaper-acc

"Zayd was reading the newspaper"

b. *kaana zayd-un 'an yaqra'-a l-jariidat-a.

readig-subj

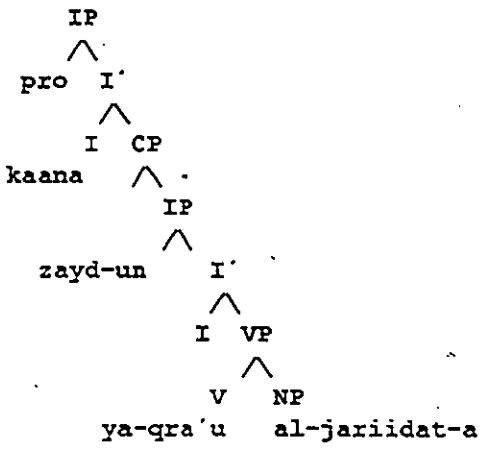
This could mean that the complements of kaana in (6) and (8a) are both S's with an empty COMP.

According to this view the structure of (8a) will look like (9a) assuming that kaana is base generated under INFL of the matrix IP and that the subject of this IP is pro. (9b) is the tree corresponding to the bracketing in (9a):

(9)a. [pro [[kaana[[[zayd [[[[ya-qra'u]
IP I'I IP I'I VP V

[al-jariidat-a]]]]]]]]]]
NP

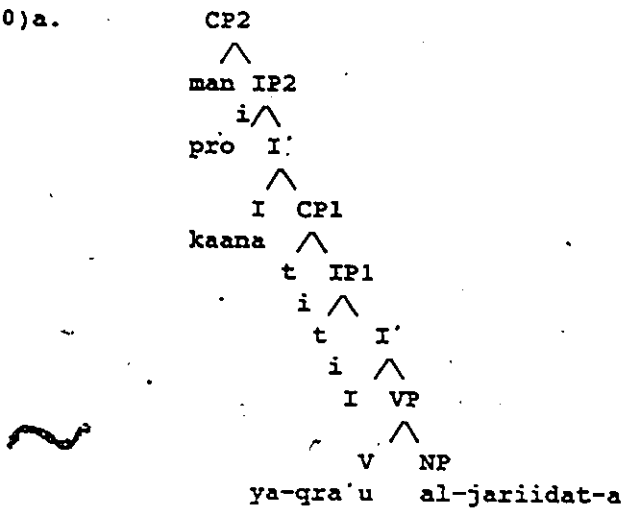
b.



Notice that this is done with the proposition for which kaana is subcategorizing containing a full fledged verb ya-qra'u "read". compare this to cases where kaana has a clausal complement without a verb as in (6).

Testing this proposal against other syntactic properties may help to clarify and solidify or falsify it. One of these properties is wh-movement. Extraction of the subject zayd-un by wh-movement will look like (10a) which will result in the grammatical sentence (10b):

(10)a.



b. man kaana ya-qra'u al-jariidat-a ?

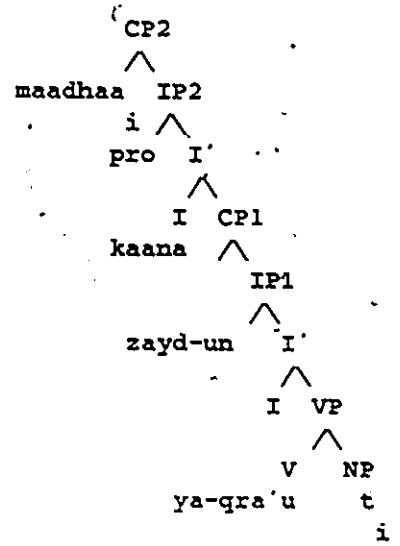
Who was imperf-reading the-newspaper-acc

"Who was reading the newspaper ?"

As can be seen in (10a), the movement goes on despite the fact that it crosses an S bounding node. This is because, as is believed in the literature (Saad (1982), Abdul-Ghany (1981), and others), the barrier to movement in Arabic is S' not S.

Extraction by wh-movement from object position, on the other hand will look like (11):

(11)a.



b. maadhaa kaana zayd-un ya-qra'u ?

What was Zayd-nom imperf-reading

"What was Zayd reading ?"

The question here concerns the case where there is no verb in the complement of kaana like ya-qra'u in (10) and (11). This is what the small clause analysis presented here is trying to answer.

The argument against CP in the complement of kaana in (11) is to be attributed to the lexical and syntactic properties of kaana. It also goes against the spirit of the traditional approach that both kaana and 'inna share the property that they subcategorize for an IP-type complement. This assumption that kaana, a verb-like element, takes an IP rather than a CP complement allows it to be treated along parallel lines to 'inna which is considered a complementizer with an IP complement.

This also leads to the argument that indirect questions in such structures should be more difficult to get if not impossible with CP1 as in (11), which I assume they are.

2.3.4 'inna

These sentences also are introduced by members of a small group of particles known by traditional grammarians as "the sisters of 'inna. In addition to 'inna, they include 'anna, li'anna and laakinna. These particles share the following characteristics:

(i) They introduce clauses.

(ii) They may not be followed immediately by a verb. They are most commonly followed by a noun or a pronoun suffix, which functions as the subject of the clause.

(iii) When the subject is a lexical NP, it is in the accusative case (but a predicate NP or adjective, if present, remains nominative.) .

Traditional grammarians, as well as some of the more recent approaches, consider 'inna as the accusative Case assigner to the subject NP. This can be seen in (12):

(12)a. 'inna zayd-an mudarris-un
Zayd-acc teacher-nom
"Zayd is a teacher"

b. 'inna zayd-an fi al-madrasati.
Zayd-acc in the-school-gen
"Zayd is in the school"

c. 'inna zayd-an wasiim-un.
Zayd-acc handsome-nom

"Zayd is handsome."

d. 'inna-hu mudarris-un.

He teacher-nom

"He is a teacher."

e. 'inna-hu fi al-madrasat-i.

he in the-school-gen

"He is in the school"

If (12) were to be assigned a D-structure according to the small clause analysis as in (13), it would be by claiming that 'inna should be in COMP position with the rest of the sentence as its small clause complement, as in (13a). By NP-movement [Zayd] moves to IP subject position where 'inna assigns accusative case to it, instead of being assigned nominative by default at S-structure or by INFL in D-structure, when it is not preceded by kaana, as in (13b) which is to be contrasted with (11a), which I will not adopt. (13) constitutes a combination of the two analyses of Stowell (1981, 1983) and H&L (1987) reviewed in Chapter One (the notation SC is used here to stand for small clause).

(13)a. [['inna [[[INFL [[zayd-an] [mudarris-un]]]]]]]
CP C IP I' I SC

b. [['inna [[zayd-an] [[INFL [[t] [mudarris-un]]]]]]]
CP C IP i I' I SC i

It is worth noting that in (13) Case is always assigned to the right by both 'inna and INFL. The same can be said for kaana, as shown in (18).

The traditional position is that the verb kaana assigns two Cases: nominative to the subject and accusative to the predicate. Under the Case theory within the G.B framework, this is not permitted. A Case assigner assigns only one case, and only one kind of Case gets assigned by the same assigner. Only one item at a time gets assigned Case. In my analysis the predicate XP gets accusative case assigned to the right from kaana. As for the subject, it either gets nominative case from INFL in D-structure before it raises to adjoin to IP, or, a second possibility, as the subject of IP gets nominative case from kaana at S-structure after it raises to adjoin to IP, and hence is able to lexically govern the subject position.[1]

This seems to call for consideration of the contrast between 'inna and kaana in the traditional literature. The first is a particle which cannot act in a verbal-like way in a sentence, whereas the second is a verb-like element which does, as can be seen from examples (6) & (7) above. kaana is considered, as maintained elsewhere in this thesis, a verb-like item, i.e, an "incomplete" verb that carries tense (usually past) in nominal sentences or acts as a tensed Aux., in sentences with verbs in the complement position, as in (8), (9), (10), and (11).

2.3.5 The Arabic "Pronoun of Separation"

Doron (1986) shows that in some copula structures of Hebrew, a theta-role can be assigned by the AUX h.y.y in past and future tensed sentences and by PRON hu in present tense sentences. It follow that PRON should be obligatory when a present-tense predicate is a referring NP. According to Doron, the Hebrew facts confirm this prediction. In a string of the form NP NP, the predicate is obligatorily predicational. Only in sentences that contain PRON can both NPs be referring.

PRON is a form identical to that of the third person nominative pronoun that appears between the subject and the predicate of present tense nominal sentences in Hebrew as in (14b):

(14)a. David student.

b. David [hu] student.

"David is a student"

Arabic sentences analogous to the Hebrew ones in (5) have no elements such as the Hebrew PRON, and nothing is allowed to intervene between the subject and the predicate in the present tense sentences corresponding to (15) as the ungrammaticality of (16a) shows:

(15) *zayd-un huwa Taalib-un.

Zayd-nom. he student-nom.

The fact that the structure [huwa taalib-un] can be treated as a small clause could contribute to the ungrammaticality of (15). This is in harmony with Stowell's observation, among others, that small clauses do not occur inside an NP.

However, in Arabic there is what traditional grammarians called "a pronoun of separation". This pronoun functions to render ungrammatical sentences like (16a) grammatical as in (16b).

2.4 A Small Clause Analysis

In this section I would like to argue for a small clause analysis for nominal sentences. These are "independent" small clauses as mentioned above, when unembedded with an empty INFL, as was shown by Doron (1986) for Hebrew.

2.4.1 Small Clauses with NP-trace Subjects

I would like to argue also that Arabic copular constructions are small clauses even when they are embedded as complements of verbs like kaana with the D-structure as in (18a):

(18)a. [IP [INFL kaana [IP [I'[I [SC [NP zayd-u]
[NP mudarris-an]]]]]]]

b. [IP [INFL Kaana [IP zayd-u$_i$ [I' [I [SC [t$_i$]
[NP mudarris-an]]]]]]]

As for the subject of this small clause, and as it appears from the derivation presented in section 2.3.2, it must be NP-trace resulting from Move-alpha. That is to say, the subject of SC in D-structure moves to the subject position of the embedded IP, as shown in (18b) above.

The alternative possible view to that is that the derivation process could involve the following three steps[2]:

1)Deep structure:

```
[ [ [kaana [ [ [Io [  [zayd ][mudarris]]]]]]]
IPI'I      IPI'I   SC NP     XP
```

2)zayd raises to become the subject of kaana and kaana as an accusative assigner is able to give accusative case -an to mudarris since no lexical material separates them:

```
[ [zayd-un] [ [kaana [ [ [Io [  [t]

IP NPi      I'I      IPI'I   SC NPi

[mudarris-an]]]]]]]]
XP
```

3) kaana may also raise after this to give the other possible word order:

```
[kaana [ [zayd-un] [ [  [  [ [  [  [t]
IP   j IPNPi       I'Ij IP I'Io SC NPi

[mudarris-an]]]]]]]]
XP
```

One advantage of this view over the traditional analysis is that this view avoids treating kaana as a double case-assigner.

One could claim at this point that SC can be in complementary distribution with VP, which will have the consequence that if there is a VP in the complement of kaana, then this complement is an S-bar, as Abdul-Ghany (1981) has claimed for Classical Arabic. If this complement contains no verb, then it is only S.

2.4.2 Small Clauses with Pronoun Subjects

I would like to argue that (16b) has the structure (19a), and that the pronouns of separation form a small clause which, as predicate, assigns a theta-role to the matrix subject:

```
(19)a. [IP [NP [Io [SC [NP ] [NP ]]]]]
            i       i  j     j

    b. [IP [al-'ustaadh-u]NP [Io [SC [huwa]NP [al-9aalim-u]NP ]]]]
                          i          i     j               j
```

In (19), The subject of IP, [al-'ustaadh-u] in (16b), has a complex matrix predicate composed of the small clause [huwa al-9aalim-u] in (16b). This small clause has the structure [NP NP].The predicate of this small clause cannot be other than a definite

NP. The subject has to be a pronoun of separation. It has to be so because it is interpreted as coreferential with the matrix subject, and because of the nature of both the subject and the predicate NPs. As mentioned above, this pronoun agrees with the subject of IP in person, number, and gender.

It is likely that this type of small clause inherits its distinctive properties from the other two types of small clauses. Namely those where a) the subject is NP-trace and b) the subject is PRO.

This pronoun of separation apparently differs from PRON in Hebrew by facts such as that the Arabic pronoun can function as a matrix subject whereas according to Doron, this is not possible for PRON. While PRON can be analyzed as a clitic bearing the AGR features, the Arabic pronoun cannot be so analyzed.

Moreover, according to Doron, PRON on its own can assign a theta-role to the subject of the nominal sentence in the absence of the copula verb. The pronoun of separation in Arabic has to combine with a definite NP in the predicate position in order to be able to do so.

2.4.3 Small Clauses with pro Subjects

Arabic, as has been attested in much of the literature (e.g Abdul-Ghany (1981) and Saad (1982)), is a Pro-drop language. As such, it resembles languages such as Italian, Spanish, Greek, and Hebrew. This can be seen from comparing Arabic paradigms in (20) with the Italian paradigms in (21) (from van Riemsdijk and Williams (1986)):

(20)

a. ʾanaa	ʾatakallamu	"I talk"	b. ʾatakallamu	(1st pers. sg.)
ʾanta	tatakallamu	"you talk"	tatakallamu	(2nd pers. sg.)
huwa	yatakallamu	"he talks"	yatakallamu	(3rd pers. sg.)
naHnu	natakallamu	"We talk"	natakallamu	(1st pers. pl.)
ʾantum	tatakallamuun	"you talk"	tatakallamuun	(2nd pers.pl.)
hum	yatakallamuun	"they talk"	yatakalamuun	(3rd pers. pl.)

(21)a. io	parlo	"I talk"	b. Parlo		(1st pers. sg.)
tu	parli	"you talk"	parli		(2nd pers. sg.)
lui	parla	"he talks"	parla		(3rd pers. sg.)
noi	parlamo	"We talk"	parlamo		(1st pers. pl.)
voi	parlate	"you talk"	parlate		(2nd pers.pl.)
loro	parlano	"they talk"	parlano		(3rd pers. pl.)

This pro-drop property is applicable to all verbs in Arabic including "kaana and its sisters". This leads to the identification of a third type of small clauses when we acknowledge the further property that Arabic has sentences with "kaana" or one of its verb sisters followed by only an XP, as in (22):

(22) a. kaana mudiir-an.
was manager-acc
"He was a manager"

b. [[[kaana [[[[[pro] [mudiir-an]]]]]]]
IP I' I IPI'Io SC NP XP

(22b) is the D-structure to be assigned to (22a) according to the small clause analysis advocated for the argument structure of "Kaana" and its sisters. As shown in (22b), pro is the subject of the small clause complement of kaana.

2.5 Word Order:

Another aspect of Arabic nominal sentences is that their predicates may, on certain conditions on both the subject and the predicate, be fronted as in (23):

(23)a. al-kitaab-u fawqa ar-raff-i.
the book-nom on the-shelf-gen

b.*fawqa ar-raff-i al-kitaab-u.
on the-shelf-gen the-book-nom
"The book is on the shelf"

c.*kitaab-un fawqa ar-raff-i.
book-nom. on the-shelf.

d. fawqa ar-raff-i kitaab-un.
on the-shalf-gen book-nom
"There is a book on the shelf"

(23) shows that the conditions allowing the predicate to precede the subject are:

i) that the predicate be a PP.

ii) that the subject be an indefinite NP.

Both (23b,c) can be grammatical as left dislocation structures by inserting a pause after the dislocated element.

It is clear that the PP can function as a small clause predicate because it is already a phrase, i.e a maximal XP that can assign a theta-role to its subject. The definite NP on the other hand cannot assign a theta-role to the subject, as noted elsewhere.

These two conditions, I argue, can be replaced by one condition using the terms of the generative approach along with the small clause theory advocated in this thesis. This condition is to be known as a condition on small clause fronting instead of a condition(s) on predicate fronting as in the traditional approach:

iii)The Small Clause Fronting Condition:

A predicate can be fronted only when it has a subject, i.e, only when it is clausal.

In terms of Stowell's theory this is explained straightforwardly by using his generalization of subjects to all phrasal categories.

When we come to the analysis by H&L, the story is different. For them an INFLo, internal to the small clause, is necessary so that the small clause may be considered clausal. This will be the topic of the final section of this chapter.

2.6 Predicates and Arguments

The predicate position is not an A-position, that is, no theta-role is assigned to it. VPs, PPs, APs, and NPs that appear in predicate position in D-structure are not arguments, or a violation of the theta-criterion would ensue. Rather, they are predicates, in that they assign a theta-role to the subject.

Referring NPs, on the other hand, are arguments, and accordingly must be assigned theta-role. Therefore they can not occupy a predicate position. A string of the form [NP NP] where both NPs are referring is ill-formed, first because the NP in

predicate position is not assigned a theta-role, and also because nothing assigns a theta-role to the subject in this case. Such sentences constitute a double violation of the theta-criterion. Thus, it appears that referring NPs should not be able to occupy the predicate position at all, as shown by the ungrammaticality of (23b) where al-kitaab-u is a referring NP in predicate position.

Doron's (1986) observation that languages have various devices for allowing a referring NP to occupy something like a predicate position is discussed in section 2.2 of this chapter. English and many other languages use a copula:

(24)a. John is my best friend.

b.*John my best friend.

However, the requirement for a copula is loosened in certain complement clauses. (25b) is possible alongside (25a). The complement in (25b) is a "small clause":

(25)a. I consider[John to be my best friend].

b. I consider[John my best friend].

Consider now the contrast between (26a) and (26b):

(26)a. I consider[my best friend to be John].

b.*I consider[my best friend John].

The NP John must be referring, and in (26a) it is assigned a theta-role by the copula be. It is not assigned a theta-role in (26b), since the copula is missing. Sentence (26b) is ungrammatical because the predicate of its small clause is predicational (not identificational), and thus not an argument. No theta-criterion violation ensues from the absence of a theta-role assigner.

Rapoport (1985), following Akmajian (1970), draws a distinction between the "predicational" sense of the copula (in which certain qualities are predicated of some individual), and the "specificational" or the "identificational" sense (in which some entity is identified or specified). As Akmajian notes, the difference between a predicational statement and an identificational statement is that the post-copular NP in the latter is referential.

2.7 Subcategorized vs Non-subcategorized Small Clauses

Distinctions have been drawn in the literature between different types of small clauses. On the one hand, there are those whose subject is a lexical NP and those whose subject is PRO, and on the other hand, a distinction is made between those that are subcategorized and those that are not. These distinctions will the basis for the discussion in the following sections of this chapter.

2.7.1 Subcategorized vs Non-subcategorized Small Clauses in English

Subcategorized small clauses are those that occur in an argument position of the main clause verb, as in (27). They constitute part of the matrix VP. Non-subcategorized small clauses are those that occur after the satisfaction of the argument structure of the verb, i.e they occur after the VP is completed by filling in all the possible argument positions in the VP, as in (28).

Now, consider some of the differences between these two types of small clauses.

When the clause appears as a subcategorized complement, it may never contain a PRO subject, thus there are no small clause counterparts to infinitival control

complements, as there are to infinitival raising and exceptional case-marking complements in English. This is shown by Stowell's (1981) examples in (27):

(27)a. * I expect [PRO off this ship (by midnight)]

b. * Nancy tried [PRO nice to her brother]

c. * I was hoping [PRO released tomorrow]

d. * Peter was unable to see [PRO do that]

(Stowell's (23))

On the other hand, small clause adjuncts seem to allow PRO to appear in the subject position as in (28):

(28)a. Scott wandered home [PRO drunk]

b. The farmer loaded the truck [PRO full of hay]

c. Jack rolled the dough [PRO into a ball]

d. John emerged from the meeting [PRO confused by her reaction]

(Stowell's (24))

Thus an asymmetry appears to hold between subcategorized complements and adjuncts with respect to the possibility of PRO appearing in subject position, as demonstrated by Stowell.[3]

As pointed out in Chapter One, we assume that the domain of government of a lexical head projects through X-bar structure. Chomsky (1981) proposed an alternative account for the asymmetry holding between the subcategorized small clauses and their adjunct counterparts. Thus, according to him, (27) can be ruled out without reference

to the external governing verb. The adjunct control structures are permitted, under the additional assumptions that these clauses are not projections of AP, PP, PrtP etc., but rather have the categorial status of S. As he observes, the issue of the locality of strict subcategorization does not arise with the adjunct, so there is no compelling reason to assume necessarily that they are projections of the lexical categories of the heads of their predicates.

2.7.2 Arabic Subcategorized Small Clauses

In order to work out the idea of asymmetry between these two types of small clauses in Arabic there seems to be a need to look at the occurrence of PRO and its distribution in the language. To my knowledge, this has not been done comprehensively.

Earlier in this chapter, I argued that Arabic copular structures, which constitute an example of "root" or "independent" small clauses, could also function as subcategorized small clauses as in the bracketed items of (29a-b). This is done in a different way from Stowell's (1981, 1983). While Stowell's distinction is related to PRO, our case here is not quite the same. Arabic subcategorized small clauses involve NP-movement from subject of the small clause to the subject of IP. Hence, the subject of these small clauses in Arabic is an NP-trace, governed but not case-marked as in (29c).

(29)a. kaana [samiir-u kaatib-an].
was Samir-nom writer-acc
"Samir was a writer"

b. 'asbaha [al-mal9ab-u xaaliy-an].
became the-playground-nom vacant-acc
"The playground became vacant"

c. [Kaana [samiir-u [[[t kaatib-an]]]]]
IP IP I' I SC

As noted above in this chapter, when it comes to subjects, two other types of small clauses have been introduced in Arabic. These types are the ones discussed in sections 2.4.2 and 2.4.3.

It seems possible for me to argue that these types, as well, can be treated as subcategorized when they occur in the complement position of verbs like Kaana or one of its "sisters", as in (30a-b) and (31a-b):

(30)a. al-shujaa9-u huwa al-muntasir-u.

the-brave-nom he the-vitorious-nom

"the brave is the victorious"

b. [[[kaana [[al-shujaa9-u [[[[huwa]
IPI'I IP NP I' Io SC NP

[al-muntasir-u]]]]]]]
NP

(31)a. kaana kariim-an.

was-he generous-acc.

"He was generous"

b. [[[kaana[[[[[pro][kariim-an]]]]]]]
IPI'I IPI'Io SC NP XP

This is done on the assumption that the subject NP [al-shujaa9-u] is base generated in the subject position of IP, as shown in (30b). The major claim here is that this small clause does not involve NP-movement, which is what differentiates it from the nominal sentence small clause that has NP-trace as subject.

The claim was made, following H&L, that these small clauses contain an empty INFL written as INFLo which governs but does not Case-mark. According to H&L, the small clause is a projection of INFLo.

2.7.3 Arabic Non-subcategorized Small Clauses:

Non-subcategorized small clauses, on the other hand, are those adjuncts known by traditional grammarians as adverbs. They are not subject to the theta-criterion. However, they can project on their own as shown by Stowell in one way, and by H&L in another. They have a subject which, I claim in Chapter Four, in Arabic, is exclusively PRO. Subcategorized small clauses on the other hand may have NP-trace, pro, or the pronoun of separation as subject which is lexical and also an R-expression.

The kind of subject that occurs in each type of small clauses is an important criterion for distinguishing whether the small clause is subcategorized or non-subcategorized.

It also seems reasonable, and this is supported by the analysis in Chapter Two, to draw the conclusion that Arabic small clauses may never have lexical NP subjects at S-structure.

For this claim, it seems to be essential to emphasize that raising from D-structure subject position of the subcategorized small clause is vital. It is needed for many purposes, one of which is Case assignment.

2.8 Concluding Remarks:

The discussion throughout the first part of this chapter has shown that in nominal present tense sentences in Arabic, a verb is not needed. It is also meant to support the idea that these constructions are "root" or "independent" small clauses. This is the kind of small clause that languages like English tend to lack, as shown in (24b). These root small clauses can still be treated as small clauses when embedded in a matrix clause that has a verb like kaana or one of its group members.

To my understanding, the analyses of nominal sentences as presented in this chapter indicate that they can be treated as small clauses, but that they are IPs at the same time.

Since the argument here is that these entities labelled "SC" are clausal it is inescapable that we must deal with INFL in these clauses.

Stowell assumes that the internal structure of these entities contains nothing but the subject NP and the predicate XP.

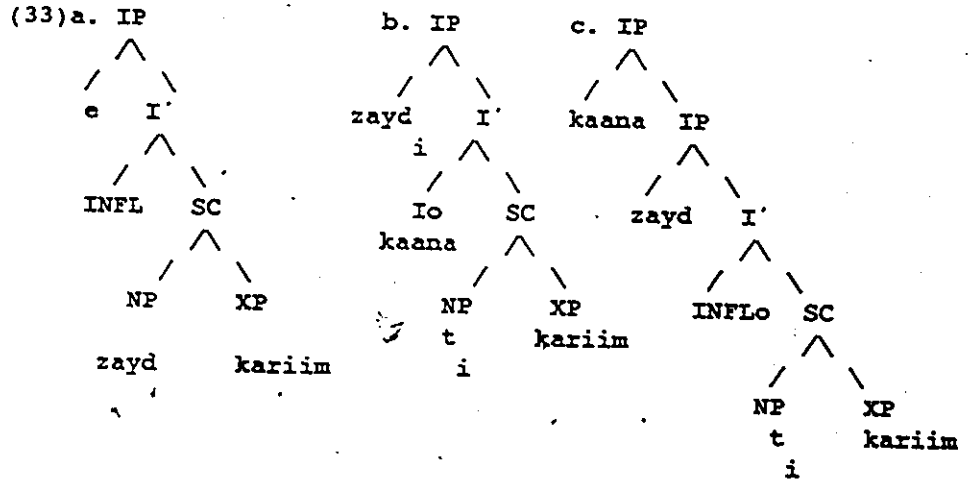
Of the three main approaches that I summarized in Chapter One, only H&L claim that there is an INFLo as part of the internal structure of the small clause. It appears to be tempting to follow their analysis (cf. Chapter One) and claim that there is an INFLo, which I do here. Contrary to them, however, I argue here that this INFLo is not internal to the small clause. I argue that it is external to the small clause, but internal to the IP complement of kaana, which raises to adjoin to IP as in (32c). This enables me to keep the advantages of both analyses by Stowell and H&L, by drawing another distinction between "root" small clauses and embedded small clauses subcategorized and non-subcategorized as to the nature of INFL that the upper IP contains. This distinction seems to be that root and subcategorized small clauses have a full INFL in the sense of Doron (1986) and that this INFL assigns Case whereas embedded non-subcategorized small clauses have an INFLo which does not assign Case, in the sense of H&L, as seen in Chapter Four.

(32) a. [[[INFL [AGR][Nom.]] [[zayd] [kariim]]]]
IP I' I AGR SC NP XP

b. [[[INFLo kaana [AGR] [[zayd] [kariim]]]]
IPI'I SC NP XP

c. [kaana [[[INFLo [AGR] [[zayd-un] [kariim-an]]]]
IP IP I'I SC NP XP

The structures in (32) correspond to the trees in (33):



The aim of the second part of this chapter was to highlight the contrast between subcategorized and non-subcategorized small clauses, a contrast initiated by Stowell (1981, 1983) among others.

One issue was what kind of subject would each type allow. Stowell noted that English subcategorized small clauses allow lexical NP subjects. Non-subcategorized small clauses, however, do not allow lexical subjects.

It was found in this thesis that out of three types of Arabic subcategorized small clauses two must have empty category subjects, i.e, NP-trace and small pro. The third subcategorized type must have a pronoun as subject. The non-subcategorized small clauses, on the other hand, can only have PRO as subject exclusively, as will be argued in the next chapter.

Another issue to be contrasted as it applies to these two types is the transportability of these small clauses. Non-subcategorized small clauses tend to have more freedom as regards the position in which they are allowed to appear. This, as will be argued later, is attributable, partially if not totally, to the government and binding effects on the subject of the small clause (cf. Chapter Four).

Extracting from the subject position of a non-subcategorized small clause is impossible at any level of the derivation because it is not occupied by a lexical NP subject. Contrary to this, the subcategorized small clauses may have a lexical NP subject at D-structure which is obligatorily raised to the subject of the dominating IP by NP movement. Wh-movement of that subject proceeds from the subject of IP to the matrix COMP position, as will be shown in Chapter Four.

Chapter Three is a further study of Arabic adverbials analyzed as non-subcategorized small clauses with PRO as subject, along with the properties affecting the syntax of such structures.

Notes

1) The subject can also get assigned nominative Case by default, and by principle (6) in Chapter Three after it raises to the subject position of the IP containing the small clause.
2) I am indebted to Professor M. L. Rivero for this observation.
3) For more on Stowell, and Chomsky's views, on this matter, see section 1.2.3.

CHAPTER THREE

3.0

The subject matter of this chapter is the reanalysis of Arabic adverbials as non-subcategorized small clauses. Only those adverbs classified by traditional grammarians as accusative nouns will be treated.

3.1 Arabic Adverbials

According to many classical references on Arabic grammar like Wright (1951) and others, there are three sorts of adverbs in Arabic. The first class consists of particles of various origins, partly inseparable, partly separable; the second class of indeclinable nouns ending in u, the third class of nouns in the accusative Case. The third class is the one that will be our focus of interest in this chapter. This kind of constructions is exemplified by items like the bracketed parts in (1).

(1)a) jaa'a zayd-un [raakib-an].
come-past-1st.pers.sg. Zayd-nom riding-acc
"Zayd came riding."

b) waqafa 9alaa baab-i al-mugharat-i [musallim-an].
stood-3rd pers-sg at door-gen the-cave-gen saluting-acc
"He stood at the entrance of the cave saluting."

c) rakib-tu al-faras-a [musraj-an].
rode-I the-horse-acc saddled-acc
"I rode the horse saddled

d) laqii-tu as-sulTaan-a 9inda-hu [baakiy-an].

met- I the-sultan in-his-house weeping-acc.

"I met the sultan in his house, weeping."

e) kun-tu fi -l- bustaan-i [zaahir-an].

was-I in the garden-gen blooming-acc

"I was in the garden while it was in bloom."

f) laqii -tu- hu [raakibayni].

met I him riding-1st-pers-dual-acc.

"I met him (while we were) both riding."

g) zayd-un daarib-un 9amr-an [qaa'im-an].

Zayd-nom beating-nom 'Amr-acc standing-acc

"Zayd is beating 'Amr standing."

h) zayd-un madruub-un [qaa'im-an].

Zayd-nom beaten-nom standing-acc

"Zayd is beaten standing."

i) bi9-hu mudd-an [bi- dirham-in].

sell-imperf-it-acc mudd-acc for dirham-gen

"sell it (at the rate of) a mudd for a dirham."

j) jaa'a zayd-un [raakib-an][DaHik-an]

came Zayd-nom riding-acc laughing-acc

"Zayd came riding (along) laughing."

k) laqii-tu hind-an [muS9id-an]

met-I Hind-acc going up-masc.acc

munHadiratan.

going down-femin-acc

"I, (while) going up, met Hind (a woman) coming down."

l) laqii-tu zayd-an [muS9id-an]

met-I Zayd-acc-sg-masc going up-acc-sg- masc

munHadir-an.

going down-acc-sg-masc

"I met Zayd going up while I was going down"

m) ra'ay-tu zayd-an [maashiy-an] raakib-an.

saw-I Zayd-acc- walking-acc-sg-masc riding-acc-sg-masc

"I saw Zayd walking while I was riding."

n) wa 'arsal-naa-ka li-an-nas-i [rasuul-an].

and sent-we-you to-the-people-gen massenger-acc

"And we have sent you to mankind as an Apostle."

o) zayd-un abuu-ka [9aTuuf-an].

Zayd-nom father-nom-you affectionate-acc

"Zay is your father, as being affectionate."

p) huwa zayd-un [ma9ruuf-an].

he Zayd-nom well known-acc

"This is Zayd, as is well known"

q) 'anaa fulaan-un [baTal-an] [shujaa9-an].

I so and so-nom valiant-acc brave-acc

"I am so and so, valiant (and) brave.

r) huwa al-Haqq-u [bayyin-an].

it the-truth-nom manifested-acc

"It is the truth, as manifested."

s) marar-tu bi-hi [waHd-a-hu].

passed-I by-him alone-acc-him

"I passed by him (while he was) alone"

t) fa9alta dhaalika [jahd-a-ka].

did-you that ability-you

"You have done that to the best of your ability"

u) fii-haa [qaa'im-an] rajul-un.

in-it standing-acc man-nom

"In it (the house) is a man standing"

v) li-9azata [muHish-an] Talal-un qadiim-un.

to-&aza-gen desolate-acc ruin-nom old-nom

"'Aza's is an ancient ruin, left desolate"

w) [raakib-an] jaa'a zayd-un.

riding-acc came Zayd-nom

"Riding came Zayd."

x) [musri9-an] dhaa raaHil-u.

quick-acc this departing-nom

"In haste this man is departing"

These items are analyzed by traditional Arab grammarians as bare NPs or bare PPs modifying the subject, the object or the whole proposition. No explanation of the accusative case is offered except that it is the adverbial case in Arabic.

3.2 Small Clauses

I would like to argue that the bracketed items in (1) are examples of Arabic "adverbials" that can be identified as small clauses:

(2)a. jaa'a zayd-un [raakib-an].
come-past-1st.pers.sg. Zayd-nom riding-acc.
"Zayd came riding."

b. waqafa 9alaa baab-i al-mugharat-i [musallim-an].
stood-1st.pers.sg. at door the-cave-gen saluting-acc
"He stood at the entrance of the cave saluting."

c. fi-haa [qaa'im-an] rajul-un.
in-it standing-acc man-nom.
"In it (the house) is a man standing"

d. li-9azata [muHish-an] Talal-un qadiim-un.
to-&aza-gen desolate-acc. ruin-nom. old-nom.
"'Aza's is an ancient ruin, left desolate"

e. [raakib-an] jaa'a zayd-un.
riding-acc. came Zayd-nom.
"riding came Zayd."

f. [musri9-an] dhaa raaHil-u.
quick-acc. this departing-nom.
"in haste this man is departing"

g. bi9-hu mudd-an [bi- dirham-in]

sell-imperf-it-acc. mudd-acc. for dirham-gen.

"Sell it (at the rate of) a mudd for a dirham"

Compared to those small clauses in chapter two, these small clauses are not subcategorized by any verb in the sentence, i.e they are not in an argument position. They are adjuncts.

3.2.1 PRO Subject:

Contrary to the traditional view which considers them nouns in the accusative, I would like to argue that the bracketed items in (2) are to be analyzed here as the predicate XP's of small clauses with empty category subjects, rather than bare XP's. It is likely that this empty category is PRO, which will assign examples like (2a-f) the structure in (3a), and examples like (2g) the structure in (3b):

(3)a.[[jaa'a zayd-un] [. [PRO] [raakib-an]]]
IP IP SC NP XP

b.[['ishtaray-tu 9uSfuur-an [[PRO] [bi- dirham-in]]]
IP IP SC NP XP

In (3), PRO is ungoverned as required by Chomsky's (1981) "PRO theorem". It is coreferential, however, with a preceding NP in the sentence. Usually, this NP is a subject, an object, or an object of a preposition. In (3a) PRO is coreferential with the subject zayd-un, whereas in (3b) PRO is coreferential with the object 9uSfuur-an.

XP can be an NP as in (2a-b), or a PP as in (2g). The XP is to be considered as the head of the small clause on which the case assigned to it would be realized.

These XP's show agreement with the NP they modify, i.e the subject, object, or any other NP in the sentence.

As can be seen through the examples in (2), these bracketed items are able to occupy more than one position in the sentence. They are in final position as in (2a, b), internal to the sentence as in (2c, d), and in initial position as in (2e, f).

It is also time here to consider the claim by H&L that the equivalent English SCs include INFLo, which if applied to Arabic gives the structure in (4):

```
(4)a.[  [jaa'a zayd-un] [   [PRO]. INFLo [raakib-an]]]
     IP IP               SC  NP         XP

   b.[  ['ishtaray-tu  9usfuur-an [  [PRO] INFLo [bi- dirham-in]]]
     IP IP                        SC NP        XP
```

However, under the analysis presented in the previous chapters, the structure should be as in (5):

```
(5)  jaa'a zayd-un[  [  [PRO XP]]]]
    IP            IP Io SC
```

This INFLo governs but does not case mark the predicate of the small clause. This, as will be seen later, suits some of the syntactic properties of Arabic small clauses as presented in this work.

The similarity in the realization of the predicate XP between this type of small clause and the subcategorized type exemplified by copular embedded structures in Chapter Two and Chapter Three, is obviously a significant phenomenon. Another alternative treatment of small clauses, which follows from the analysis I have presented in this thesis, is to treat them all as IPs (i.e S's). This S contains an

empty INFL in the sense of H&L for both the subcategorized and the non-subcategorized small clauses. This INFL is, contrary to H&L, external to the small clause but internal to the IP containing it. The fact that these small clauses have no lexical subjects seems to serve the purposes of the government and binding theories of Chomsky with regard to the question of whether this subject is assigned Case under government or not, and whether it is free or bound.

3.2.2 Case Marking

The problem at issue here is where to attach the small clause, and this aspect may determine the origin of the accusative case that shows up at the end of the XP predicate when realized as NP or AP.

Since these small clauses are not subcategorized by the matrix or any other verb, they cannot be generated inside VP. They do not submit to the theta-criterion since they are neither assign nor are assigned a theta role as defined by the theta-criterion. Their position in the phrase marker decides what their Case assigner would be, if this Case is assigned under structural conditions. This is what is easier to do for the subcategorized small clauses. It is not easy for adjuncts, of which non-subcategorized small clauses are a part.

One idea seems to be relevant here, one that follows from the logic used in some of the literature. Traditional grammarians argue that some constituents get assigned a case by default, i.e by position (e.g nominal sentence subjects). It is also their position that adverbials in Arabic are always assigned accusative case. Comparing these two positions to each other on one hand, and to the clear cut cases where Case is assigned under government, regardless of its definition, on the

other hand; we could formalize this in the generalization in (6). This generalization may be known as The Adjunct Case-marking Convention:

The Adjunct Case-marking Convention:

(6) XP's are assigned nominative case in initial position and accusative case in final position by default, provided that they are not properly governed.

Proper government referred to here should be understood as a structural notion as defined in the recent generative literature. For a definition of proper government, the following definition is from Chomsky (1986b):

α properly governs β iff α theta-governs or antecedent-governs β

(Chomsky (1986b) p.17)

For a formal definition of government, I repeat two recent definitions of government cited in chapter one of this thesis:

(7) Aoun and Hornstein's (1985) definition:

a. A (X) governs B iff A and B share all maximal projection. if A governs XP, then A governs the corresponding X.

b. a governing category for A is the first clause or NP which contains a governor for A and a subject accessible to A.

(8)Aoun and Sportiche's (1983) definition of government:[1]

X governs Y iff for all α , α a maximal projection, dominates X <=> α dominates Y.

The issue then will be in addressing two types of constituents, namely subjects and adjuncts. Adjuncts include non-subcategorized small clauses known in traditional grammar, as adverbs. This also implies the assumption that these items are base-generated as (optional) constituents adjoined to IP, so that they are the equivalents of adverbials in many languages.

The subjects that are referred to here are subjects of matrix IPs, not those of embedded IPs. This is because of the fact that the subjects of embedded IPs are sometimes likely to be lexically governed by governors like the matrix verb or special types of COMP (e.g the prepositional English COMP "for").

It is worth noting here that Arabic is known for having overt COMPs for declarative matrix sentences that assign case to the subject of nominal sentences. One type of these COMPs is "inna & its sisters" dealt with in section 2.3.4 of Chapter Two.

Chapter Four is a discussion of further questions about small clauses guided by previous proposals in this thesis.

Notes

1) For more details on these definitions see section 1.2.3 in Chapter One, Aoun & Hornstein (1985), and Aoun & Sportiche (1983).

CHAPTER FOUR

4.0

This chapter will conclude the thesis with a general discussion of the consequences of the analyses given in the second and third chapters of the thesis in an attempt to tie up some loose ends.

The first remark to be made is that Arabic small clauses have not been discussed before in a generative framework. The term "small clause" does not exist in the traditional framework. To initiate a discussion of small clauses is one of the objectives of this work. It is hoped that further work will lead to a clarification of their properties in the future.

4.1 Licensing

The problem of licensing these small clauses seems to be the first problem facing the study of such constructions. Some of the proposals made by writers in this field seem to offer a potential towards finding a solution to the problem. Stowell, for instance, draws a distinction between subcategorized and non-subcategorized small clauses (for details see Chapter One and Chapter Two).

Subcategorized small clauses in English, as demonstrated by Stowell (1981, 1983), are called this because the matrix verb can govern and case-mark the subject of the small clause. Hence, PRO can not occur as subject of this kind of small clause, since it should not be governed nor case-marked.

In Arabic, with the class of verbs exemplified by kaana called by traditional grammarians "incomplete verbs", the verb affects the predicate XP of the small clause. The verb is called "incomplete" because its argument structure is not satisfied at S-structure by an NP, a PP, or an AP like other verbs. Instead this argument structure is satisfied by a verbless clause of the structure [NP XP]. This is basically what licenses the subcategorized variety of the small clause in Arabic (cf. sec. 2.3.4 in Chapter Two for more on kaana)

4.2 Case

The second problem connected with these constructions is the justification of the accusative case on both kinds of small clause. This problem is dependent on another problem which is the question: Under what circumstance is this case assigned? Is it assigned under government, or isn't it? If it is assigned under government, then what is the governor of these small clauses? This is a complex problem which is not easy to solve. A lack of success in resolving all these questions is not surprising. However, it is much easier to propose solutions for the subcategorized type of small clauses because of the presence of a governor, as demonstrated earlier in the thesis.

In Chapter Three (section 3.2.2), I argued that both the traditional grammarians' approach and the generative approach to case assignment can be part of a generalization on a case assignment mechanism to items that are not properly governed. Non-subcategorized small clauses, hence, are assigned accusative case by default in the traditional sense, and the condition that they can not be properly governed is satisfied.

As for the subject, which raises to the subject position of the IP containing the small clause, there are three possible ways for it to be assigned Case. The first is at D-structure as a lexical subject of the small clause by INFL. The second is by default at S-structure by virtue of principle (6) in Chapter Three. The third is as an argument of kaana, if it is to be a nominative case assigner, after it raises to adjoin to IP under lexical government. This question needs further discussion in the light of case theory in the recent generative literature to see the different consequences of every alternative interacting with the others.

4.3 Constituency

Defining what we mean by the term "constituent" is essential before we go on discussing whether the small clauses treated here are, or are not, constituents.

The issue of the constituency of small clauses still remains a topic of contraversy. On one hand, Chomsky (1981) and Stowell (1981) among others treat them as constituents. On the other, Schein (1982), Williams (1983) and Bresnan (1978, and elsewhere) among others treat small clauses as non-constituents.

Chomsky's (1981) argument in this regard, as stated in Chapter One, maintains that since there must be a subject-predicate relationship between the subject of the small clause and the predicate XP of that clause at LF, it must be the case that the relationship holds at all levels. Consequently, it holds at D-structure and at S-structure. Thus, the subject and the predicate must form a constituent, and in my analysis they do.

Safir's (1983) conclusion is that the fact that small clauses with clausal readings can be honorary NPs, but not regular NPs, indicates on one hand that

clausally interpreted Small Clauses can be constituents, and on the other hand, that they are not really NP constituents. Safir does not go any further into this matter.

With the analysis I am proposing, and the observations made about their properties, I tend towards preferring to argue for their constituency.

4.4 Transportability

As demonstrated in Chapter Three (section 3.2), non-subcategorized Arabic small clauses have the property of being able to occur in more than one position. As in (2) in Chapter Three repeated here as (1), the bracketed items, i.e the small clauses, are able to occupy more than one position in the sentence. They are in final position as in (1a, b), internal to the sentence as in (1c,d), and initial position as in (1e, f). This is a characteristic of adverbs that has been treated in the early literature by authors such as Jackendoff (1972).

(1)a. jaa'a zayd-un [raakib-an].
come-past-1st-pers-sg Zayd-nom riding-acc
"Zayd came riding."

b. waqafa 9alaa baab-i al-mugharat-i [musallim-an].
stood-3rd-pers-sg at door the-cave-gen saluting-acc
"He stood at the entrance of the cave saluting."

c. fi-haa [qaa'im-an] rajul-un.
in-it standing-acc man-nom
"In it (the house) is a man standing"

d. li-9azata [muHish-an] Talal-un qadiim-un.
to-9aza-gen desolate-acc ruin-nom old-nom
"'Aza's is an ancient ruin, left desolate"

e. [raakib-an] jaa'a zayd-un.
riding-acc came Zayd-nom
"Riding came Zayd."

f. [musri9-an] dhaa raaHil-u.
quick-acc this departing-nom
"In haste this man is departing"

g. bi9-hu mudd-an [bi- dirham-in]
sell-imperf-it-acc mudd-acc for dirham-gen
"Sell it (at the rate of) a mudd for a dirham"

It is worth noting here that the subcategorized small clauses in Arabic treated in Chapter Two do not have this freedom of position, as expected. It is expected because of the government and binding theories and their conditions on the subject of the small clause which will rule out the outputs of the movement because the subject has to be properly governed, which it is not in this case. Thus, the initial position of the matrix sentence is prohibited for the subcategorized small clause as an effect of the government theory and the binding theory, as will be shown below.

The moveability of these small clauses is subject to the same conditions referred to in Chapter Two (section 2.5) as conditions on predicate fronting in nominal sentences.

Two conditions were put forth by traditional grammarians on the possibility of fronting the predicate XP of the Arabic nominal sentences (Chapter Two, section 2.3.5). These conditions were that the predicate be a PP, and that the subject be an indefinite NP. This was seen in examples (23) in that chapter, repeated here as (2):

(2)a. al-kitaab-u fawqa ar-raff-i.
the book-nom. on the-shelf-gen

b.*fawqa ar-raff-i al-kitaab-u.
on the-shelf-gen the-book-nom
"The book is on the shelf"

c.*kitaab-un fawqa ar-raff-i.
book-nom on the-shelf-gen

d. fawqa ar-raff-i kitaab-un.
on the-shelf-gen book-nom
"There is a book on the shelf"

If these sentences were embedded so that they would serve as arguments of the verb kaana, the same two conditions would still hold on the possibility of fronting the SC, as can be seen in (3), the blanks indicate the D-structure positions of the small clauses:

(3)a. [[[kaana [al-kitaab-u [[[t fawqa ar-raffi]]]]]
IPI'I IP i I' I SC i

b.*[t fawqa ar-raff-i [[[kaana[al-kitaab-u [[[___]]]]]]]
SC IPI'I IP I'I SC

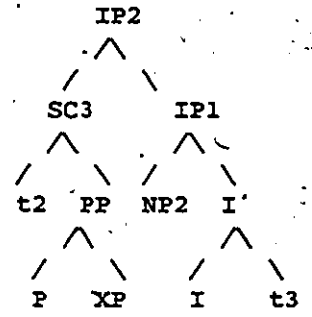
c. [kaana [kitaab-un [[[[t fawqa ar-raffi]]]]]
IP IP IPI'I SC

d.*[t fawqa ar-raff-i[[[kaana [[kitaab-un [[[___]]]]]]]
SC IP I'I IP I'I SC

The reason for the ungrammaticality of (3b,d) can be attributed to proper government. The NP-trace subject of the small clause is not properly governed, which violates the government conditions on NP-trace that say that it should be governed.

The binding theory can play a role in ruling out (3b,d), as well. The NP-trace should be bound by the NP in subject position of IP, which in order to be able to bind it, must c-command it. There is no way for the subject NP, as it appears from the structure above, to c-command the NP-trace in (3b,d) since the latter is lower in the tree than its antecedent as in (4):

(4)



4.5 Extraction

It is generally assumed that subcategorized and non-subcategorized small clauses would differ as to the possibility of extraction.

Wh-movement is one of the types of extractions which I will investigate here.

4.5.1 Extracting from Root Small Clauses

Assume that we have a D-structure as in (5a) for a root small clause like those discussed in chapter two:

(5)a. [IP [I' [I [SC [zayd-un] [Hakiim-un]]]]]
NP XP

b. [CP[man] [IP [t][I' [I [SC [t] [Hakiim-un]]]]]]
i i i XP

c. man Hakiim-un ?
who wise-nom
"Who is wise?"

In (5b), raising applies from the subject of SC to the subject position of IP, then wh-movement from subject of IP to COMP position. The two movements result in the grammatical Phonetic Form (5c). If this is what we have for subject extraction, what about extraction of the predicate XP?

Assuming that we have the same D-structure as in (6a):

(6)a. [IP [I' [I [SC [Zayd-un] [fi bayt-i-hi]]]]]
NP XP

b. [CP ['ayna] [IP [Zayd-un][I' [I [SC [t] [t]]]]]]
i j j i

c. 'ayna Zayd-un ?
where Zayd-nom
"Where is Zayd ?"

In (6b), raising applies from the subject of the small clause to the subject of IP as in (5b). The trace of the predicate XP left by wh-movement is antecedent-governed by the wh-word in the matrix COMP position. The derivation process results in the

perfectly grammatical Phonetic Form (6c). Since wh-traces are variables, they must have case. For "Where" PP's can be treated as having their own case.

This shows that extraction from both subject and predicate of the Arabic root small clauses is permitted.

4.5.2 Extracting from Subcategorized Small Clauses

As for subcategorized small clauses discussed in Chapters Two and Three, extraction by wh-movement is expected to apply as follows:

Suppose that we assign this type of SC's the D-structure (7a):

(7)a. [IP [I'[I [kaana [IP[I'[Io [SC [xalid-u]
[mumtaaz-an]]]]]]]]]

b. [CP [man]$_i$ [IP [I'[I kaana [IP[I'[I [SC [t$_i$]
[mumtaaz-an]]]]]]]]]

c. man kaana mumtaaz-an ?
who was excellent-acc
"Who was excellent ?"

In (7b), as in (5b) and (6b) raising to the subject of IP occurs from subject position of SC. From there, wh-movement takes place to the matrix COMP position, which yields the phonetic form in (7c).

As for predicate extraction, it will look like (8):

(8)a. [IP [I' [I kaana [IP [I'[I [SC [xalid-u]
[mumtaaz-an]]]]]]]]

b. [CP [maadhaa] [IP [I'[I kaana [IP [xalid-u] [I" [I [SC t
i j j

t]]]]]]]]]
i

c. maadhaa kaana xalid-u ?

what was Khalid-nom.

"What was Khalid ?"

In (8b), raising applies as usual from the subject of SC to subject of IP. Wh-movement moves the predicate XP of the small clause in the lower IP to COMP position of the matrix CP. In this case raising of kaana is necessary to obtain the phonetic form in (8c) from predicate wh-extraction.

This shows that for wh-subject extraction out of subcategorized small clauses verb raising is not needed whereas in predicate extraction it is necessary. Interesting questions may arise from trying to explain this in a generative framework.

4.5.3 Extracting from Non-subcategorized Small Clauses

As explained in Chapter Three, items like the bracketed one in (9b) are non-subcategorized small clauses, i.e, adjuncts.

(9) a. jaa'a zayd-un raakib-an.

came Zayd-nom riding-acc

"Zayd came riding."

b. jaa'a zayd-un INFL [[PRO] [raakib-an]].
SC NP XP

Since the subject of these small clauses is PRO as in (9b), extraction from subject position is not possible since there is no lexical subject. The only part left to be extracted from is the predicate XP position. In (9), the predicate is a simple predicate, i.e, an adjective functioning as an adverb and modifying the subject of the matrix sentence. Questioning this adverb would look like (10):

(10) a. [CP [IP jaa'a zayd-un][IP[I'[Io[SC [PRO] [raakib-an]]]]]]
NP XP

b. [CP [kayfa] [IP jaa'a zayd-un] [IP[I[Io[SC [PRO]
i
[t]]]]]]]
i

It is worth noting that according to H&L the wh-trace left by the predicate XP will be in a governed position but not one Case-marked by INFLo, which is internal to the small clause as in (11):

(11) a. [CP [IP jaa'a zayd-un] [SC [PRO] INFLo [raakib-an]]]]
NP XP

b. [CP [kayfa] [IP jaa'a zayd-un] [SC [PRO] INFLo [t]]]]
i i

Compared to my analysis where INFL is external and structurally governs the small clause, the INFLo of their analysis is unnecessary and of no use to me at this point.

As noted above, the predicate in (9) and (10) is simple. Under the analysis I support in this thesis, let us look at (12) where the predicate is a complex predicate. The first NP in this complex predicate is a verbal noun which lexically governs the second NP as its complement:

(12) a. jaa'a zayd-un raakib-an darraajat-an.
came Zady-nom riding-acc bicycle-acc

"Zayd came riding a bicycle"

b. [jaa'a zayd-un [[[[[PRO] [[raakib-an]
IP IP I'Io SC NP XPNP
[darraajat-an]]]]]]]
NP

Extraction out of the complex predicate of the small clause using (12b) as a D-structure will be as follows:

If we assume the structure in (13a):

(13) a. [IP jaa'a zayd-un [IP[I'[Io[SC [PRO] [XP [NP raakib-an]
[NP darraaja-tan]]]]]]

b. [CP[maadhaa] [IP jaa'a zayd-un [IP[I'[Io SC [PRO] [XP
i
[NP raakib-an] [t]]]]]]]
i

c. maadhaa jaa'a zayd-un raakib-an
What come-past- Zayd-nom riding-acc
1st-pers-sg
"What did Zayd come riding ?"

(13c) shows that extraction from the second NP-position of the small clause predicate is permitted and yields grammatical Surface Forms. This is not easily explained in terms of the government theory if the small clauses we treat here are treated as adjuncts. It seems to me that the problem arises because of lexical properties of the first NP in the complex predicate XP of the SC. As mentioned above, it is a verbal noun, i.e a noun with verbal properties such as whether it takes a complement and assigns case or not.

4.6 Concluding Remarks

The following conclusion is divided into two parts. The first part relates to Chapter Four and the second to the whole thesis.

As for the final chapter, I tried to use the structural analysis I proposed to account for some of the syntactic properties of what have been identified as small clauses in Arabic. I also went further to propose some explanations to observations made by traditional and other grammarians regarding these structures. General issues such as licensing, Case, constituency, and transportability were discussed in accordance with the analysis proposed in the rest of the thesis. I have tried in my discussion to stay within the domain of the theory of small clauses as outlined in the literature and as the facts of Arabic would require, trying to propose ways of solving problems within the generative framework.

To conclude, I must emphasize that this work was not intended to be, as well it cannot be, perfect, due to many reasons, some of which are general and others that are specific to the topic. Despite that, this work has established general claims about small clauses in Arabic that can be summarized, looking at the thesis as a whole, by the following points:

i) Arabic, like many other languages, has structures that could be identified as small clauses. These small clauses are of two major kinds, namely independent or "root" small clauses and "dependent" small clauses.

ii) Independent Arabic small clauses are those known by traditional grammarians as "nominal sentences". They have the properties referred to and discussed in Chapter Two. These properties include incorporating Doron's (1986) claim about similar Hebrew structures, in that they are preceded by an abstract empty INFL in their present tense form.

iii) Dependent Arabic small clauses fall in two groups, namely:

a) the subcategorized small clauses exemplified by "root" small clauses when embedded as arguments of kaana or one of its sisters. In this thesis, I have established that Arabic has three types of subcategorized small clauses when we consider what type of subject these small clauses may have. In D-structure Arabic subcategorized small clauses may have lexical NP, pro, or a pronoun of separation as subject. At S-structure only the pronoun of separation stays. Lexical NPs undergo raising to subject of IP, and pro probably does too.

b) The non-subcategorized small clauses are those which are generally known as adverbs in traditional grammar. Arabic non-subcategorized small clauses are no different from this. I argued here that they exclusively have PRO as subject in all levels of the derivation. I have tried to explain some of these small clause properties in the light of both the traditional and the generative frameworks, trying to combine where needed the two approaches to account for phenomena that appear to be difficult to solve using only one of the two. This was the subject matter of Chapter Four.

iv) In my analysis I provide support for claims made by Stowell (1981, 1983) with regard to the internal structure of a small clause and in the fact that all small clauses have subjects. I add to that, regarding Arabic small clauses, the details about the types of subjects allowed in each type.

v) I also provide support for H&L in their claim that there is an INFLo when it comes to small clauses. However, I disagree with them, that this INFL is internal to the small clause, arguing instead that it is external to the small clause. Their analysis allows them, as they claim, to argue for the base as in (14):

(14) S (or INFL') ——> NP INFL XP

The analysis I present for Arabic small clauses enables me to argue for the two base rules as in (15):

(15) a. INFL' ——> INFL SC

b. SC ——> NP XP

vi) I also support the claim that this INFL may contain [+Tense] or [-Tense], and that would be the present tense and the kaana type respectively in Arabic. However I must disagree with H&L (1987) in their claim that this INFL occurs only where there is no S-node. INFL in my analysis is contained in an S-node and is the head of this S, which is either a "Root" small clause or an embedded small clause.

vii) By combining features of Stowell (1981, 1983) with H&L (1987), I obtain an analysis that enjoys the advantages of both and avoids most of their disadvantages. This analysis tries and succeeds as far as the data show to use some traditional claims after translating them into the terms of the generative framework represented by Chomsky, Stowell, H&L, and many others.

viii) Since small clauses occur within the argument structure of a subclass of verbs exemplified by kaana, it is assumed that with normal verbs other than this subclass, small clauses would be replaced by a VP headed by a full fledged verb rather than an "incomplete" verb. This issue needs more detailed consideration.

ix) It is one of the underpinnings of my analysis that the kaana type of Arabic verb is base-generated under INFL compared to other verbs which I assume are base generated as heads of VPs. This could be understood as based on the generative approach's interpretation of the traditional concept of "incomplete" verbs. It is an issue that needs further detailed study.

x) Contrary to authors like Abdul-Ghany (1981) and others who consider small clauses to be CPs with empty COMPs, I argue that Arabic small clauses are all IPs. They are projections of the abstract INFL assumed to be in initial position in the D-structure of "Root" small clauses and embedded small clauses. kaana is sometimes Chomsky-adjoined to these clauses at S-structure after it has been base-generated under INFL in the past tense version of the "Root" small clause.

To keep the traditional view of kaana, we will have to show that it adjoins to IP to assign nominative case to the subject at S-structure. The subject then raises to the subject position of the embedded IP from the subject position of the SC, leaving a trace. This leads to the conclusion that INFL must assign accusative case, to the right, that is, to the SC which appears morphologically on its predicate XP.

But, following the analysis in (18) in Chapter Two and the suggestions following it, it seems better to keep the idea that the abstract INFL preceding the SC is the assigner of nominative case at D-structure to the subject of the small clause before it raises to the subject position of the lowest dominating IP. This would allow for kaana to assign accusative case to the SC because there in no lexical material intervening. This view would allow us to account for another property shared by both "'inna" and "Kaana", i.e, that they are both accusative

case assigners. This finding is contrary to the held view that "kaana" is a nominative case assigner and "'inna" is an accusative case assigner.

Last but not least, I hope that this thesis has succeeded in initiating the discussion of small clauses in Arabic in the light of both the theoretical remarks in the literature overviewed in Chapter One and the data and analysis offered in the rest of the thesis. It is not to be denied that many questions still need further scrutiny and further study to test the claims and predictions of the small clause analysis of the constructions dealt with in this work.

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