GRAMMATICAL SUBJECTS OF JORDANIAN ARABIC: SYNTACTIC AND DISCOURSE FUNCTIONS

by

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ABSTRACT

This dissertation examines a set of phenomena in Jordanian Arabic (JA) related to the subject and its position, providing an analysis for each within the assumptions of generative grammar, particularly those related to the provocative syntax model (Branigan 2010), and functional grammar (Prince 1999, Owens *et. al.* 2010, among others).

Chapter 2 examines the properties of the preverbal subject and how it is derived. Based on ambiguity tests involving negation and quantifiers, I show that the preverbal DP occupies an A position and is derived by movement.

Chapter 3 deals with the embedded lexical subject and the subject clitics that cooccur with it. I argue that the cooccurrence of a subject clitic and a lexical subject is a product of a provocation process. Following Branigan (2010), I propose that the C head in JA is endowed with a provocative feature, which imposes the creation of an external copy of its internal goal projection. The external copy can be identical or non-identical to the original goal projection. I take the non-identical shape of a DP projection to be a pronoun with a deleted NP, in line with the NP-deletion theory (Elbourne 2001). Accordingly, when C locates the preverbal lexical subject as a local goal, it creates an external copy of it. This copy merges with C, which derives the 'doubling' of an agreeing clitic and the lexical subject. Since C is provocative, it also has the option to probe for an 'external' copy that is already available. In this case, C probes for the default clitic *–uh*. I show that probing for the default *–uh* can be obligatory, as in cases where C cannot reach its internal goal, or optional, where C directly probes for *–uh* even when with the presence of

a 'reachable' internal goal. In this case, we get the 'doubling' of a default clitic and an overt subject.

Chapter 4 investigates the variation in overt and null subjects within a functional approach. Specifically, I examine the role of discourse and semantic-pragmatic factors in overt and null subject variation in JA. I show that the favoring of an overt subject is influenced by pragmatic anaphora, antecedent salience in the discourse, and predicate type.

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Dedication

الى والديَ العزيزين

الى زوجتي الغاليه و اولادي الاحبه جواد و حازم و مرح

To my dear parents

To my dear wife and my lovely kids, Jawad, Hazim, and Marah

Committee:

Dr. Phil Branigan, supervisor

Dr. Julie Brittain, member

Dr. Douglas Wharram, member

Dr. Martha McGinnis, examiner

Dr. Hamid Ouali, examiner

Dr. Margurite MacKenzie, examiner

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List of Abbreviations and Phonetic Symbols

I. Abbreviations:

acc	accusative
dft	default clitic
f	feminine
gen	genitive
JA	Jordanian Arabic
LA	Lebanese Arabic
m	masculine
nom	nominative
p	plural
PA	Palestinian Arabic
s	singular
SA	Standard Arabic
subjn	subjunctive
1	first person
2	second person
3	third person
Ø	null subject

II. Phonetic Symbols

Consonants:

	Labial	Labio-dental	Inter-dental	Dental	Alveolar	Palatal	Velar	Uvular	Pharyngeal	Glottal
Stop	b			t d			k g			ʔ
Emphatic stop				tˤ						
Fricative		f	θ ð	s z		ʃ	x ɣ		ħ ʕ	h
Emphatic fricative			ðˤ	sˤ						
Affricate						ʤ				
Nasal	m				n					
Lateral					l					
Flap					r					
Glide	w					j				

Vowels:

	front closed	central open	back closed rounded
short	i	a	u
long	ii	aa	uu

CHAPTER ONE: Introduction

1 Introduction

In this chapter, I provide an overview of the issues to be examined in the thesis (section 2) as well as a description of the relevant grammatical properties of Jordanian Arabic (JA), the language under investigation, (section 4).

2 Aims and scope of the thesis

Aims: the current study aims to: 1) examine the properties of the preverbal subject and the subject position in JA, 2) account for the subject pattern shown in embedded clauses (5-8), and 3) account for the variation in overt and null subject types adopting a functional approach.

Scope: this study will focus on data from JA. In particular, the variety spoken in villages and rural areas around the city of Irbid in northern Jordan. In addition to the researcher's native judgment on this variety, native judgment on the data in chapters (2) and (3) was further checked with at least one native speaker of that variety. The data for chapter (3) was based on data provided by speakers from both Irbid and Amman.

I will be concerned with verbal sentences–that is to say, sentences which do not have an overt verb (zero-copula) will not be examined. In my analysis, I follow a generative approach, in part, and a functional approach, in part.

3 Data and issues

A great deal of attention has been paid to the grammatical subject in Arabic in recent years, by both linguists who work in the generative framework (Plunkett 1993, Platzack 2003, among others) and by those working within discourse frameworks (Moutaouakil 1989, Owens *et. al.* 2010, among others). Most of these studies, however, have examined the properties of the subject in Standard Arabic (SA).

One of the major focuses of the literature on SA has been the properties of the preverbal subject. Within the long tradition of Arabic grammarian scholarship, the preverbal subject, in particular in both main (1) and embedded clauses (2), has been treated as a topic (Hassan 1961).

1. atˤ-tˤulaab-u qaabal-uu al-mudarrisat-a. (SA)
   the-students-nom met-3mp the-teacher-acc
   'The students met the teacher.'

2. qaala Aliyy-un ʔanna atˤ-tˤulaab-a qaabal-uu al-mudarrisat-a. (SA)
   said.3ms Ali-nom that the-students-acc met-3mp the-teacher-acc
   'Ali said that the students met the teacher.'

The topicality claim by traditional Arab grammarians has been recently reexamined by a number of linguists working within the generative framework (Fassi Fehri 1993, Ouhalla 1994, Bolotin 1995, Doron 1996, among others). With regard to main clauses, no consensus has yet been reached as to the status of the preverbal subject. While some researchers consider the preverbal DP to be a topic (Plunkett 1993, Platzack 2003, Soltan 2006, 2008, Musabhien 2008), others treat it as a true subject (Mohammad 1990, Benmamoun 1993, 2000, Fassi Fehri 1993, Ouhalla 1994, Bolotin 1995, Doron 1996, Doron and Heycock 1999). Further debate pertains to how the preverbal DP is derived,

with some arguing that the preverbal DP is base generated in preverbal position (Plunkett 1993, Platzack 2003, Soltan 2006, 2008), while others contend that the preverbal DP is generated by movement (Fassi Fehri 1993, Doron 1996, Doron and Heycock 1999, Musabhien 2008). In this thesis, I address the status of the preverbal DP in JA, as well as how it is derived. Based on ambiguity tests involving negation and quantifiers, I show that the preverbal DP is a subject derived by A-movement. These issues will be discussed in chapter (2).

A rather more complex context for SA preverbal DPs is in embedded clauses. The preverbal DP in embedded clauses receives accusative case, as shown in (2) above, and word order is obligatorily SVO. Subject pronouns appear as clitics on the complementizer, as illustrated in (3).

3. qaala Aliyy-un ʔanna-ha jaaʔat. (SA)
said.3ms Ali-nom that-her came.3fs
'Ali said that she came.'

However, a subject clitic is not allowed to cooccur with a preverbal lexical subject. For example, neither the 'default' clitic *–hu* (4a), nor a clitic agreeing with the subject (4b) is permitted. Thus, the 'doubling' of a clitic and a preverbal lexical subject is not allowed in SA.

4. a. *qaala Aliyy-un ʔanna-hu al-bint-u jaaʔat. (SA)
said.3ms Ali-nom that-dft. the-girl-nom came.3fs
'Ali said that the girl came.'

b. *qaala Aliyy-un ʔanna-ha al-bint-u jaaʔat. (SA)
said.3ms Ali-nom that-her the-girl-nom came.3fs
'Ali said that the girl came.'

The embedded subject position in JA exhibits a different pattern. Unlike SA (4), either a default clitic (5a) or an agreeing clitic (5b) is allowed to cooccur with the preverbal subject.

5. a. Ali gaal ʔinn-uh il-bint ʔij-at. (JA)
Ali said.3ms that-dft. the-girl came-3fs
'Ali said that the girl came.'

b. Ali gaal ʔin-ha il-bint ʔij-at. (JA)
Ali said.3ms that-her the-girl came-3fs
'Ali said that the girl came.'

Further, JA allows for a VSO order in embedded clauses, but some constraints apply to the type of clitic in this context. While either the default or an agreeing clitic can cooccur with the preverbal subject, as shown in (5) above, only the default clitic is possible when the embedded subject occurs in postverbal position, as seen in (6).

6. a. ?Ali gaal ʔinn-uh ʔij-at il-bint. (JA)
Ali said.3ms that-dft. came-3fs the-girl
'Ali said that the girl came.'

b. Ali gaal *ʔinn-ha ʔij-at il-bint. (JA)
Ali said.3ms that-her came-3fs the-girl
'Ali said that the girl came.'

In JA, a clitic is obligatory regardless of whether the subject occurs in preverbal (7a) or postverbal position (7b).

7. a. Ali gaal *ʔin il-bint ʔij-at. (JA)
Ali said.3ms that the-girl came-3fs
'Ali said that the girl came.'

b. Ali gaal *ʔin ʔij-at il-bint. (JA)
Ali said.3ms that came-3fs the-girl
'Ali said that the girl came.'

An agreeing clitic can cooccur with a null subject (8a), but when the clitic is the default (8b), a null subject does not seem to be licit.

8. a. Ali gaal ʔin-ha Ø[1] ʔij-at. (JA)
Ali said.3ms that-her came-3fs
'Ali said that she came.'

b. Ali gaal ʔinn-uh *Ø/hii ʔij-at. (JA)
Ali said.3ms that-dft. /she came-3fs
'Ali said that she came.'

One of the principal goals of this thesis is to account for the pattern in the JA data shown in (5-8) above. This issue will be discussed in chapter 3.

A central concern in the study of subjects in null subject languages has been the uncovering of the underlying influences on the variation in null and overt subject type. A functional approach has in many cases been used to account for this type of variation for a variety of languages (Prince 1999, Owens *et. al.* 2010, Posio 2011, among others). JA allows for just this type of variation in subject type; the subject can be overt or null, as shown in (9).

9. Ø/huu daras. (JA)
/he studied.3ms
'(He) studied.'

One of the aims of the current study is to examine the variation in overt and null subjects within a functional approach. Specifically, I examine the role of discourse and semantic-pragmatic factors in the variation in overt and null subject in JA. I show that the variation in subject type is influenced by pragmatic anaphora, antecedent salience and predicate type.The issue of variation in subject type will be discussed in chapter 4.

In summary, the current study aims to: 1) examine the properties of the preverbal subject and subject position in JA, 2) account for the pattern of subject shown in embedded clauses (5-8), and 3) account for the variation in overt and null subject types.

[1] Null subjects will not be glossed, as the symbol "Ø" is not used for any other null element in the thesis.

In the next section, I describe the grammatical aspects of JA relevant to this study.

4 Background

In this section, I introduce the main grammatical features of JA that are pertinent to the topic at hand, and I introduce the theoretical model adopted in the syntactic analysis of embedded subjects in chapter 3 (section 4.6). Since a great deal of the literature is devoted to the analysis of SA, I find it useful here to briefly refer to the equivalent structure in this language whenever the context permits.

Arabic is the language spoken in the Arab world. Two levels of the language are typically distinguished: Standard Arabic, which is normally used in formal contexts such as political speeches,[2] and Spoken Arabic, which is the language mostly used in daily life. However, there are many different varieties of Spoken Arabic. A general sub-classification of Spoken Arabic normally goes by country or region. One of these varieties is JA, which is used by about 6 million speakers. However, several sub-varieties of JA can also be identified, such as the Bedouin and rural varieties.

4.1 Morphological marking in JA

4.1.1 Case marking

Nouns in JA are not marked for case; only pronouns show case distinctions. Pronouns in the nominative form appear as independent morphemes (Table 1), while in the accusative

[2] The literature on Arabic also refers to different forms of SA such as Modern Standard Arabic and Educated Spoken Arabic. Differences between SA and these varieties are not clear-cut. For example, according to Haeri (2002), as cited in Musabhien (2008), SA, or Classical Arabic in her terminology, and Modern Standard Arabic have identical syntax.

and genitive case, they appear as enclitics on lexical heads (Table 2). For example, the 3rd person masculine singular pronoun appears as an independent morpheme in the subject position (10a), while in the object (10b) and genitive position (10c), the pronoun appears as a clitic. Subject pronouns in embedded clauses appear as clitics on the complementizer *ʔin-* 'that', as shown in (11).

10. a. huu qaabal ir-raʔiis.
3ms.nom met-3ms the-president
'He met the president.'

b. Ali saamaħ-uh.
Ali forgave.3ms-3ms.acc
'Ali forgave him.'

c. ħaka maʕ-uh.
spoke.3ms with-3ms.gen
'He spoke with him.'

11. Ali gaal ʔin-ha ʔij-at. (JA)
Ali said.3ms that-3ms.acc came-3fs
'Ali said that she came.'

Table 1: Independent Personal Pronouns in JA (nominative)

	Singular		Plural	
First person	ana		iħna	
Second person	inta [m]	inti [f]	intu [m]	intin [f]
Third person	huu [m]	hii [f]	hummuh [m]	hinnih [f]

Table 2: Personal Pronoun Enclitics in JA (accusative and genitive)[3]

	Singular		Plural	
First person	-ni (accusative) -i (genitive)		-na	
Second person	-ak [m]	-ik [f]	-ku[4] [m]	-kin [f]
Third person	-uh [m]	-ha [f]	-hum [m]	-hin [f]

I observe that these pronouns do not cliticize on lexical heads if that head has already hosted another clitic. Instead, the pronoun appears as a clitic on the morpheme *ʔiyya-*. For example, as shown in (12a), the 3rd person feminine singular pronoun *–ha.acc* appears as a clitic on the verb. However, in (12b) where the 1st person clitic *–ni.acc* 'me' is already attached to the verb, the 3rd person feminine singular pronoun appears as a clitic on the morpheme *ʔiyyaa*.

12. a. il-walad ʃaaf-ha. (JA)
the-boy saw.3ms-her
'The boy saw her.'

b. il-walad ʔaʕtˁaa-ni ʔiyyaa-ha. (JA)
the-boy gave.3ms-me.f -3fs
'The boy gave it to me.'

Thus, when a clitic fails to cliticize on the verb, it appears as a clitic on the morpheme *ʔiyyaa*. The following table illustrates the combination of *ʔiyyaa* with a clitic.[5]

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[3] Enclitics in JA, except for the 1st person singular pronoun, have the same form in the accusative and gentive cases.
[4] I observe that for some speakers, gender is neutralized in the 2nd person plural, so *-ku* is 2nd plural.
[5] I assume that the function of the morpheme *ʔiyyaa-* is to host the clitic when it fails to attach to its original host. However, one may think of the complex form *ʔiyya+clitic* as an independent accusative pronoun. For instance, one may consider *ʔiyyaa-ha* in (12b) above as the independent accusative form of the 3rd person feminine singular pronoun. Exploring this issue is beyond the scope of this thesis.

Table 3: The form of clitics when they fail to attach to a head

	Singular		Plural	
First person	ʔiyyaa-ni		ʔiyyaa-na	
Second person	ʔiyya-ak [m]	ʔiyya-ki [f]	ʔiyyaa-ku [m]	ʔiyyaa-kin [f]
Third person	ʔiyyaa-h [m]	ʔiyyaa-ha [f]	ʔiyyaa-hum [m]	ʔiyyaa-hin [f]

4.1.2 Number marking

Nouns in JA are marked for singular, dual, and plural. Dual nouns are derived by adding the suffix *-eɪn* to the stem noun (13). However, the plural form can be derived through either a regular or an irregular process. The regular process is sensitive to the gender of the noun. The plural form of a masculine noun is derived by adding the suffix *–iin* to the noun (14).

13. ktaab → ktaab-eɪn.
    book.ms book-m.dual

14. mʕallim → mʕallim-iin.
    teacher.ms teacher-mp

A feminine singular noun is derived by adding the suffix *–ah* to a masculine singular noun (15), while the plural feminine form is built directly on the masculine singular by adding the suffix *–aat*. (16).

15. mudiir → mudiir-ah.
    manager.ms manager-fs

16. mudiir → mudiir-aat.
    manager.ms manager-fp

Irregular plural in Arabic is often referred to as 'broken' plural (McCarthy and Prince 1990). This type of plural is derived by modifying the stem, and it applies to both masculine and feminine nouns. The following are some examples:

17. ktaab →kutub.
    book.ms book.mp

18. maktab → makaatib.
    office.ms office.mp

19. ħadiiq-ah→ ħadaa?iq.
    park-fs parks.fp

4.2 Complementizers

There are two types of complementizers in JA: Embedded clause complementizers and root and subordinating complementizers. Embedded clauses are invariably headed by the complementizer *?in* 'that' (20). Root and subordinating complementizers include, but are not limited to, *laakin* 'but' (21), *ka?in* 'look.like' (22), and *reɪt* 'wish' (23).[6]

20. smiʕit ?in-ha faaz-at.
    heard.3ms that-her won-3fs
    'I heard that she won.'

21. il-walad maa daras kwayyis, **laakinn**-uh nijiħ bi-l-imtiħaan.
    the-boy neg studied.3ms well but-him passed.3ms in-the-exam
    'The boy did not study well, but he passed the exam.'

22. **ka?in**-hum nisju il-mawʕid.
    look.like-them forgot.3mp the-appointment.
    'It looks like that they forgot the appointment.'

23. **reɪt**-ni maa ʕmilit heɪk.
    wish-me neg did.1s this
    'I wish I hadn't done this.'

---

[6] The root and subbordinating complementizers reported here are ones that I observe are frequent in JA. Other complementizers may also exist in the language.

As can be seen from the data in (21-23), root clause complementizers require a subject clitic to be attached to them. My analysis will be devoted to embedded clauses, but the analysis can also be extended to account for the root complementizers, as they seem to behave like the embedded clause complementizer *ʔin*.

SA also has both embedded and root-type complementizers. Unlike JA, however, there are three embedded complementizers: *ʔinna*[7], *ʔanna*, and *ʔan*; the selection of these is determined by the matrix verb (Mohammad 2000). For instance, the verb *ħasiba* 'thought' selects an embedded clause headed by the complementizer *ʔanna*, as shown in (24).

24. ħassibtu ʔanna al-rajaul-a ɣaadara. (SA)
thought.3ms that the-man-acc left.3ms
'I thought that the man left.'

Main clause complementizers in SA include *ʔinna* 'indeed', *laakinna* 'but', *kaʔinna* 'look.like', *layta* 'wish', *laʕalla* 'could.be'.

Word order and agreement properties of embedded clauses in JA and SA are described in the next section.

4.3 Subject-verb order and agreement

In main clauses, the subject can freely precede or follow the verb, as illustrated in (25).

This variation in word order is also possible in embedded clauses, as shown in (26).[8]

25. a. Ali iʃtara sayyarah. (JA)
Ali bought.3ms car
'Ali bought a car.'

---

[7] *ʔinna* is also a main clause complementizer.
[8] Some of my informants found the VS order in embedded clauses completely grammatical, while others found this to be less acceptable.

b. iʃtara Ali sayyarah. (JA)
bought.3ms Ali car
'Ali bought a car.'

26. a. il-walad gaal ʔinn-uh il-bint iʃtarat sayyarah. (JA)
the-boy said.3ms that-dft. the-girl bought.3ms car
'The boy said that the girl bought a car.'

b. ʔil-walad gaal ʔinn-uh iʃtarat il-bint sayyarah. (JA)
the-boy said.3ms that-dft. bought.3ms the-girl car
'The boy said that the girl bought a car.'

As can be seen from (25-26), the verb in JA agrees with the subject in person, number, and gender features (Phi-features), and full agreement holds in both SV and VS orders. Similar facts are also attested in other spoken varieties of Arabic, such as Moroccan Arabic (Benamoun 2000:27):

27. a. lə-wlad kla-w. (Morrocan Arabic)
the-boys ate-3pm
'The boys ate.'

b. kla-w lə-wlad.
ate-3pm the-boys
'The boys ate.'

The subject in SA can also freely precede or follow the verb (28). However, in SA, full agreement is found only in SV orders (28a). VS orders show a partial agreement relation (only in person and gender) (28b).

28. a. al-banaat-u daras-na. (SA)
the-girls-nom studied-3fp
'The girls studied.'

b. daras-at al-banaat-u.[9] (SA)
studied-3fs the-girls-nom
'The girls studied.'

[9] The singular form of the verb in the VS order is considered a default form.

Word order in SA embedded clauses depends on the type of complementizer. Clauses headed by the complementizers *ʔanna* and *ʔinna* require a SV order, as illustrated in (29), while the complementizer *ʔan* requires a VS order with the verb marked for the subjunctive mood, as shown in (30), (Mohammad 2000:20).[10]

29. a. qaala alwalad-u ʔinna Aliyy-an jaaʔa. (SA)
said.3ms the-boy-nom that Ali-acc came.3ms
'The boy said that Ali came.'

b. *qaala alwalad-u ʔinna jaaʔa Aliyy-un. (SA)
said.3ms the-boy-nom that came.3ms Ali-nom
'The boy said that Ali came.'

30. a. ʔamarat al-ħukuumat-u ʔan yusaafir-a Aliyy-un.
ordered.3fs the-government-nom that travel-subjn Ali-nom
'The government ordered that Ali (should) travel.'

b. *ʔamarat al-ħukuumat-u ʔan Aliyy-un yusaafir-a.
ordered.3fs the-government-nom that Ali-nom travel-subjn
'The government ordered that Ali (should) travel.'

4.4 Null and overt subjects in JA

Null pronouns in JA are permitted with all types of person, as illustrated in (31).

31. a. ʔana/Ø darasit. (JA)
I studied.3ms
'(I) studied.'

b. ʔinta/Ø darasit. (JA)
you studied.2ms
'(You) studied.'

c. huu/il-walad/Ø daras. (JA)
he/the boy studied.3ms
'(He/the boy) studied.'

---

[10] Mohammad (2000) was discussing Modern Standard Arabic. Irrespective of any features that could distinguish SA from Modern Standard Arabic, the issue of word order cited here applies to SA, too.

I also show that null subjects are allowed in embedded clauses. In (31) above, the null pro can be recovered for discourse reasons, in particular, for focus. Similarly, in the following constructed dialogue, the null pro *ʔintah* 'you.ms' cooccurring with the subject clitic *–ak* 'you.ms' can also be recovered.

32. A (to his friend (B)): ʔana ʕind-i muʃkilih kbiirih b-is-sayyaarah.
I with-me problem big with-the-car
'I have a big problem with the car.'

B: ʔana bagdar ʔasˁallih-ha.
I can fix-3fs
'I can fix it.'

A: miin gall-ak [ʔin-ak (ʔintah) btigdar tsˁallih-ha?]
who told-you.m that-you.m you.m can fix-3fs
Literally: 'Who told you that you can fix it?'
Meaning: 'I doubt that you can do it.'

4.5 Negation in JA

There are two negation markers in JA which work with different types of structures: the negation particle *miʃ* is used with verbless (zero-copula) sentences, as shown in (33).

33. il-jaw miʃ ħiluw.
the-weather neg nice
'The weather is not nice.'

The other negation element is the discontinuous form *maa V -ʃ* which is used with sentences that have a verb (34-36).

34. il-walad maa ʔijaa-ʃ.
the-boy neg came.3ms-neg
'The boy didn't come.'

35. il-walad maa kaan-ʃ b-il-beɪt.
the-boy neg was-neg in-the-house
'The boy wasn't in the house.'

36. il-walad maa kaan-ʃ yilʕab.
the-boy neg was-neg playing
'The boy wasn't playing.'

In verbless sentences in which the expletive element *fii* is used, it is the negation form *maa* + *-ʃ*, not *miʃ*, that is used, as illustrated in (37).

37. a. fii walad b-il-beɪt.
there boy in-the-house
'There is a boy in the house.'

b. maa fii-ʃ walad b-il-beɪt.
neg there-neg boy in-the-house
'There is no boy in the house.'

4.6 Theoretical model

4.6.1 Provocation

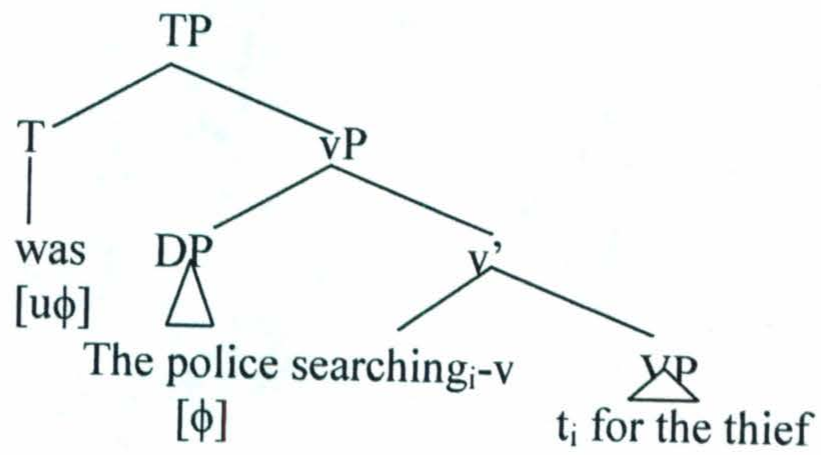
Branigan (2010) argues that most syntactic movement occurs as a result of a syntactic operation called *provocation*. This operation is motivated in the derivation during the feature valuation process when a *probe* searches for a *goal* with matching features. The provocation operation forces the generation of a new, 'external' copy of the original goal projection. This new copy forms a chain with the original internal copy and thus they count as a single unit for syntactic operations and semantic interpretation, such as theta-assignment. As soon as possible, the new, 'external' copy is reintroduced into the structure in a higher position.

Thus, certain heads not only require that their unvalued features be valued through a probe-goal relation, but also force the generation of a new copy of that goal. To illustrate how a provocation-based derivation works, consider how the DP *the police* in

(38) arrives at the Spec-TP within this model. In line with Chomsky (2000), the derivation of a structure such as (38) proceeds as follows. At an early stage of the derivation, the T head has unvalued phi-features that need to be valued in order for the derivation to converge. Consequently, T probes for a goal that bears matching features within its complement, the vP. It then spots the DP *the police* which has features that match with those on T. This stage of derivation can be illustrated in (39).

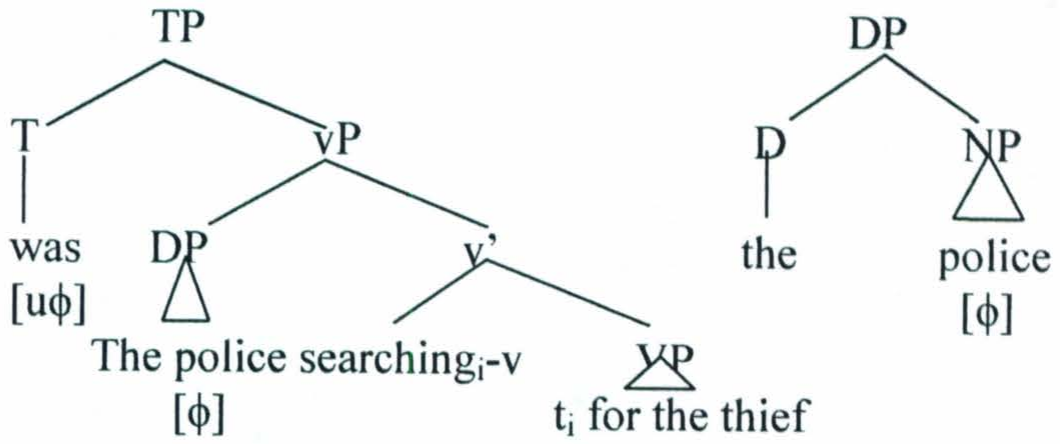
38. The police was searching for the thief.

39.



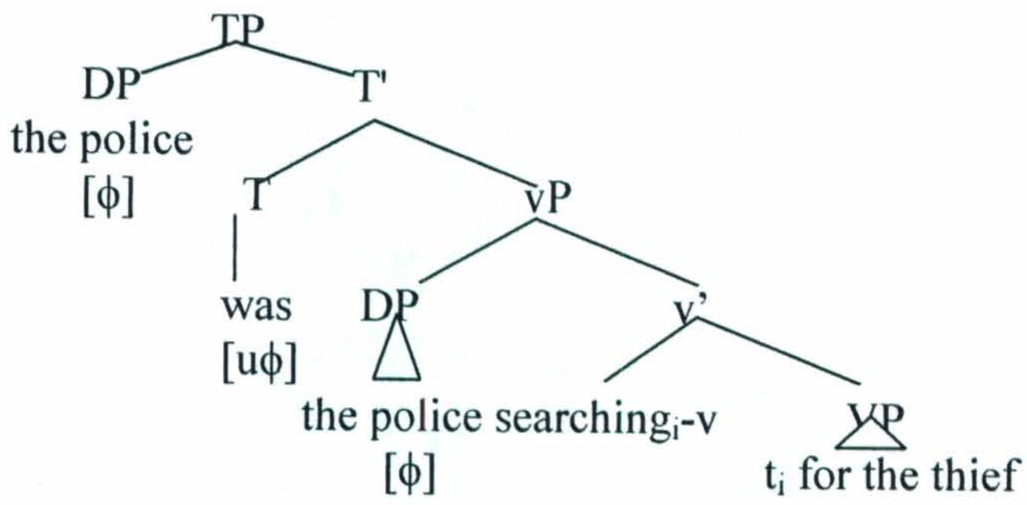
According to Branigan (2010), a head endowed with a provocative feature can not be satisfied by only valuing its features; it also requires that a copy of the goal be generated external to the phrase marker it heads. Assuming that the T head in the above example is parametrically endowed with a provocative feature, it thus requires that an 'external' copy of the goal be made. Thus, the derivation at this stage will be as in (40), where a copy of the goal DP *the police* is created.

40.



The two copies of the goal form a single chain with respect to theta-role assignment and other semantic interpretations (Branigan 2010:9). Then, the two separate phrase markers in (40) must be merged, as shown in (41), because separate phrase markers cannot be interpreted.

41.



The derivation then proceeds according to the traditional conventions of PF and LF interpretations. For example, at the PF interface, the lower copy will be marked as null, while the higher copy is given a phonetic content.

The 'shape' of the external copy created by virtue of provocation can either be identical to the original goal copy, or non-identical. For example, while the external copy created by the provocative T head in (40) is identical to the original goal phrase (i.e., the DP *the police*), the external copy created by provocation in languages such as German can be non-identical to the original goal copy. In this model, the derivation of the German question in (42), taken from Fanselow (2006), proceeds as follows. C is provocative and

thus must find a goal with matching features external to its own phrase marker. In this case, however, the external copy created by virtue of provocation (i.e, the wh-word *was* 'what') is not identical to the original goal wh-word *wen* 'when', as illustrated in (43).

42. Was glaubst du wen Irina liebt?
what believe you who Irina loves
'Who do you believe that Irina loves?'

43. $[_{CP}\ C_{[uWH]}\ [_{TP}$ du glaubst $[_{CP}\ wen_{i[uWH]}\ C\ [_{TP}$ Irina wen_i liebt $]\ ]\ ]\ ]$

$was_{\ i[uWH]}$

The significant difference between this model and the traditional EPP-driven movement model is that while movement in the former is triggered by the need to fill in a specifier position, or to occupy a phrasal edge, movement in the provocation model comes about as a result of the creation of two copies of a single phrase. In other words, the consequence of unifying two separate phrase markers can be a variety of structure-building operations, such as the merge to a Spec-position, or adjunction of one phrase marker to another.

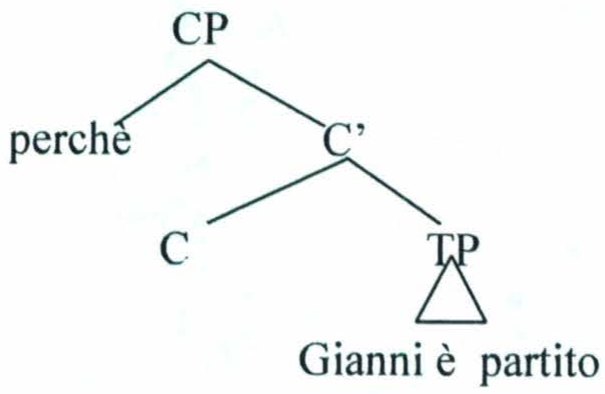
Branigan argues that a provocative probe can find its matching goal either internally through provocation within its complement, or externally, in an independent phrase marker. To illustrate, while the T head in structures such as (39) was able to find its goal inside its complement domain, the vP, and thus could create an external copy of that goal, there are cases where the goal is never contained in the complement domain of the head. For example, the wh-word *perchè* 'why' in the Italian example in (44) did not wh-move from inside the clause (Rizzi 1999), which raises questions about the 'source' of the wh-word and the way C checks its interrogative feature. According to the provocation model, since the C head cannot probe and provoke a goal within its

complement domain to value its features, it can probe a matching goal found in a position external to the phrase marker (45) and this is later merged with C (46).[11]

44. Perchè Gianni è partito?
why Gianni is left

45.

46.



External matching operations are computationally efficient, as the goal in these operations is already identified (Branigan 2010:16).

5 Summary

In this chapter, I have introduced the issues and context of the study, and have described the relevant grammatical aspects of JA and the theoretical model. In the next chapter, I examine the properties of the preverbal DP in JA. I show that the position occupied by the preverbal DP in JA is an A-position, and that it is derived by movement.

[11] The provocation model also allows for a probe to seek for an internal and external goal simultaneously. The details of this model are beyond the scope of this section. For further detail, see Branigan (2010).

CHAPTER TWO: The Subject Position in Simple Clauses in JA

1 Introduction:

Like other varieties of Arabic, JA allows for the subject to appear in preverbal or postverbal position. While most researchers seem to agree that postverbal DPs in Arabic are base-generated in an A-position (Spec-VP or Spec-vP) (following analyses proposed in Sportiche (1988), Koopman and Sportiche (1991), Chomsky (1995, 2000), among others), there is a debate in the literature on the nature of Arabic preverbal DPs and the way they are derived. This issue has been extensively discussed based on data from SA. Two major views are found in the literature regarding the type of position occupied by preverbal DPs. The first view argues that preverbal DPs occupy a left-dislocated position (Hassan 1961, Demirdache 1989, as cited in Doron 1996, Plunkett 1993, Platzack 2003, Soltan 2006, 2008, Musabhien 2008). The other view assumes that preverbal DPs occupy an A-position (Mohammad 1990, Benmamoun 1993, 2000, Fassi Fehri 1993, Ouhalla 1994, Bolotin 1995, Doron 1996, Doron and Heycock 1999).

Whether the preverbal DP in SA is believed to occupy an A or A'-position, the way this element is derived is also a matter of contention. Some argue that the preverbal DP is derived by base-generation (Plunkett 1993, Soltan 2006, 2008), while others maintain it is derived by movement (Benmamoun 1993, 2000, Fassi Fehri 1993, Aoun,

Benmamoun, and Sportiche 1994, Ouhalla 1994, Doron 1996, Ouhalla 1997, Doron and Heycock 1999, Musabhien 2008).[12]

The same sort of debate about the nature of preverbal DPs is also found in other languages. For example, Uribe-Etxebarria (1992) argues that Spanish preverbal DPs occupy an A'-position, while Goodall (2002) argues that preverbal DPs in Spanish occupy an A-position.

I argue in this chapter that the preverbal DP in JA occupies an A-position and derived by A-movement. In particular, I show that the preverbal subject originates in a position internal to vP and then is raised to Spec-TP via A-movement.

2 Literature Review

2.1 Preverbal DPs in SA

2.1.1 Analysis of Preverbal DPs as left-dislocated elements

The preverbal DP in SA sentences such as (1) has been treated differently in the literature.

1. atˤ-tˤulaab-u qaabal-uu al-mudarrisat-a. (SA)
   the-students-nom met-3mp the-teacher-acc
   'The students met the teacher.'

According to traditional Arabic grammar (Hassan 1961), the preverbal DP in (1) is a topic, and the structure that follows is treated as a full sentence with its own subject, normally the agreement clitic shown on the verb; this whole sentence functions as the comment.

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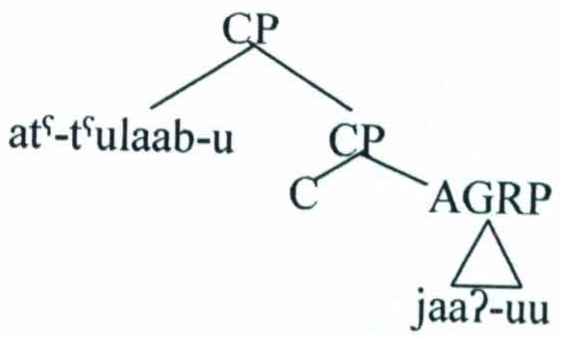
[12] Arguing for a multiple subject analysis for Arabic and Hebrew, Doron and Heycock (1999) distinguish between two types of subjects: A "broad" subject that is base-generated in a Spec-TP position and a "narrow" subject which is derived by movement to a lower Spec-TP. This issue is discussed on page 21.

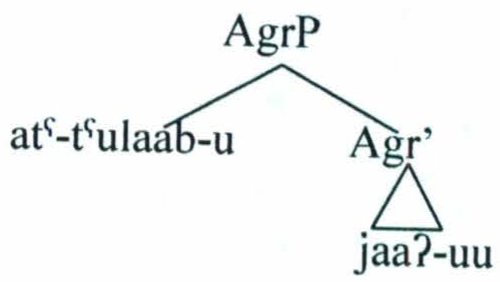
Plunkett (1993) analyzes the preverbal DP in (1) as a topic that is base-generated in the Spec-TP position. According to Plunkett, the preverbal DP is associated with a covert resumptive pronoun, an option attributed to the fact that Arabic is a pro-drop language (Plunkett 1993:241).

According to Fassi Fehri (1993), the categorization of preverbal DPs into subjects or topics is based on the criterion of definiteness. Accordingly, definite preverbal DPs such as in (1) can have two interpretations: as left-dislocated elements, in which case they occupy a position external to IP (see 2a), or as real subjects in which case they occupy the Spec-IP position (or Spec-Agr) (2b) (Fassi Fehri 1993:28). However, if the preverbal DP is indefinite (3), it is treated as a typical subject derived by movement from Spec-VP (Fassi-Fehri 1993:31).

2. a.



b.



3. baqarat-un takalam-at. (SA)
cow-nom.indef spoke.3fs
"A cow has spoken." (Fassi-Fehri 1993:28)

Platzack (2003:341) points out that visible preverbal subjects in null-subject languages such as Italian and SA must be generated in an A'-position. Arguing that the agreement shown on the verb in these languages is a pronominal affix, he points out that

generating preverbal DPs in an A-position results in a violation of Binding Principle B, as the agreement clitic, being a pronominal, would not be locally free. Platzack extends the idea that preverbal subjects occupy an A'-position to postverbal subjects. He suggests that the postverbal subject in languages such as SA is also generated in a topic position adjoined to the Spec-vP in the sense of Belletti (1998). Given that the pronominal agreement affix occupies the Spec-vP, this will ensure that no Principle C violation takes place.

Soltan (2006, 2008) argues that the preverbal DP in SA is base-generated in the Spec-TP position which he considers an A'-position. According to this proposal, the preverbal DP is interpreted as coreferential with a pro occupying the Spec-*v*P position, as illustrated in (4), and it satisfies the EPP feature on T. In contrast, in case of VS orders, the Spec-*v*P position will be filled by a lexical DP; T in this case lacks the EPP feature, as shown in (5).

4. SV: [TP DP T+[v+V][vP *pro t v* [VP t_V …]]]]

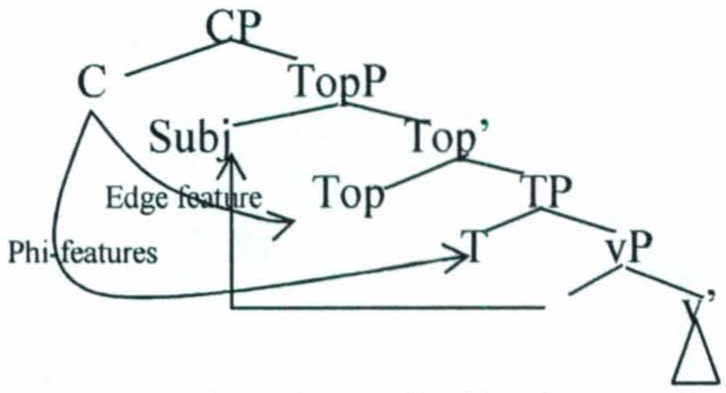
5. VS: [TP T+[v+V][vP *DP t v* [VP t_V …]]]]

In essence, this proposal is similar to Plunkett's (1993) discussed above. Both Soltan and Plunkett argue that the preverbal DP in examples such as (1) are base-generated in the Spec-TP, which they consider an A'-position. The only difference I see here is one of terminology, in which the preverbal DP is referred to as a topic in Plunkett's analysis, but as subject in Soltan's. Furthermore, both Plunkett and Soltan assume that the preverbal DP is associated with a null element inside the VP.

Musabhien (2008) argues that preverbal DPs of the type in (1) are topics. However, unlike the base-generation argument (Plunkett 1993, Soltan 2006, 2008),

Musabhien proposes that the preverbal DP in (1) is directly raised from the Spec-vP to Spec-TopP position. According to Musabhien, the head C does not transfer all of the formal features down to the T head. While it transfers all phi-features to T which thus agrees with the subject in its postverbal position, the edge feature is assumed to be inherited by the head of the TopP, which triggers the direct movement of the subject from Spec-vP to the Spec-TopP (6) (Musabhien 2008:206).

6.



Musabhien suggests that the topicalization analysis comes with further merits. It provides the requisite configuration for the complementizer to assign accusative case to the preverbal subject. In other words, since complementizers in SA assign accusative case to the preverbal subject, as shown in (7), the direct raising of the subject to the Spec-TopP, as illustrated in (6) above, will provide a local configuration for the complementizer to assign accusative case to the subject.

7. ʔinna atˤ-tˤulaab-a qaabal-uu al-mudarrisat-a. (SA)
comp the-students-acc met-3mp the-teacher-acc
'Indeed, the students met the teacher.'

He claims that the C head in SA has a Lexical Case feature that is not transferred to lower projections. Therefore, the topicalization process enables C to discharge the untransferred Case feature. Since the topicalized DP is a copy of the preverbal subject and has an unvalued Case feature, it is an active goal and thus can be probed by C and assigned the Lexical Case (Musabhien 2008:206-07).

In section 3, I provide evidence in favor of an A-analysis of the preverbal DP in JA. In particular, I show that the preverbal DP occupies the Spec-TP position and is derived by A-movement.

2.1.2 Analysis of Preverbal DPs as subjects

Proponents of the subjecthood of the preverbal DP in (1), repeated below in (8), (Mohammad 1990, 2000, Benmamoun 1993, 2000, Fassi Fehri 1993, Ouhalla 1994, Bolotin 1995, Doron 1996, Doron and Heycock 1999) follow the standard assumption that the preverbal DP is derived by movement from a lower position (Spec-VP or Spec-vP) to a higher position (Spec-AGRP or Spec-TP).

Ouhalla (1994, 1997) diagnoses the category of preverbal DPs based on the presence of overt pronouns. According to Ouhalla (1997:47), preverbal DPs that are not associated with an overt resumptive pronoun (8) are treated as subjects derived by A-movement to the Spec-TP position, while those which are linked with an overt resumptive pronoun (9) are treated as typical left-dislocated phrases (Ouhalla 1994:47).

8. atˤ-tˤulaab-u qaabal-uu al-mudarris-at-a. (SA)
the-students-nom met-3mp the-teacher-f-acc
'The students met the teacher.'

9. al-mudarris-at-u qaabal-uu-ha atˤ-tˤulaab-u. (SA)
the-teacher-f-nom met-3mp-her the-students-nom
'The students met the teacher.'

Doron and Heycock (1999) argue that preverbal DPs in Hebrew and SA are real subjects occupying Spec-TP positions. According to Doron and Heycock, the preverbal DP in (8) above is a subject occupying a lower Spec-TP position. They dub this type of subjects "narrow" subjects. However, Doron and Heycock argue that the preverbal DPs of

the type in (9), which have been traditionally treated in the literature of SA as a typical left-dislocated structure (Hassan 1961, Plunkett 1993, Fassi Fehri 1993, Ouhalla 1997, among others), are also subjects. They identify these types of subjects as "broad" subjects that occupy a higher Spec-TP position.

According to Doron and Heycock, one major distinction between "narrow" subjects (8) and "broad" subjects (9) lies in the way they are derived. The former is derived via A-movement, while the latter is derived by base-generation in a higher Spec-TP position. When both "broad" and "narrow" subjects cooccur (10a), each occupies a separate layer of a multiple Spec-TP structure. The derivation involves first the movement of the "narrow" subject to the lower Spec-TP position followed by the base-generation of the "broad" subject in the higher layer. Doron and Heycock (1999:79) point out that this order is obligatory, as evidenced from the contrast between (10a) and (10b).[13]

10. a. al-mudarris-at-u at$^{\varsigma}$-t$^{\varsigma}$ulaab-u qaabal-uu-ha. (SA)
the-teacher-f-nom the-students-nom met-3mp-her
'The teacher, the students met her.'

b. *at$^{\varsigma}$-t$^{\varsigma}$ulaab-u al-mudarris-at-u qaabal-uu-ha. (SA)
the-students-nom the-teacher-f-nom met-3mp-her

In JA, when two DPs cooccur in preverbal position, they must be related to each other through a possessive relationship, as illustrated in (11-12).

11. ana axuu-i iʃtara sayyaarah. (JA)
I brother-my bought.3ms car
'I, my brother bought a car.'

12. is-sayyaarah baab-ha xarbaan. (JA)
the-car door-her broken
'The car, its door is broken.'

---

[13] Sentences with structures similar to (10b) are reported to be grammatical in Soltan (2008:78).

As shown in (11-12), the sentence-initial DP is connected with the following DP through a possessive relationship. If such a relationship is not available between the two DPs, the cooccurrence of the two DPs sounds unacceptable in JA, as illustrated below:

13. *li-mʕallim-ih utˁ-tˁullaab ʃaaf-uu-ha. (JA)
the-teacher-f the-students saw.3mp-her
'The teacher, the students saw her.'

An acceptable version of (13) would be one where the initial DP is separated from the rest of the sentence by a comma intonation (14).

14. li-mʕallm-ih, utˁ-tˁullaab ʃaaf-uu-ha. (JA)
the-teacher-f the-students saw.3mp-her
'As for the teacher, the students saw her.'

To summarize, the preverbal subject in SA (1) has been analyzed as a topic (Hassan 1961, Plunkett 1993, Fassi Fehri 1993 (if the DP is definite), Platzack 2003, Soltan 2006, 2008, Musabhien 2008) or as a subject (Mohammad 1990, Benmamoun 1993, 2000, Fassi Fehri 1993 (if the DP is indefinite), Ouhalla 1994, Bolotin 1995, Doron 1996, Doron and Heycock 1999). Some argue that the preverbal DP is derived by base-generation (Plunkett 1993, Soltan 2006, 2008), while others maintain it is derived by movement (Benmamoun 1993, 2000, Fassi Fehri 1993, Aoun, Benmamoun, and Sportiche 1994, Ouhalla 1994, Doron 1996, Ouhalla 1997, Doron and Heycock 1999, Musabhien 2008).

In this study, I will be mainly concerned with accounting for the structure of JA preverbal DPs in (15) (equivalent of the SA data in (8)). In line with Doron and Heycock's (1999) proposal for SA, I argue that this DP is the subject of the sentence generated by A-movement. As for the status of the JA sentence-initial DPs in (14), I

assume that they are typical left-dislocated structures, following proposals for SA (Hassan 1961, Fassi Fehri 1993, Ouhalla 1997, among others).

15. utˤ-tˤullaab ʃaaf-u li-mʕallim-ih. (JA)
the-students saw-3ms the-teacher-f
'The students saw the teacher.'

2.2 Preverbal subjects and definiteness

In SA, the preverbal DP can either be definite (16), or a specific indefinite (17), but it cannot be a non-specific indefinite (18) (Fassi Fehri 1993:28-29).

16. al-ʔawlaad-u jaaʔ-uu. (SA)
the-boys-nom came-3mp
'The boys came.' (Fassi Fehri 1993:27)

17. baqarat-un takallam-at. (SA)
cow-nom spoke-3fs
'A cow has spoken.' (Fassi Fehri 1993:28)

18. *walad-un zaara l-mariidˤ-a. (SA)
boy-nom visited.3ms the-patient-acc
'A boy visited the patient.'

The definiteness properties of the subject in SA are normally referred to in any discussion of subject position in this language. As discussed in section 2.1.1 above, according to Fassi Fehri (1993), whether the preverbal DP is considered a subject or a topic is determined by its definiteness properties. Accordingly, indefinite preverbal DPs are subjects, while definite preverbal DPs can be either subjects or topics. In Soltan (2006, 2008), the fact that non-specific indefinites are disallowed in preverbal position in SA is taken as evidence supporting the fact that preverbal DPs have topics-like properties and thus occupy a left-dislocated position. However, according to traditional Arabic grammarians, non-specific indefinites can function as topics in certain contexts (Hassan

1961:485-86). According to Hassan, there are eleven positions where indefinites can function as topics in SA. One of these positions is when the indefinite has the sense of exaggeration. For example, the indefinite DP *balaaʔ* 'disaster' in (19) is treated as the topic of the sentence because it is used for exaggerating the outcomes of a war.

19. balaaʔ-un fi-l-ħarb-i. (SA)
disaster-nom in-the-war-gen
'A disaster is in the war.' (Hassan 1961:486)

This suggests that determining what position the preverbal DP occupies based on definiteness is not well-grounded.

Like SA, preverbal DPs in JA can be definite (20) or specific indefinite (21), but they cannot be non-specific (22).[14]

20. lu-wlaad ʔij-u. (JA)
the-boys came-3mp
'The boys came.'

21. bass bint maa ʔij-at. (JA)
only girl neg came-3fs
'Only a girl didn't come.'

22. *sayyaarah marr-at. (JA)
car passed.by-3fs
'A car passed by.'

However, a non-specific indefinite DP can be used if it is preceded by the expletive element *fii*, as illustrated in (23).[15]

---

[14] Musabhien (2008:156) points out that non-specific indefinites are allowed in preverbal position in JA. My informants did not accept the non-specific reading of a preverbal indefinite. This may be due to dialectal variation. However, a preverbal non-specific indefinite is allowed if it is used in the context of contrastive focus, as in:
(1) walad ʔija. (miʃ bint)
boy came.3sm (not girl)
'It is a boy who came (not a girl).'

[15] The expletive *fii* must also be used with non-specific indefinites DP in verbless clauses, as shown in (1).
(1) fii walad b-il-beit.

23. fii sayyaarah marr-at.
there car passed.by-3fs
'There is a car passed by.'

One may think about the structure in (23) as simply a verbless sentence where the verb *marrat* 'passed.by' belongs to a relative clause with a null head that modifies the indefinite DP *sayyaarah* 'car' in the same sense as in the following English example:

24. There is a car (that) passed by.

Whether this is the correct analysis of these structures remains to be confirmed. What may strengthen the relative clause analysis is that it is possible for a definite DP to follow the expletive element *fii*, in which case it is modified by a relative clause with an overt head, as shown in (25).

25. fii il-sayyaarah illi Ali iʃtaraa-ha insarg-at.
there the-car that Ali bought-her stolen-3fs
'There is the car that Ali bought (it) was stolen.'

Unlike in main clauses, non-specific preverbal DPs are allowed in JA embedded clauses. For example, the indefinite preverbal DP *bint* 'girl' in (26) and *furtˤi* 'policeman' in (27) can have a specific or non-specific reading. [16]

26. raħ ʔanbasˤitˤ ʔiða bint bitfuuz b-is-sibaag.
will feel.happy.1s if girl win.3fs in-the-race
'I will feel happy if a girl wins the race.'

27. Ali gaal ʔinn-uh ʃurtˤi saaʕad-hum.
Ali said.3sm that-dft. policeman helped.3ms-them
'Ali said that a policeman helped them.'

---

there boy in-the-house
'There is a boy in the house.'

[16] Non-specific indefinites in embedded clauses are also allowed Palestinian Arabic, a variety close to JA (Mohammad 2000:28).

As discussed in section 3.2.3.2 of chapter 3, the fact that indefinite DPs are allowed in embedded clauses proves to be useful in identifying the relationship between the clitic and the embedded subject.

2.3 Subject verb agreement asymmetries in Arabic

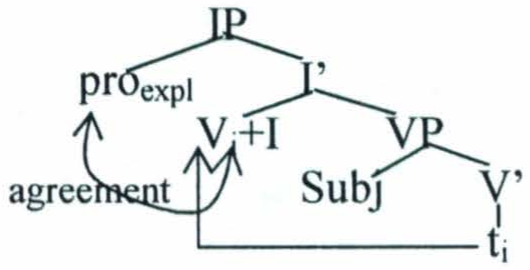
A well-known fact about SA is that agreement between the subject and the verb varies according to word order. SV orders involve full agreement between the verb and the subject (28a), while VS orders show partial agreement (only in person and gender) (28b).

28. a. al-banaat-u daras-na. (SA)
the-girls-nom studied-3fp
'The girls studied.'

b. daras-at al-banaat-u. (SA)
studied-3fs the-girls-nom
'The girls studied.'

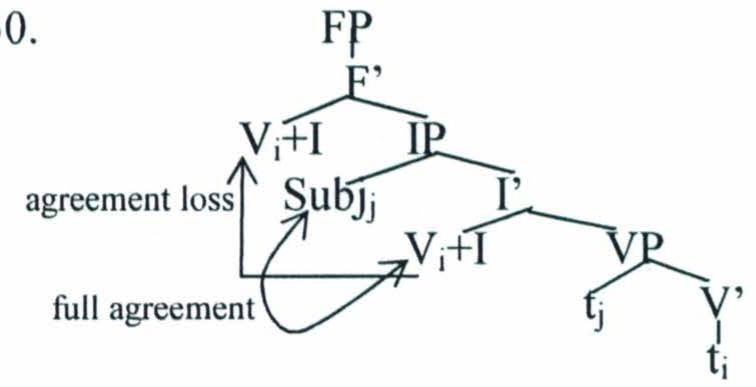
Several accounts have been suggested in the literature for this phenomenon. For example, according to Mohammad (1990, 2000), the verb in VS order does not agree with the postverbal lexical subject, rather it agrees with a null-expletive pro that occupies the Spec-IP position, as illustrated in (29).

29.



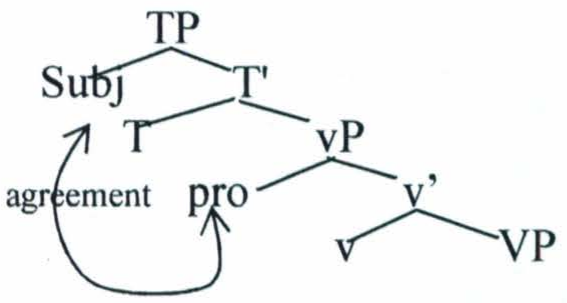
Aoun, Benmamoun, and Sportiche (1994) argue that full agreement in SV orders is established in a Spec-head relation between the verb and the subject, but part of the agreement relation is lost by a further movement of the verb to a functional head, accounting for why partial agreement appears in VS orders (30).

30.



In Soltan's (2006, 2008) analysis, full agreement in SV orders is obtained through the relationship between the verb and a pro occupying the Spec-v*P coreferential with the preverbal DP; the preverbal DP is base-generated in the Spec-TP position which he considers an A'-position, as illustrated in (31).

31.



On the other hand, partial agreement in VS orders is assumed to be a result of a default agreement morpheme on T.

Unlike SA, full agreement in JA is obtained in both SV (32a) and VS (32b) orders; partial agreement is not allowed (32c).

32. a. lu-wlaad ʔij-u. (JA)
the-boys came-3mp
'The boys came.'

b. ʔij-u lu-wlaad. (JA)
came-3mp the-boys
'The boys came.'

c.*ʔij-a lu-wlaad. (JA)
came-3ms the-boys
'The boys came.'

Similar facts are also attested in other spoken varieties of Arabic, such as Moroccan Arabic (Benmamoun 2000:27):

33. a. lə-wlad kla-w. (Moroccan Arabic)
the-boys ate-3pm
'The boys ate.'

b. kla-w lə-wlad. (Moroccan Arabic)
ate-3pm the-boys
'The boys ate.'

c.*kla-a lə-wlad. (Moroccan Arabic)
ate-3sm the-boys
'The boys ate.'

3 Evidence for an A-analysis of the preverbal DP in JA

In this section, I provide evidence that topics and preverbal subjects in JA occupy distinct positions.

According to Rizzi (1997:290), bare quantifiers cannot function as topics, as evidenced by the ungrammaticality of the Italian construction in (34). The same effect is attested in JA, as illustrated in (35-36).

34. * Tutto, lo ho fatto.
everything, I did it (Rizzi 1997:290)

35. *kul-ʃi, ana iʃtareɪt-uh. (JA)
every-thing, I bought.1ms-it

36. *wala waaħad, Ali ʃaaf-uh. (JA)
no one, Ali saw.3ms-him

However, bare quantifiers are fully grammatical as preverbal subjects (37-38).

37. kul waaħad ʔaxað jaaʔizih.
every one took.3ms prize
'Everyone received a prize.'

38. wala waaħad ʃaaf Ali.
no one saw Ali

'No one saw Ali.'

The contrast between (35-36), on the one hand, and (37-38), on the other, indicates that the position occupied by the quantifiers is a distinct position in each of the structures.

The second argument supporting the claim that preverbal subjects occupying an A-position comes from wh-movement facts. In JA, a wh-word must follow the topic and cannot occur before it, as illustrated in the contrast between (39a) and (39b).

39. a. haað li-ktaab, min weın iʃtareıt-uh.
this the-book, from where bought.2s-him
'This book, from where did you buy it,'

b.*min weın haað li-ktaab, iʃtareıt-uh.
from where this the-book bought.2s-him

However, both short and long-distance wh-movement across a preverbal DP are acceptable, as shown (40) and (41), respectively.

40. ʃuu Ali iʃtara?
what Ali bought.3ms
'What did Ali buy?'

41. ʃuu Mohammad gaal ʔinn-uh Ali iʃtara?
what Mohammad said.3ms that Ali bought.3ms
'What did Mohammad say that Ali buy?'

The third argument in support of a subject A-position comes from examining the status of focal subjects. De Cat (2005:1207) argues that in French, when the subject XP is not coindexed with a subject clitic, the XP in question occupies the Spec-TP position, and thus it has the structure in (42a). However, when the subject XP in French is coindexed with a subject clitic, it will have the structure in (42b), where the XP occupies a left-dislocated position and the subject clitic fills in the Spec-TP position.

42. a. $[_{CP}\ldots \quad [_{TP}\, XP_i \quad [_{T'}\, clitic_i\text{+}T\ldots]]]$
b. $[_{CP}\, XP_i \ldots [_{TP}\, clitic_i\, [_{T'}\, \ldots]]]$

De Cat supports her argument by focus tests. She argues that only the XP in (42a) can be subject to focus interpretation. Testing native speakers' judgments, she shows that most speakers accepted the focus reading in (43a), where the subject is not coindexed with a subject clitic, rather than in (43b), where the subject is coindexed with a subject clitic. In other words, only the XP in the subject position was available for focus interpretation.

43. Context: La voiture bleue est foutue.
'The blue car's knackered.'
Focus: a. Non, la voiture ROUGE est foutue. ←
no the car red is knackered
'No, the RED car's knackered.'

b. Non, la voiture ROUGE elle est foutue.
no the car red she is knackered
'No, the RED car's knackered.'

By analogy with French, I assume that if the preverbal DP can undergo a focus interpretation, it implies that the subject occupies the Spec-TP position. This prediction is borne out, as the subject in JA can have a focus interpretation, as illustrated in (44).

44. IL-BINT ribħ-at il-jaaʔizih (miʃ il-walad). (JA)
the-girl won-3mf the-prize (not the boy)
'It is the girl who won the prize (not the boy).'

Thus, if the subject in (44) were in a topic position, it is expected not to have a focus interpretation, contrary to fact.[17]

To summarize, I have shown in this section that the position occupied by the preverbal DP in JA is distinct from the position normally occupied by A'-constituents. I

[17] It could be possible that the subject in (44) has moved from the Spec-TP position to a Spec-focus position in which case, unlike French, a coindexed pronoun will be invisible because Arabic is a pro drop language. However, according to Ouhalla (1999), focus in spoken varieties such as Moroccan Arabic is interpreted in-situ and thus is not reflected by an overt movement in the syntax.

take this position to be an A-position, namely the canonical Spec-TP subject position.[18] In the next section, I provide evidence for a movement-based derivation for the preverbal DP.

4 Evidence of A-movement analysis of preverbal DPs

In the previous section, I established that the preverbal DP in JA does not occupy a topic position. In this section, I provide evidence that the preverbal DP in structures such as (45) is the result of A-movement. This is based on scope ambiguity tests in two types of constructions: scope readings inside and outside negation (section 4.1) and reconstruction of preverbal quantifiers (section 4.2).

45. il-walad iʃtara sayyaarah. (JA)
the-boy bought.3ms car
'The boy bought a car.'

4.1 Scope inside and outside negation

Evidence in support of the A-movement analysis of preverbal DPs comes from scope ambiguity tests involving negation. Consider the following example:

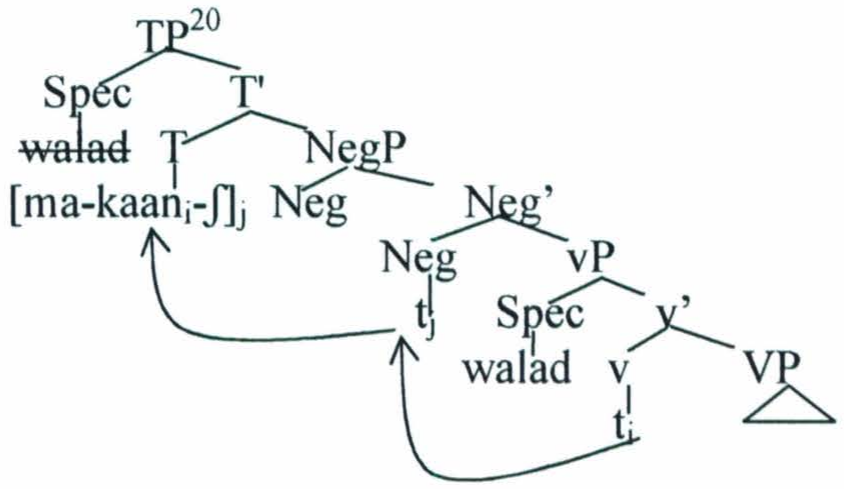
46. maa kaan-ʃ walad biħki maʕ Ali.
neg was-neg boy speaking.3ms with Ali
i. 'It is not the case that any boy was speaking with Ali.'
ii. 'A (particular) boy was not speaking with Ali.'

Assuming that the sentential negation projection is located between TP and VP (Benmamoun 2000:70), at the LF the indefinite DP *walad* in (46) can have scope either inside negation (47a) or outside negation (b47b). When the scope is inside, the phrase is

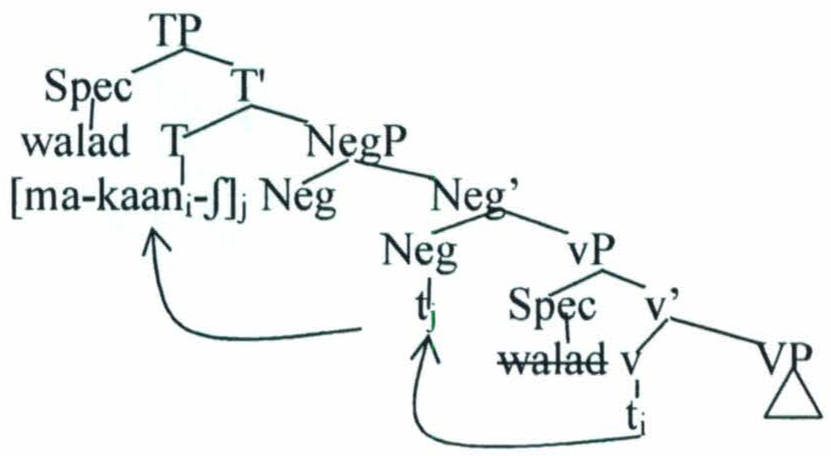
[18] For lack of free movement of the object, it sounds that A'-scrambling is not part of the JA syntax.

interpreted as 'it is not the case that any boy was speaking with Ali', whereas when it is outside, the interpretation is 'a (particular) boy was not speaking with Ali'.[19]

47. a.



b.



When the existential expletive element *fii* is inserted (48), the sentence is no longer ambiguous. The only possible reading in this case is the one inside the scope of negation.

48. maa kaan-ʃ fii walad biħki maʕ Ali.
neg was-neg there boy speaking-3ms with Ali
i. 'It is not the case that any boy was speaking with Ali.'
ii. *'A (particular) boy was not speaking with Ali.'

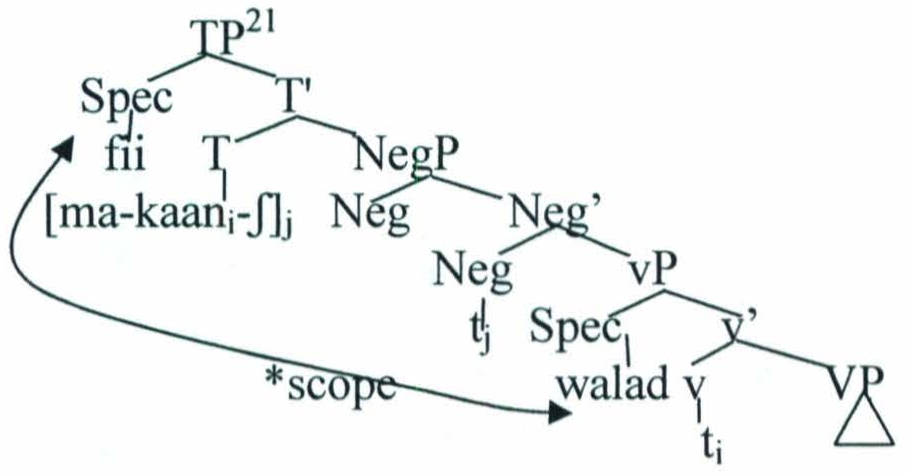
This can be accounted for by the claim that the expletive element *fii* occupies the Spec-TP position, which prevents the indefinite DP from scoping outside negation (49).

---

[19] A quantifier phrase can also have a wide or narrow scope over negation, as illustrated in the following example:
a. maa ħakaa-ʃ kul walad maʕ Ali.
neg spoke.3ms-neg every boy with Ali
i. 'Not every boy spoke with Ali.'
ii. 'Every boy didn't speak with Ali.'

[20] The structure of negation shown in (47) is based on Benmamoun (2000:81), where he argues that the verb moves first to the neg head, where the negation elements *maa* and *ʃ* merge with the verb, and then the verb moves to T.

49.



4.2 Quantifier scope

Further evidence in support of an A-movement analysis of the subject comes from quantifier raising (May 1985). Consider the following example:

50. kul waaħad mumkin yiʃtari sayyaarah.[22] (JA)
every one may buy.3sm car
i. 'Everyone is permitted to buy a car.'
ii. 'It is possible that everyone buys a car.'

The preverbal quantifier *kul waaħad* 'every one' in (50) can have an ambiguous scope. It can be construed outside the scope of the modal, where we get the permission reading, or inside the scope of the modal, where we get the possibility reading. The reconstruction reading of the quantifier *kul waaħad* inside the scope of the modal indicates that a copy remains downstairs in Spec-vP position before a raising process moved it to Spec-TP.

---

[21] Notice that this tree diagram does not correspond to the actual word order of the example in (48) where the auxiliary *kaan* along with the negative particles *maa* and *ʃ* appears in front of the existential expletive *fii*. The fact that the auxiliary *kaan* can appear before the preverbal DP which I argue that it occupies the Spec-TP position may be a result of a T-to-C movement.

[22] The example in (50) can have another version where the modal is followed by a CP headed by the complementizer *ʔin*. In this case, the clitic attached to the complementizer must corefer with the quantifier, as illustrated in the following examples:

1. kul waaħad mumkin ʔinn-uh yiʃtari sayyaarah. (JA)
every one may that-him buy.3ms car
'Everyone may buy a car.'
2. kul waħdih mumkin ʔinn-ha tiʃtari sayyaarah. (JA)
every one.f may that-her buy.3fs car
'Everyone may buy a car.'

The overt realization of the complementizer in these two examples does not affect the ambiguity readings of the examples.

However, when the quantifier does not raise to Spec-TP (51), it is predicted that only one reading is possible (inside the scope of the modal); this prediction is borne out, as the sentence is no longer ambiguous.

51. mumkin kul waaħad yiʃtari sayyaarah. (JA)
may every one buy.3sm car
'It is possible that everyone buys a car.'

4.2.1 Scope ambiguity tests in other varieties of Arabic

The A-movement analysis can also be supported from scope ambiguity tests in other spoken varieties of Arabic. For example, in Assiri Arabic, the preverbal quantifier can have ambiguous scope over the modal (52).

52. kul waaħid mumkin yiʃtri sayyaarah. (Assiri Arabic)
every one may buy.3sm car
i. 'Everyone is permitted to buy a car.'
ii. 'It is possible that everyone buys a car.'

Scope tests suggest an A-movement analysis of preverbal DPs for SA, as well. According to Doron and Heycock (1999:83), the preverbal DPs in the SA example in (53) has different scope readings relative to the quantifiers inside the VP. The fact that the preverbal DP in (53) can have two possible scope interpretations relative to the quantifier inside the VP indicates that the preverbal DP has moved from within the VP to the Spec-TP position.

53. fataat-un tˁawiilat-un raqasat maʕ kull-i sˁabiyy-in. (SA)
gril-nom tall-nom danced.3sf with every-gen boy-gen
'A tall girl danced with every boy.' (ambiguous scope)

The A-movement analysis of the preverbal subject in SA, as well as in other Arabic dialects, suggests a reexamination of the following SA data:

54. a. man dˤaraba Zayd-un? (SA)
who hit.3sm Zayd-nom
'Who did Zayd hit?'

b. *man Zayd-un dˤaraba?
who Zayd-nom hit.3sm
'Who did Zayd hit?'

According to Plunkett (1993), and Soltan (2006, 2008) the ungrammaticality of (54b) is due to a minimality effect whereby the wh-word has crossed an intervening A'-position occupied by the base-generated preverbal DP. However, the findings based on JA requires a different account of these examples. While providing an alternative account for these data is beyond the scope of my thesis, I speculate here on two possible accounts. The first account entails wh-movement in SA root questions triggering T-to-C movement. According to this hypothesis, the ungrammaticality of (54b) is due to the failure of T to move to C. Note that long-distance wh-movement across an embedded preverbal DP is acceptable in SA (Plunkett 1993:245), as seen in (55).

55. maaða yaʕtaqid-u yuusuf-u anna atˤ-tˤullaab-a yadrus-uuna *t*? (SA)
what think-3ms Youssef-nom that the-students-acc study-3mp *t*
'What does Yousef think that the students are studying?

However, T-to-C movement in SA is rejected in the literature on the grounds that the VSO order can occur following a complementizer (Plunkett 1993:244), as illustrated in structures such as (56), and can be separated from the complementizer by a number of inflectional constituents (including modality and negation) (Fassi Fehri 1993:26), as shown in (57).

56. uriid-u an yalʕab-a atˤ-tˤullaab-u. (SA)
want-1s that play-subjn the-students-nom
'I want the students to play.'

57. zaʕama ʔan qad laa yaʔtii Zayd-un. (SA)
pretended.3ms that may not come.3ms Zayd-nom
'He pretended that Zayd may not come.' (Fassi Fehri 1993:26)

The other possible account would be to assume, following Goodall's (2002) proposal for similar effects in Spanish, that the T head, in addition to the EPP feature, may have a quantifier feature that is checked by an intermediate movement of the wh-word to Spec-TP before it is further attracted by the landing site of the wh-phrase. Checking the quantifier feature by the intermediate movement of the wh-word will block the movement of the postverbal DP to the preverbal position. Evidence for the idea that the Spec-TP can host elements other than the subject comes from the fact that locative structures in SA can occupy the subject position in zero-copula clauses, as shown below:

58. fi-l-bayt-i sayyarat-un.
in-the-house-gen car-nom
'There is a car at the house.'

To sum up, arguing for an A-position for the preverbal DP in JA, a proposal that can be drawn to SA examples in (54a), I suggest an alternative analysis to the ungrammaticality of the SA structure in (54b). This could be due to a failure of T-to-C movement, if SA proves to have this type of movement. The other alternative would be to suggest that, following Goodall's (2002) proposal, the T head, in addition to the EPP feature, may have a quantifier feature that is checked by an intermediate movement of the wh-word to Spec-TP before it resides in its final destination. This issue is recommended for further research.

5 Summary

In this chapter, I have argued that the preverbal subject in JA occupies an A-position. This proposal is supported by the fact that quantifier phrases can occupy the preverbal position in JA. As well, short and long wh-movement is shown to be permissible over a preverbal subject in JA.

I have also shown that scope ambiguity tests support a movement analysis of the preverbal subject. The preverbal subject is shown to have scope inside or outside negation. Similar results are also obtained from quantifier scope with the modal *mumkin* 'may', where the preverbal quantifier *kul waaħad* 'everyone' can reconstruct below the modal.

In the next chapter, I discuss the structure of preverbal subject(s) in embedded clauses.

CHAPTER THREE: Embedded Subjects in JA

1 Introduction

In the previous chapter, I established that the preverbal DP in JA is a subject and generated by A-movement. In this chapter, I examine the preverbal position in embedded structures. In particular, I investigate the argument status of the preverbal lexical subject and its syntactic relationship with the subject clitic that cooccurs with it.

Unlike in root-type clauses, the embedded subject position in JA has a complex pattern where more than one element seems to fill this position. Three patterns are possible. In one, the subject of the embedded clause appears to be a pronominal clitic attached to the complementizer. This pronoun agrees with the embedded verb and must be realized in the accusative form, as illustrated in (1).

1. Ali gaal ʔin-ha ʔij-at.
   Ali said.3ms that-her came-3fs
   'Ali said that she came.'

The second possible pattern occurs when the agreeing clitic cooccurs with a coreferential lexical DP, as seen in (2).

2. Ali gaal ʔin-ha il-bint ʔij-at.
   Ali said.3ms that-her the-girl came-3fs
   'Ali said that she came.'

The third possibility occurs when the lexical subject cooccurs with the non-agreeing clitic form *–uh* (the default clitic) (3a). The default clitic *–uh* is homophonous with the third person masculine singular pronominal clitic *–uh* 'him'.[23] When the default clitic is used,

[23] The 'default' form *–uh* is glossed as *dft.*, while the referential form will be glossed as 'him'.

the realization of a lexical subject becomes obligatory, as illustrated in the contrast between (3a) and (3b).

3. a. Ali gaal ʔinn-uh il-bint ʔij-at.
Ali said.3ms that-dft. the-girl came-3fs
'Ali said that the girl came.'

b. *Ali gaal ʔinn-uh ʔij-at.
Ali said.3ms that-dft. came-3fs
'Ali said that she came.'

In summary, there are three possible ways to fill in the preverbal embedded subject position in JA: an agreeing pronominal clitic (1), an agreeing clitic 'doubled' by a coreferential lexical DP (2), and a default clitic with an obligatory lexical DP (3). What this pattern reveals is that the subject clitic must be attached to the complementizer even when a lexical subject is present, as shown in the contrast in (4).

4. a. Ali gaal ʔin-ha/uh il-bint ʔij-at.
Ali said.3ms that-her/dft. the-girl came-3fs
'Ali said that the girl came.'

b. *Ali gaal ʔin il-bint ʔij-at.[24]
Ali said.3ms that the-girl came-3fs
'Ali said that the girl came.'

This 'fine' structure in the embedded subject space described here has not been fully or adequately examined in JA or in any variety of Arabic. In this chapter, I provide an account for the derivation of lexical subjects and subject clitics in embedded clauses in JA. My account is based on Branigan's (2010) provocative syntax model.

Some aspects of the embedded subject, however, have been discussed elsewhere in the literature for other varieties of Arabic (e.g., Standard Arabic (SA)). In the next

[24] The equivalent structure to this example is completely grammatical in other varieties of Arabic such as Egyptian Arabic (Buell 2009), Assiri Arabic and Standard Arabic.

section, I review these studies and show how these proposals fail to account for the pattern attested in JA. I will also review proposals made about similar structures in Italian.

2 Literature review

2.1 The Expletive Hypothesis:

Mohammad (1990, 2000) examines the issue of asymmetry of agreement in SA.[25] According to Mohammad, that the verb is realized in the third person masculine singular form in SA VS orders (5) is because the verb agrees with a null expletive pronoun that occupies the Spec-TP position, as illustrated in (6). This proposal has been consistently referred to in the literature as the "Expletive Hypothesis" (Fassi Fehri 1993).

5. ʝaaʔa al-ʔwalad-u. (SA)
   came.3ms the-boys-nom
   'The boys came.'

6. [IP pro_{exp} V_i+I [VP Subj t_i …]]

Mohammad (2000) supports his Expletive Hypothesis by the agreement behavior found in structures that require an expletive subject, such as raising verbs. According to Mohammad, the verb *ʝaaʔa* 'came' in (5) behaves like the raising verb *yabduu* 'seem' in (7), where the verb must be realized in the third person masculine singular form even with the presence of a preverbal lexical subject.

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[25] While the proposal made by Mohammad (1990, 2000) is reviewed in detail in the previous chapter, I provide an overview here because it is highly relevant to the issue I am discussing in this chapter.

7. al-banaat-u pro_{exp} yabduu ʔanna-hunna ðahab-na. (SA)
the-girls-nom seem.3ms that-them.f left-3fp
'They girls seem to have left.'

Thus, for Mohammad, the reason why the verb is realized in the third person masculine singular form in VS orders is because the verb in these structures agrees with a null expletive subject. The default clitic that appears on the complementizer when a raising structure is embedded is a lexicalization of that null expletive subject, as illustrated in (8), (Mohammad 2000:98-99).

8. qaala Aliyy-un ʔanna-hu yabduu ʔanna … (SA)
said.3ms Ali-nom that-dft. seem.3ms that ...
'Ali said that it seems that …'

Mohammad could be right about the verb in raising structures agreeing with a null expletive subject,[26] as is the case in many languages (see the English example in (9)), but the idea that the verb agrees with an expletive subject in other types of structures has been undermined in the literature by facts from both SA and Spoken Arabic dialects.

9. It seems that he is right.

One of the main arguments against the Expletive Hypothesis is based on the fact that when the postverbal subject in SA is a pronoun, the verb shows full agreement with the pronoun, and not with the assumed expletive subject (Bahloul and Harbert 1992), as illustrated in (10).

10. ji?-na hunna wa ʔaabaaʔ-u-hunna. (SA)
came-3fp they.f and fathers-nom-their.f
"They and their fathers came."

[26] I will return to this question in section 3.2.4.1.

As shown in (10), the verb *ji?-na* 'came' does not agree with a third person masculine singular pronoun, rather it shows full agreement with the postverbal pronoun *hunna* 'they (f)'.

As Mohammad (2000:24) himself points out, the most serious challenge to the Expletive Hypothesis comes from observations found in the spoken varieties of Arabic discussed in Aoun, Benmamoun, and Sportiche (1994). In spoken varieties of Arabic such as Lebanese Arabic (LA), when the postverbal subject is a coordinate conjunction, the verb has the option to agree either with the first conjunct (11) or with the whole coordinate conjunction (12). In other words, agreeing with a null expletive subject does not turn out to be an option.

11. raaħ Kariim w-Marwaan. (LA)
left.3ms Kariim and-Marwaan
'Kareem and Marwaan left.' (Aoun, Benmamoun, and Sportiche 1994:207)

12. raaħu ʕumar w-ʕali. (LA)
left.3mp Omar and-Ali
'Omar and Ali left.' (Aoun, Benmamoun, and Sportiche 1994:208)

In embedded structures, the null expletive hypothesis can be undermined by the same sort of reasoning. Aoun, Benmamoun, and Sportiche (1994:202) point out that the default clitic *–o* in LA can cooccur with a lexical subject in which case the verb shows full agreement with the latter, as shown in (13).[27]

13. fakkar ʔinn-o 1-baneet raaħ-o. (LA)
thought.3ms that-dft. the-girls left-3p
'He thought that the girls left.' (Aoun, Benmamoun, and Sportiche (1994: 202)

[27] For more detail about the argument against the null expletive hypothesis (Mohammad 1990, 2000), the reader is referred to Fassi Fehri (1993), Aoun, Benmamoun and Sportiche (1994) and Soltan (2006, 2008).

The same observation is also found in JA. As shown in (14), although the default clitic cooccurs with the lexical subject, the verb continues to agree with the lexical subject, not with the default clitic.

14. Ali gaal ʔinn-uh il-bint ʔij-at. (JA)
Ali said.3ms that-dft. the-girl came-3fs
'Ali said that the girl came.'

Thus, as shown in (14), if the default clitic attached to the complementizer was originally generated in the Spec-TP position, one would expect the verb to agree with it, contrary to fact.

To summarize, according to Mohammad's Expletive Hypothesis, the Spec-TP position in VS orders and in structures that take an expletive subject is occupied by a null expletive subject which is characterized as a third person masculine singular. The verb in these structures establishes an agreement relationship with the expletive subject rather than with the postverbal lexical subject, and the null expletive subject is lexicalized as a clitic on the complementizer in embedded constructions. However, this hypothesis is refuted by several facts. When the postverbal subject (in root and embedded clauses) in SA is a pronoun, the verb shows full agreement with the postverbal pronoun, not with an expletive subject. In embedded clauses in spoken varieties such as LA (13) and JA (14), the default clitic cooccurs with the lexical subject, but the verb continues to agree with the lexical subject.

2.2 Subject clitics and clitic 'doubling'

In addition to embedded structures, the cooccurrence of a subject clitic with a lexical subject is found with the Palestinian Arabic (PA) verb *bidd* 'want' (Mohammad 2000), as seen in (15).

15. bidd-hen le-wlaad yruuħu. (PA)
    want-them.m the-boys go.3mp.subjn
    'The boys want to go.' (Mohammad 2000:130)

As noted in Mohammad (2000:130), the verb *bidd* 'want' in (15) requires a subject clitic and allows for the cooccurrence of a lexical subject. This verb also exists in JA and behaves in the same manner, as illustrated in (16).

16. bidd-ha il-bint tiʃrab. (JA)
    want-her the-girl drink.3fs.subjn
    'The girl wants to drink.'

Mohammad (2000:132) concludes that the cooccurrence of the subject clitic and the lexical subject in structures such as (15) does not constitute a clitic 'doubling' structure, and that the subject clitic is either an expletive pronoun or a form of agreement. This conclusion is based on two facts. The first is based on the idea that the subject clitic must not be a fully referential pronoun because it will otherwise trigger Principle C violations. In other words, if the subject clitic in examples such as (15) and (16) were a true referential pronoun, one would expect the cooccurrence of the subject clitic to trigger Principle C effects, contrary to facts.

This argument, however, can be undermined by two facts. First, if clitic doubling triggers Principle C violations, the phenomenon of clitic 'doubling' should not be allowed in natural languages, contrary to fact. The cooccurrence of subject clitics and lexical

subjects is a well-established phenomenon attested in many languages, such as French and Italian. For example, the cooccurrence of the subject clitic and a tonic pronoun in the Fiorentino example in (17) does not trigger Principle C violations. Similarly, the cooccurrence of a lexical object and an object clitic is also possible, as illustrated in the Spanish data in (18).

17. **La Maria la** parla. (Fiorentino Italian)
the Mario she (clitic) speaks
'Mary speaks.' (Brandi and Cordin 1989:113)

18. Juan **lo** leyó **el libro**. (Spanish)
Juan acc.3ms read the book
'Juan read the book.' (Belloro 2008:6)

The other fact that weakens Mohammad's argument comes from the data he cites in support of the claim that subject clitics are not referential pronouns. According to Mohammad (2000:131), structures such as (19)-(20) where the pronoun is followed by a coreferential DP are ungrammatical due to principle C violations. In other words, the clitics in (19)-(20) are considered referential and thus the cooccurrence of the pronoun *–u* 'his' with the lexical DP *Ahmad* in (19) is due to violations of Principle C. Similarly, (20) is considered ungrammatical because the pronoun *–ha* 'its', a referential pronominal clitic, cooccurs with the lexical DP *s-sayyaara* 'the car'. By contrast, the clitic 'doubling' structures in (15)-(16) are considered grammatical because the clitics in these constructions are not referential and thus no Principle C violations are triggered.

19. *beṯ̣ebb ʔemm-u ʔeḥmad. (PA)
love.3fs mother-his Ahmad
'His$_i$ mother loves Ahmad$_i$.' (Mohammad 2000:131)

20. *muftaaḥ-ha be-s-sayyaara. (PA)
key-its in-the-car
'Its$_i$ key is in the car$_i$.' (Mohammad 2000:131)

In fact, Mohammad bases his assumptions about Principle C violations in (19)-(20) on a non-standard approach, namely the h-command relation. There does not seem to be a Principle C violation in (19)-(20) simply because these pronouns do not c-command the lexical DP. The contrast between (19)-(20), on the one hand, and (15)-(16), on the other, cannot be explained in terms of Principle C violations.[28]

The second argument offered by Mohammad in support of his conclusion that subject clitics are either expletives or forms of agreement is based on the contrast between (21), on the one hand, and (22)-(23), on the other hand.

21. baħebb-u le-ħmad. (PA)
love.1ms-him to-Ahmad
'I love Ahmad.' (Mohammad 2000:131)

22. gult ʔen-ha (*la)-xadiije ʔaj-at. (PA)
said.1ms that-her to-Khadije came-3fs
'I said that Khadije arrived.' (Mohammad 2000:132)

23. bidd-hen (*la) le-wlaad yruuħu. (PA)
want-them to-the-boys go.3mp.subjn
'The boys want to go.' (Mohammad 2000:132)

According to Mohammad (1997), as cited in Mohammad (2000:131), clitic 'doubling' with the object clitic in (21) is allowed because the object clitic occupies a thematic position, while clitic doubling with the subject clitic in (22)-(23) is prohibited because the clitic is expletive and thus non-thematic. In fact, testing the permissibility of clitic 'doubling' by the insertion of the preposition *la* 'to' with the subject in (22)-(23) will result in ungrammaticality for independent reasons. Given Kayne's Generalization (Jaeggli 1982) that a lexical NP can be doubled by a clitic only if this NP is preceded by a

[28] The ungrammaticality of (19)-(20) could be due to a violation of a different constraint in the language, an issue that is beyond the scope of this discussion.

case assigner (the preposition), the ungrammaticality of the structures in (22)-(23) is unsurprising simply because there already exists a case assigner in that position, namely the T head which is responsible for assigning the nominative case to the subject. This is evident from the fact that when the lexical subject cooccurring with the clitic is a pronoun, it is realized in the nominative case, as illustrated in (24).

24. Ali gaal ʔinn-ha hii ʔij-at.
Ali said.3ms that-her she came-3fs
'Ali said that she came.'

Thus, Mohammad's conclusion that the lexical subject cooccurring with the subject clitic is not a clitic 'doubling' construction lacks force using Kayne's generalization in a wrong context. Therefore, his data is more easily explained by the unacceptability of imposing a case assigner (the preposition) in a position where a case assigner already exists.

To summarize thus far, I have gone through the two arguments provided by Mohammad (2000) in support of his conclusion that subject clitics are expletives or agreement markers. The first argument is related to the referential status of subject clitics and how this contributes to Principle C violation. On this view, lexical subjects can cooccur with subject clitics because the clitics are not referential. This, in turn, accounts for the fact that Principle C violations are not found in this context. However, I have shown that this analysis predicts that clitic 'doubling' should not be allowed in natural language, contrary to fact. I also pointed out that Mohammad grounded his view of Principle C violations on a non-standard approach, namely h-command. The second argument was that the cooccurrence between the subject clitic and the lexical subject should not be considered a clitic-doubling phenomenon. However, I have shown that this argument is misled by the use of Kayne's Generalization in an inappropriate context.

Inserting a preposition adjacent to the lexical subject will automatically result in ungrammaticality because there already exists a Case assigner in that position.

2.3 Clitics in SA

Letourneau (1993) offers a Government-and-Binding account of the derivation of the subject clitic in SA examples in (25). He argues that the subject clitic in these structures is first generated as a free morpheme in the subject position heading an NP, and then is moved up to incorporate into the complementizer.

25. qaala ʔinna-haa jaaʔat. (SA)
said.3ms that-her came.3ms
'He said that she came.'

This analysis might work for SA, which does not allow for the cooccurrence of a clitic with a preverbal lexical subject, as evident from the ungrammaticality of structures such as in (26), but it raises questions about equivalent structures in varieties such as JA where the clitic can cooccur with a preverbal lexical subject, as shown in (27).

26. *Ali-un gaala ʔanna-uh/ha il-bint-u jaaʔ-at. (SA)
Ali-nom said.3ms that-dft./ha the-girl-nom came-3fs
'Ali said that the girl came.'

27. Ali gaal ʔinn-uh/ha il-bint ʔij-at. (JA)
Ali said.3ms that-dft./her the-girl came-3fs
'Ali said that the girl came.'

Letourneau's analysis builds heavily on the idea that the clitic has moved from the Spec-TP position to adjoin to C, but this may not be the case for JA, given that the Spec-TP position in structures such as (27) is occupied by the preverbal DP (which I argue to be the lexical subject derived by A-movement (see section 3.1.2 below). Thus, Letourneau's analysis raises questions about the 'source' of the subject clitics in

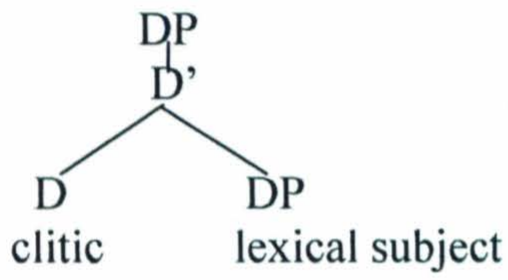
embedded clauses in such varieties. Based on data from JA, I argue that a movement-based analysis for the clitics entails that the movement operation applies from a clause 'external' source, rather than from a clause 'internal' source. This issue is discussed in detail in section 3.2.3 below.

2.4 Analysis of subject clitics in Romance

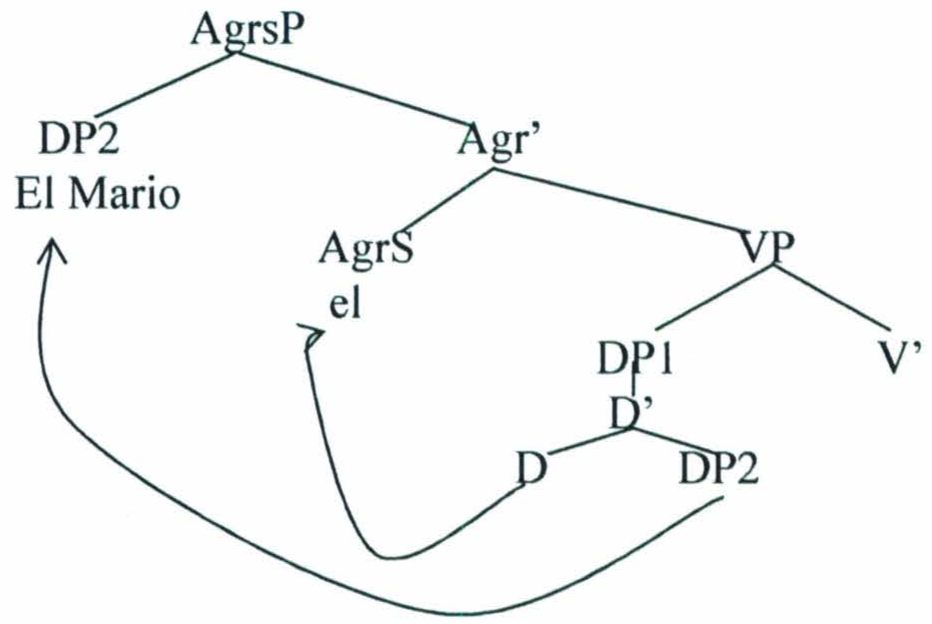
Belletti (1999) examines subject clitic 'doubling' in Northern Italian dialects. As shown in the Trentino data in (28), the lexical subject cooccurs with a clitic that fully agrees with the subject. Belletti accounts for this structure by adopting a movement-based approach. She proposes that the subject clitic is generated as the head of a DP, while the 'doubled' lexical DP occupies the complement position of the DP, as shown in (29). This DP is assumed to be first generated in the Spec-VP position. Then, both the clitic and the 'doubled' lexical DP move within the AgrS position. The clitic head-moves to occupy the AgrS position, while the 'doubled' lexical DP moves to the Spec-AgrS position. The derivation of the whole structure is sketched out in (30) (Belletti 1999:556).

28. La Maria la parla. (Trentino Italian)
    El Mario el
    'The M. she/he (clitic) speaks (Belletti 1999:556)

29.



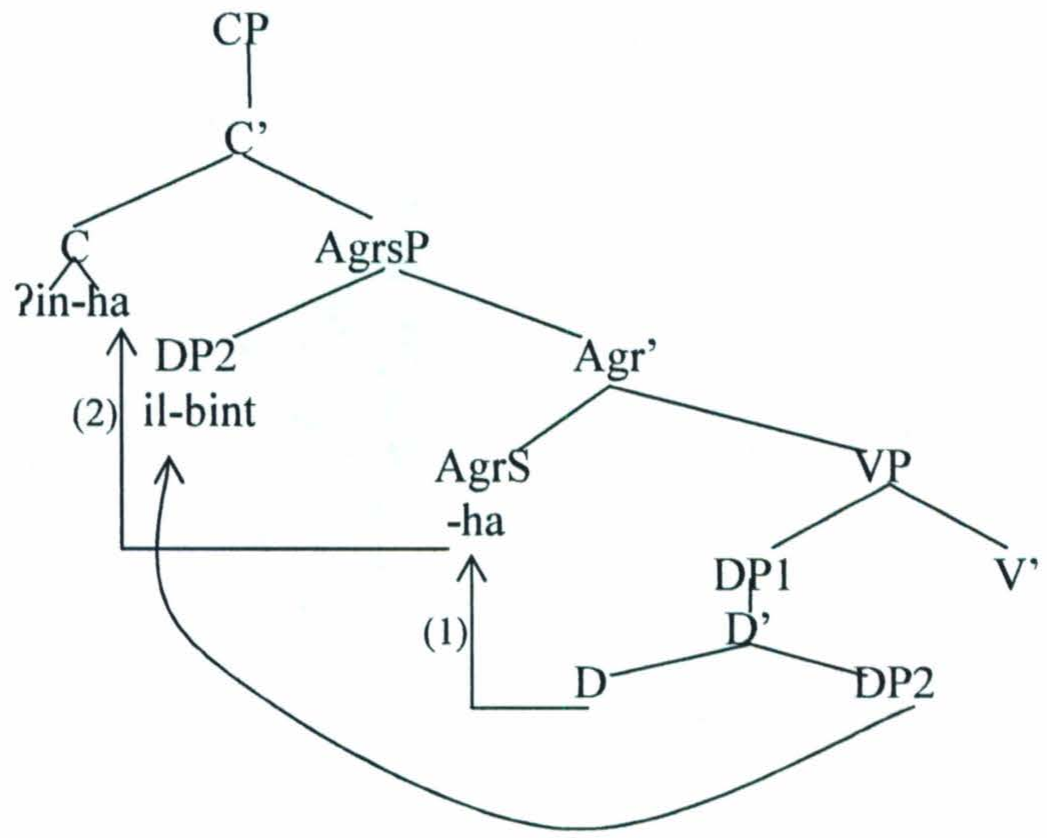
30.



Given this proposal, one would assume that the derivation of the JA clitic 'doubling' structure in (31) involves an extra step where the subject clitic head moves to adjoin to C, as illustrated in (32).

31. Ali gaal ʔin-ha il-bint ʔij-at.
Ali said.3ms that-her the-girl came-3fs
'Ali said that she came.'

32.



While there is compelling evidence in support of an A-movement of the lexical subject from a lower position (section 3.1.2), I will show that head movement of the clitic from a lower position is not well-motivated. In the case that a head intervenes (e.g, a Foc-

head), we find that the (proposed) additional step of raising the clitic from a lower position to C is not blocked. In addition, Belletti's proposal seems to imply that the agreement relation between the clitic and the 'doubled' lexical DP comes from the head-complement configuration sketched in (29). In other words, the head (clitic) will be responsible for the checking or the valuation of the formal features of the 'doubled' lexical DP which occupies the complement position. However, as for the agreement relation manifested between the clitic and the 'doubled' lexical DP in the JA in (31), I show that such a relation between the clitic and the 'doubled' lexical DP does not actually hold (within the same configuration suggested by Belletti in (29)). Specifically, when the preverbal lexical subject is indefinite, the clitic realized on the complementizer does not agree with it. In other words, the only possibility for a clitic to show on the complementizer in this case is the default one. This issue is discussed in section 3.2.3.2.

De Crousaz and Shlonsky (2003) examine the distribution of the subject clitic [i] in a Franco-Provençal dialect. In this dialect, the subject clitic [i] optionally cooccurs with the lexical subject DP in root clauses, as seen in (33) (De Crousaz and Shlonsky 2003:415).

33. Me (i) medzo dou fre.
    I (SCL) eat.1s part cheese
    'I am eating the cheese.'

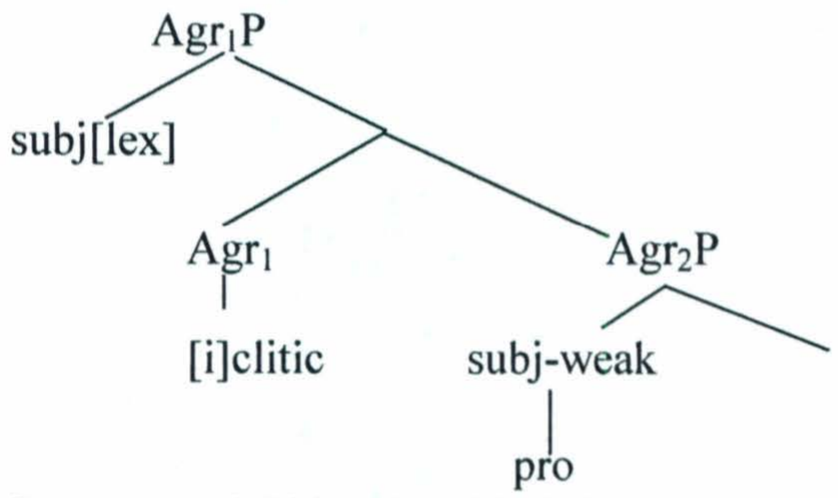
In embedded contexts, however, the subject clitic [i] is entirely banned, as illustrated in

(34) (De Crousaz and Shlonsky 2003:431).

34. Mè moujo ke (*i) travayè la demindze.
    I-refl think that (SCL) works the Sunday
    'I think that she/he works on Sundays.'

De Crousaz and Shlonsky assume that the underlying structure of the subject position in this dialect is along the lines proposed in Cardinaletti (1994, 1997) where a multiple Spec-TP position is said to exist in the clause. According to this proposal, weak pronoun subjects (including pro) occupy a different position than do lexical subjects. A pro, whether referential or expletive, is assumed to occupy the Spec-Agr_2 position, while the lexical subjects appear in the Spec-Agr_1. Given this proposal, the subject position in this dialect is situated along the lines of the structure in (35) (De Crousaz and Shlonsky 2003:420). It should be noted here that as in Belletti (1999) (reviewed above), the subject clitic occupies the head position of Agr.

35.



De Crousaz and Shlonsky (2003:420-421) account for the pattern in root-type clauses, where the realization of the pro is optional, as follows: whenever the clitic [i] is overtly realized, it functions as the licenser of the pro in the Spec-Agr_2 position. However, when the clitic is absent, the pro is moved from its canonical position in the Spec-AgrP to the Spec-Top position in the C domain giving rise to what is called a topic-drop process.

However, in embedded contexts where the [i] is entirely banned and pro movement does not seem to be a well-motivated analysis, De Crousaz and Shlonsky (2003:432-33) argue that the job of licensing pro is taken over by C. In particular, they

assume that an overt C is endowed with the ability to license pro. Thus, since pro is licensed by C, the realization of the clitic [i] becomes redundant.

As discussed above, De Crousaz and Shlonsky assume that pro in the Franco-Provençal dialect can be licensed by two mechanisms: by the clitic in root clauses and by an overt C in embedded clauses (as long as this process is not blocked by the presence of a head (e.g., Adv) between C and the pro, in which case licensing of pro will be the job of the clitic).

In JA root clauses, where no subject clitics are allowed, I assume that pro is licensed by the strong T. As seen in (36), pro is licensed in the absence of any clitics.

36. *pro* ʔij-at.
came-3fs
'She came.'

What is of particular interest in De Crousaz and Shlonsky's proposal is the prediction that an overt C can be endowed with some formal capacities, such as the ability to license pro. In this chapter, I argue that C in JA bears a provocative feature, and I show that C also has the ability to license pro in embedded clauses, following De Crousaz and Shlonsky (2003). The issue of pro licensing in embedded structures is discussed in section 3.2.3.3.

De Cat (2005) argues that the presence of a subject clitic in French interacts with the information structure of the sentence. In particular, she contends that the presence of the subject clitic signals that the coreferential XP occupies an A'-position, while the absence of the clitic indicates that the XP occupies an A-position.

Since subject clitics in JA are obligatorily required, it is hard to test this hypothesis in JA. In fact, I provide evidence in section 3.1.1 that the lexical DP cooccurring with the clitic occupies an A-position in JA.

I have reviewed the relevant literature of subject clitics in Arabic and Romance. In the next section, I provide an analysis of the embedded subjects in JA.

3 Embedded subjects

3.1 Lexical subjects

3.1.1 A-status of the preverbal embedded subject

In chapter 2, I established that the preverbal subject in root clauses occupies an A-position. In this section, I provide three arguments in support of the A-status of the preverbal embedded subject.

The first argument is grounded on the presence of quantified DP's in preverbal position. As noted by Rizzi (1997), a quantified DP cannot be left-dislocated. Since quantified DPs can occupy the preverbal position in embedded clauses, as seen in (37), it follows that this position is an A-position.

37. a. Ali gaal ʔinn-uh kul waaħad iʃtara sayyaarah.
Ali said.3ms that-dft. every one.m bought-3ms car
'Ali said that every one bought a car.'

b. Ali gaal ʔinn-uh wala waaħad nijiħ b-l-imtiħaan.
Ali said.3ms that-dft. no one succeeded in-the-exam
'Ali said that no one succeeded in the exam.'

The second supporting piece of evidence comes from Focus tests (De Cat 2005:1207). If the preverbal DP allows for a focus reading, it indicates that this DP is not

left-dislocated, and thus it occupies the canonical subject position. However, if the preverbal DP does not allow for a focus interpretation, this implies that it occupies a dislocated position. Using this test, I found that the preverbal lexical DP can undergo a focus reading, which indicates that it does not occupy an A'-position, as illustrated in the following built-up dialogue:

38. A: Ali gaal ʔinn-uh il-walad ribħ il-jaaʔizih.
Ali said.3ms that-dft. the-boy won.3ms. the-prize
'Ali said that the boy won the prize.'

B: laʔ, Ali gaal ʔinn-uh IL-BINT ribħ-at il-jaaʔizih (miʃ il-walad).
no, Ali said.3ms that-dft. the-girl won-3mf the-prize (not the boy)
'No, Ali said that it is the girl who won the prize (not the boy).'

The third argument in support of the A-status of the preverbal embedded DP comes from long-distance wh-movement facts. Wh-movement across an embedded preverbal subject is grammatical (39), while wh-movement across an embedded topic is not (40).

39. ʃuu fakkart-u ʔinn-uh Ali iʃtara?
what thought-2fp that-dft. Ali bought.3ms
'What did you think that Ali bought?'

40. *la-miin fakkart-u ʔinn-uh il-jaaʔiz-ih ʔaʕtˁ-aa-ha?
to-who thought-2fp that-dft. the-prize gave-3ms-her
'To who did you think that the prize, he gave (it)?'

The contrast between (39) and (40) indicates that the embedded subject (39) occupies a different position that the embedded subject in (40). The ungrammaticality of the latter can be explained by minimality effects where wh-movement is blocked by an intervening A'-position (Rizzi 1997).

In this section, I have shown that the position occupied by the preverbal DP is an A-position. In the next section, I discuss the derivation of the preverbal embedded subject.

3.1.2 Derivation of the embedded lexical subject

In this section, I examine whether the preverbal lexical subject is derived by base-generation or by movement. I argue that the preverbal embedded subject is derived by A-movement.

The same sort of facts attested with preverbal subjects in root clauses (chapter 2) also apply to embedded clauses. Two scope reading tests show that the embedded subject is derived by A-movement from a lower position (Spec-vP) to a higher position (Spec-TP). The scope of negation test in (41) indicates that the embedded DP *walad* 'boy' can be ambiguously interpreted as being either inside or outside the scope of negation.

41. Ahmad gaal [ʔinn-uh maa kaan-ʃ walad biħki maʕ Ali]. (JA)
Ahmad said.3sm that neg was-neg boy speaking.3ms with Ali
i. 'Ahmad said that it is not the case that any boy was speaking with Ali'
ii. 'Ahmad said that a particular boy was not speaking with Ali.'

The embedded preverbal quantifier in (42) can have an ambiguous scope. It can be construed outside the scope of the modal, where we get the permission reading, or inside the scope of the modal, where we get the possibility reading.

42. Ali gaal [ʔinn-uh kul waaħad mumkin yiʃtari sayyaarah.] (JA)
Ali said.3sm that-dft. every one.m may buy.3ms car
'Ali said that every one may buy a car.' (ambiguous scope)

All of these reconstruction effects indicate that a trace (a copy) of the preverbal subject is left downstairs in Spec-vP position before being raised to Spec-TP. As

discussed in section 3.1.3 below, I assume this movement is triggered by a strong EPP feature on the T head.

3.1.3 Word order

In chapter 2, I established that JA allows for free word order in root clauses. In embedded clauses, however, I find some variation concerning subject inversion. While all speakers fully accept the SV order (43a), their judgments about subject inversion in (43b) seem to vary. Some fully accept it while others report degraded acceptability.

43. a. Ali gaal ʔinn-uh il-bint ʔij-at. (JA)
Ali said.3ms that-dft. the-girl came-3fs
'Ali said that the girl came.'

b. Ali gaal ʔinn-uh ʔij-at il-bint. (JA)
Ali said.3ms that-dft. came-3fs the-girl
'Ali said that the girl came.'

This variation with respect to speaker judgments on word order in JA is consistent with the literature on other varieties of Arabic where cross-dialectal variation is found. Kenstowicz (1989) reports that while Bani-Hassan Arabic allows for free word order in the embedded structures,[29] Levantine dialects only allow for SV order. Aoun, Benmamoun, and Sportiche (1994), on the other hand, report that VS order is grammatical in LA. The clitic in this case must be the default. This issue is explored more fully below.

However, speaker judgments pertaining to the VS order point to the existence of restrictions on the type of clitic that is attached to C. Although VS order is sometimes acceptable when the clitic attached to C is the default (44a), the VS order is

[29] Bani-Hassan dialect is a Bedouin variety spoken in Jordan.

ungrammatical when the clitic attached to the complementizer agrees with the postverbal subject (44b).

44. a. ʔAli gaal ʔinn-uh ʔij-at il-bint. (JA)
Ali said.3ms that-dft. came-3fs the-girl
'Ali said that the girl came.'

b. *Ali gaal ʔinn-ha ʔij-at il-bint. (JA)
Ali said.3ms that-her came-3fs the-girl
'Ali said that the girl came.'

The data in (44) raise two questions: the first question is related to why VS order is less preferred by some speakers, and the second pertains to the contrast between (44a) and (44b) where the default clitic is preferred over the agreeing clitic. With respect to the first question, on the variation in word order, I offer the following solution: following Chomsky (1995, 2000), I assume that SV order is triggered by an EPP feature on T, while VS order is due to a lack of the EPP feature. Evidence that the preverbal lexical subject is generated by A-movement is provided in section 3.1.2 below.

As for the second question, which addresses the issue of why the default clitic is preferred over the agreeing clitic, I show that the ungrammaticality of this structure is related to the mechanisms of the *provocative* feature which I argue that C in JA is endowed with. This issue is discussed in section 3.2.3.2.

3.2 Embedded subject clitics

3.2.1 Position occupied by subject clitics

In this section I discuss possible positions in which the complementizer subject clitic might originate.

One possible location is Spec-TP. Letourneou (1993:266) argues that the subject clitic in the SA example in (45) originates as a free morpheme in Spec-TP and then incorporates into the complementizer through head movement, as illustrated in (46).

45. qaala ʔinna-haa ɟaaʔat. (SA)
said.3ms that-her came.3ms
'He said that she came.'

46. qaala [CP[C ʔinna-haa$_i$] [IP t_i [I' I AGR [VP ɟaaʔat]]]]

This analysis seems to predict that the cooccurrence of the clitic and a lexical subject should be impossible in SA. This prediction is borne out as evidenced by the ungrammaticality of structures such as the one in (47).

47. *qaala ʔinna-haa/hu al-bint-u jaaʔat. (SA)
said.3SM that-her/dft. the-girl-nom came.3SM
'He said that she came.'

However, such an analysis is not compatible with the JA data where a subject clitic and lexical subject can cooccur (48).

48. Ali gaal ʔin-ha/uh il-bint ʔij-at. (JA)
Ali said.3ms that-her/dft. the-girl came-3fs
'Ali said that she came.'

Given that the embedded lexical subject occupies the Spec-TP position (see section 3.1.1), the hypothesis that the subject clitic originates in the Spec-TP position becomes untenable.

Another possibility would be to assume the subject clitic originates as a functional head responsible for checking the agreement features of the lexical subject (Rizzi 1986, Brandi and Cordin 1989, De Crousaz and Shlonsky 2003). This proposal, however, is challenged by the way the agreement relation holds between the clitic and the lexical subject. This issue is discussed in detail in the next section.

3.2.2 Agreement properties of subject clitics

One influential view of the agreement relation holding between subject clitics and their 'doubled' lexical subjects has been that subject clitics are the lexicalization of the functional head Agr, which is assumed to be responsible for checking the formal features of the lexical subject (Rizzi 1986, Brandi and Cordin 1989, De Crousaz and Shlonsky 2003). In this section, I provide evidence that undermines this view as an option for clitic 'doubling' in the embedded subject position in JA. This finding leaves the question about the 'source' of the subject clitics unanswered. An answer to this question is provided in section 3.2.3.

Unlike in Northern Italian dialects where the lexical subject and the clitic must agree in phi-features (Brandi and Cordin 1989, De Crousaz and Shlonsky 2003), the agreement relation between the subject clitic and the embedded lexical subject exhibits some partially constrained variation. When the embedded subject is definite and in preverbal position, the subject clitic attached to the complementizer may agree with the lexical subject (49a), or it may not agree, in which case the default clitic appears (49b).

49. a. Ali gaal ʔinn-ha il-bint ʔij-at.
Ali said.3ms that-her the-girl came-3fs
'Ali said that the girl came.'

b. Ali gaal ʔinn-uh il-bint ʔij-at.
Ali said.3ms that-dft. the-girl came-3fs
'Ali said that the girl came.'

As seen in (49), the clitic that cooccurs with the lexical subject can be the default or an agreeing clitic. However, when the preverbal embedded subject is indefinite, no

agreement is shown between the clitic and the preverbal lexical subject, and the default clitic is the only option. This is illustrated by the contrast between (50a) and (50b).

50. a. *Ali gaal ʔin-hum wlaad marr-u min hon. (JA)
Ali said.3ms that-them boys passed.by-3mp from here
'Ali said that boys have passed by from here.'

b. Ali gaal ʔinn-uh wlaad marr-u min hon. (JA)
Ali said.3ms that-dft. boys passed.by-3mp from here
'Ali said that boys have passed by from here.'

If agreement between the subject clitic and the lexical subject was mediated through a head-goal relationship, we would expect the clitic to have the option of agreeing with the indefinite lexical subject in the same way it does when the preverbal subject is definite, contrary to fact. As shown in (49), the subject clitic can either agree with the preverbal definite subject (49a), or not agree, in which case the default clitic is realized (49b). However, when the preverbal subject is indefinite, the clitic does not have the option of agreeing with the preverbal subject; the default clitic becomes the only option, as seen in (50). Thus, if such a functional head (one that is responsible for checking the phi-features of the lexical subject) was to exist, we would expect it to check the features of the indefinite subject as well. This expectation is not realized by the data.[30]

In addition, the idea that the subject clitic is a lexicalization of a functional head poses theoretical problems when it comes to the issue of how this head adjoins to C. On the assumption that such a head has adjoined to C through head movement, we would expect this movement to be subject to the Head Movement Constraint (Travis 1984), an assumption that is not borne out. Assuming that the fronted adverb *imbaariħ* 'yesterday'

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[30] Martha McGinnis suggests that the reason why indefinite subjects trigger the default clitic may indicate that the other clitics are specified as definite, or that only definite nominals are DPs, and only DPs trigger agreement.

in (51) occupies the Spec-position of a Focus head projection, head movement of the clitic to C from a lower position should be blocked by that head, in line with the Head Movement Constraint (Travis 1984), contrary to fact.

51. Ali gaal ʔin-uh imbaariħ il-bint ʔij-at. (JA)
Ali said.3ms that-deft YESTERDAY the-girl came-3fs
'Ali said that she came.'

Thus, if the clitic was adjoined to C through head movement from a lower position, we would expect this movement to be blocked in the presence of an intervening head, which is not the case.

What is more interesting about intervention effects occurs when we consider the up-down agreement relation between the clitic and the preverbal lexical subject. The presence of a topic element between C and the lexical subject appears to disrupt the agreement relation between the clitic and the lexical subject. When the topic *is-sayyaarah* 'the car' intervenes between C and the lexical subject, the clitic does not agree with the subject (the pro) and thus the default clitic is realized. As shown in the contrast between (52a) and (52b), when the topic phrase intervenes, the clitic does not agree with the null subject, and the only option is to have the default clitic. An agreement relation between the clitic and the topic is not a good alternative, either, as seen in (52c). In other words, the presence of the topic seems to disrupt the locality relation between the clitic and the lexical subject.

52. a. Ali gaal ʔin-uh is-sayyaarah Ø biʕnaa-ha. (JA)
Ali said.3ms that-dft. the-car sold.1p-3fs
'Ali said that as for the car, we sold it.'

b. *Ali gaal ʔinn-na is-sayyaarah Ø biʕnaa-ha. (JA)
Ali said.3ms that-us the-car sold.3ms-3fs
'Ali said that as for the car, we sold it.'

c. *Ali gaal ʔinn-ha is-sayyaarah Ø biʕnaa-ha. (JA)
Ali said.3ms that-3fs the-car sold.3ms-3fs
'Ali said that as for the car, we sold it.'

The contrast between (52a) and (52b) might suggest that the Agr head is base-generated in a higher position rather than in a lower position from where it moves up and adjoins to C. However, the question now raised is why should such a head exist? The straightforward answer would be that it is responsible for the agreement relation with the lexical subject. However, I have shown above the agreement relation between the clitic and the lexical subject is challenged by the way agreement works with the definite properties of the preverbal lexical subject (i.e., full agreement cannot be obtained when the lexical subject is indefinite).

In addition, if the clitic were to be considered an Agr head responsible for checking the formal features of the lexical subject, one would expect this head to be able to check the features of the lexical subject in both postverbal and preverbal position because there is no phase boundary that would block checking features, a prediction that is not borne out. As shown in the contrast between (53a) and (53b), when the lexical subject is in postverbal position, the complementizer clitic must be the default, in which case, it does not agree with the lexical subject.

53. a. ʔAli gaal ʔinn-uh ʔij-at il-bint.
Ali said.3ms that-dft. came-3fs the-girl
'Ali said that the girl came.'

b. *Ali gaal ʔinn-ha ʔij-at il-bint.
Ali said.3ms that-dft. came-3fs the-girl
'Ali said that the girl came.'

3.2.3 Derivation of subject clitics

In this section, I provide an account of the derivation of embedded subject clitics. This is based on the provocation model reviewed in chapter 1. The derivation of agreeing clitics is discussed in section 3.2.3.1, and the derivation of the default clitic is discussed in section 3.2.3.2.

3.2.3.1 Derivation of agreeing clitics

I propose that the JA declarative complementizer *ʔin* is endowed with a provocative feature (+P). Therefore, the declarative C imposes the creation of an external copy of its goal projection. Like in the case of the German interrogative C in (42), where the external copy need not be identical to the original goal copy, I assume that the copy of the goal projection of the JA declarative C need not be identical with the original copy. This must reflect a parameter setting specific to languages such as JA.[31] The question to be raised at this point is what is the 'shape' of the non-identical external copy? Following Elbourne's (2001) NP-deletion theory, I take the shape of an external copy of a DP projection to be a pronoun with a deleted NP.[32] Accordingly, the shape of the external copy of a DP projection such as *il-bint* 'the girl' in (54) is along the lines of (55). It should be noticed here that the phi-features in this copy are realized on D.

54. $[_{DP}[_{D}$ il$]$ $[_{NP}$ bint$]]$

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[31] The option of a non-identical external copy will be further supported when considering data from other varieties of Arabic, such as LA. This issue is further elaborated in section 3.2.3.4.

[32] Elbourne (2001) argues that pronouns are definite articles followed by a phonologically null NP (NP-deletion theory). According to Elbourne, the pronoun *it* in the classic donkey sentence in (1) below is the head of a DP with a null NP, as schematized in (2).

1. Every man who owns a donkey beats it.
2. $[_{DP}[_{D}$ it$]$ $_{NP}$ ~~donkey~~$]$

55. [$_{DP}$[$_{D}$ –ha] [$_{NP}$ ~~bint~~]]

The following table summarizes the possibilitys of an external copy of the subject in JA:

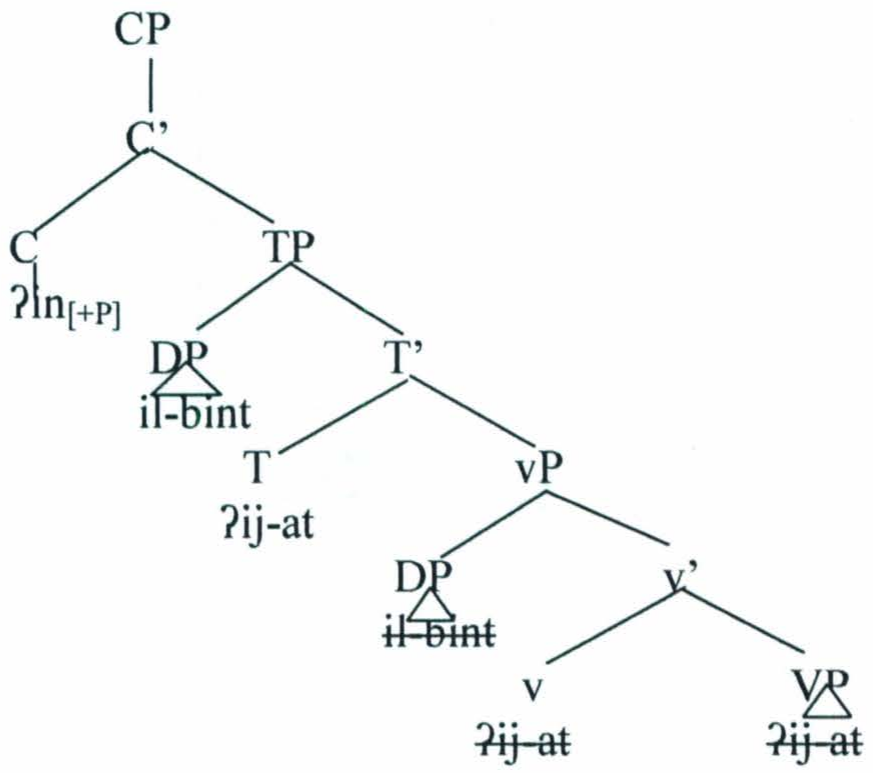
Table 1: internal and external copies of the subject

Internal copy	**External copy**
il-bint 'the girl'	[$_{DP}$[$_{D}$ –ha] [$_{NP}$ ~~bint~~]]
il-bint 'the girl'	*[$_{DP}$[$_{D}$ il] [$_{NP}$ bint]]
ha ~~bint~~	[$_{DP}$[$_{D}$ –ha] [~~bint~~]]
ha ~~bint~~	*[$_{DP}$[$_{D}$ il] [bint]]

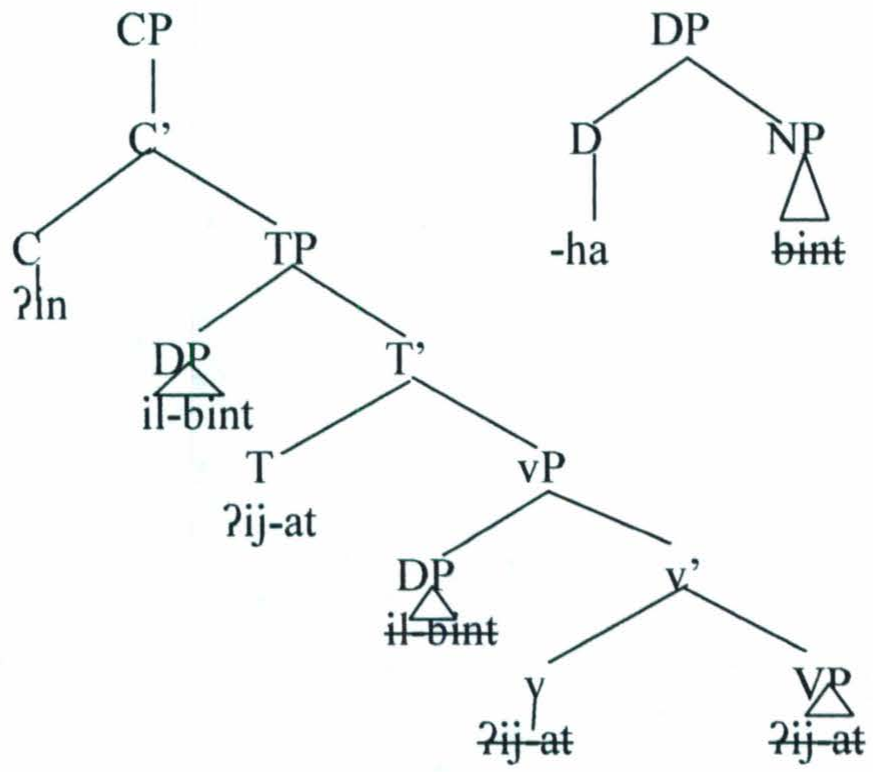
Given the above assumptions that the declarative C in JA is provocative and the external copy created by virtue of provocation can parametrically be non-identical to the original goal projection, the derivation of the subject clitic in (56) proceeds as follows. At the time of derivation when C is introduced into the derivation, the structure of (56) will be along the lines in (57). The C head bears a provocative feature (+P). It provokes the preverbal subject *il-bint* 'the girl' as a 'close' goal. As a result, it imposes the creation of a new copy of the DP *il-bint*. The shape of the new copy is along the lines suggested in (55) above where the head of the DP is the pronoun *–ha* 'her' and the complement of the NP is *bint* 'girl'. The whole structure at this stage of derivation will be as in (58).

56. Ali gaal ʔin-ha il-bint ʔij-at.
Ali said.3ms that-her the-girl came-3fs
'Ali said that the girl came.'

57.

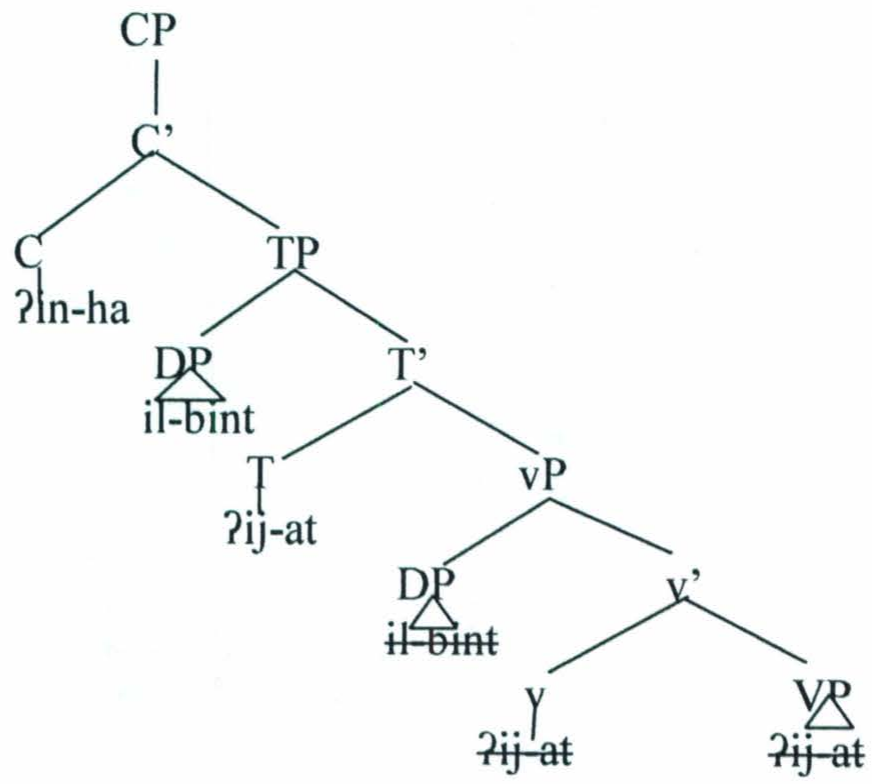


58.

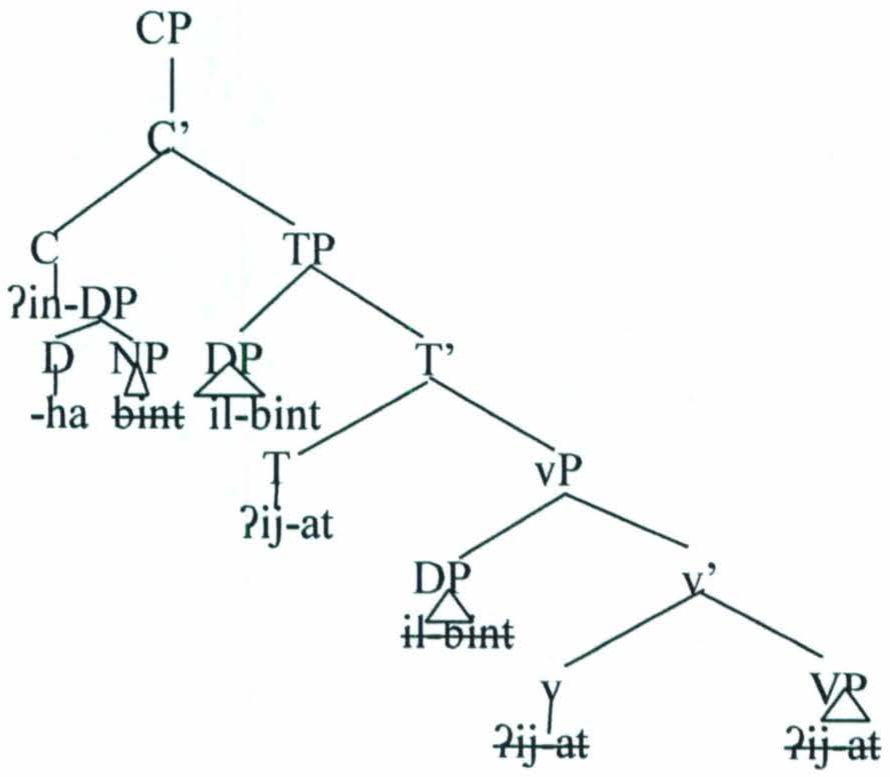


Next, the external copy is merged with C. This entails two possibilities: only the head of the DP, *-ha*, is merged with C because *–ha* is simply the smallest unit that satisfies C (59), or the whole external DP can join to C, in which case the structure will not be affected because the only audible unit in the structure is the head (60).

59.



60.



When the derivation is completed, it is then sent to PF and LF where the original copy and the head of the remerged copy are pronounced. In cases where the whole DP adjoins to C, as in (66), the NP complement of the clitic will continue to have its null status. At LF, the lexical subject will be given a theta-role as the subject of the embedded clause.

The same process of derivation applies when the subject cooccurring with the agreeing clitic is a null pro.[33] The derivation of the subject clitic *–hum* 'them' in (61) proceeds as follows. When C is introduced into the derivation, the underlying structure of (61) will be along the lines of (62). Since C is provocative, it must find its matching goal external to the phrase marker. It therefore probes the pro, the 'closest' goal, and creates a new copy of it external to the phrase marker (63). The subsequent merger of the external copy with the CP will then generate the embedded structure in (61) where the clitic *–hum*, the head of the external DP, is attached to C.

61. Ali gaal ʔin-hum ʔij-u.
Ali said.3ms that-them came-3mp
'Ali said that they came.'

62. Ali gaal $[_{CP}$ C ʔin$_{[+P]}$ $[_{TP}$ pro $[_{vP}$ ʔij-u]]]

63. Ali gaal $[_{CP}$ C ʔin$_{[+P]}$ $[_{TP}$ pro $[_{vP}$ ʔij-u]]]

$[_{DP}[_{D}$ –hum$]$ $[\text{~~NP~~}]]$

In summary, I have proposed that the derivation of the agreeing clitic on C follows from the requirement of C to satisfy its provocative feature. C is provocative and thus needs to merge with an external copy. It searches for a goal within its domain and it imposes the creation of a copy of it external to the phrase marker. I have assumed that the 'shape' of the external copy created by provocation can be parametrically non-identical to the original goal copy. I assume that its 'shape' can be along the lines suggested by Elbourne (2001) according to which a DP can be a pronoun with a deleted NP. The external copy merges with C, which produces structures such as in (56) where the two ends of the chain (the original copy and the merged external copy) are given phonetic

[33] The argument in support of the availability of pro is provided in section 3.2.3.3.

content at the PF. In the next section, I discuss how the default clitic can be derived in this model.

3.2.3.2 Derivation of the default clitic

As discussed in section 2.1 above, Mohammad (1990, 2000) argues that the verb in VS orders in SA agrees with a null expletive pro, not with the postverbal lexical subject. This argument is supported by the fact that the default clitic in raising structures is lexicalized as clitic on the complementizer, as shown in (64). However, this claim is challenged by the fact that the verb in spoken varieties of Arabic, such as JA, shows full agreement with the lexical subject which cooccurs with the default clitic (65).

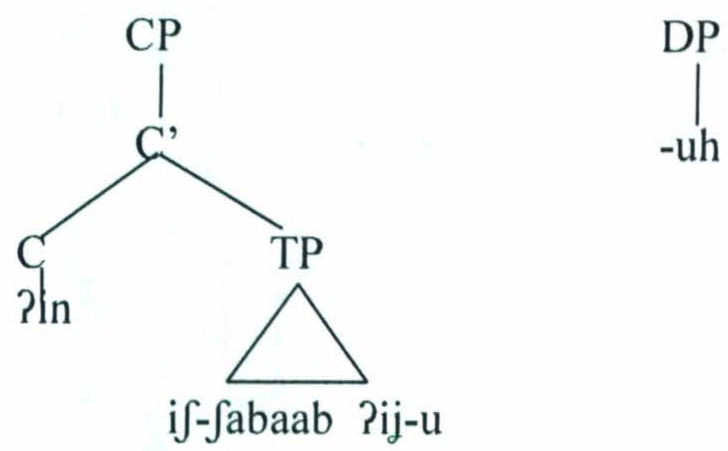
64. qaala Aliyy-un ʔanna-hu yabduu ʔanna … (SA)
said.3ms Ali-nom that-dft. seem.3ms that ...
'Ali said that it seems that …'

65. Ali gaal ʔin-uh iʃ-ʃabaab ʔij-u. (JA)
Ali said.3ms that-dft. the-guys came-3mp
'Ali said that the guys came.'

If the default clitic shown on the complementizer in examples such as (64-65) does not appear to occupy a DP position within the domain of C, one is left with the question what is the 'source' of *–uh* and under what conditions it is introduced into the structure? If the declarative C in JA is endowed with a provocative feature that requires a match with an external goal, the derivation of *–uh* follows from the need of C to satisfy its provocative feature with an external goal. On the one hand, C can provoke the preverbal lexical subject, a 'close' internal goal, and create an external copy of it which is then merged with C (see section 3.2.3.1). On the other hand, C in structures such as (65) can have the option of satisfying its provocative feature by finding a matching goal that is

already found external to the phrase marker that it heads. Thus, it finds *-uh* which is an external goal that is already generated with matching features. Accordingly, the underlying structure of (65) at the point when C is introduced in the derivation will be as in (66) where the default clitic *–uh* already exists as a potential external goal for C. Then, the provocative feature on C is satisfied by the merger of the default clitic *–uh*, producing the structure in (65) above.

66.



Thus, it appears that C can have two options. It can probe for and provoke an internal goal and create an external copy of which is later merged with C. In this case, the agreeing clitic may be selected (see section 3.2.3.1 above). Alternatively, C can directly probe for an external goal that is already available, in which case we have the default clitic *–uh*. I assume that the optionality between having an agreeing or a non-agreeing (i.e., default) clitic follows from the way that C chooses to satisfy its provocative feature. It can either merge with the external copy created from probing and finding an internal goal, or it can merge with the external goal that is already available, in which case the default clitic is the pattern. This optionality of derivation can be compared to Chomsky's (2001) assumptions about how T chooses to satisfy its EPP feature. T can satisfy its EPP feature by the movement of the embedded subject (67), or by merging the expletive subject *there* (68).

67. A plane seems to have landed.

68. There seems to have landed a plane.

Since T may have an option to satisfy its EPP feature, it follows that C in JA could also have the option to satisfy its provocative feature. It either probes an internal goal and creates an external copy of it, or it optionally probes an external goal that is already available.

However, I predict that when C cannot locate its internal goal, it no longer has the option to satisfy its provocative feature through creating a copy of an internal goal, and thus the only option available is to provoke an external goal. This prediction is borne out. Consider the following data.

69. a. ʔAli gaal ʔinn-uh ʔij-at il-bint. (JA)
Ali said.3ms that-dft. came-3fs the-girl
'Ali said that the girl came.'

b. *Ali gaal ʔinn-ha ʔij-at il-bint. (JA)
Ali said.3ms that-her came-3fs the-girl
'Ali said that the girl came.'

As shown in the contrast between (69a) and (69b), when the lexical subject is in postverbal position, the clitic attached to the complementizer must be default and cannot agree with the lexical subject. A similar contrast is also found in LA, as seen in (70).

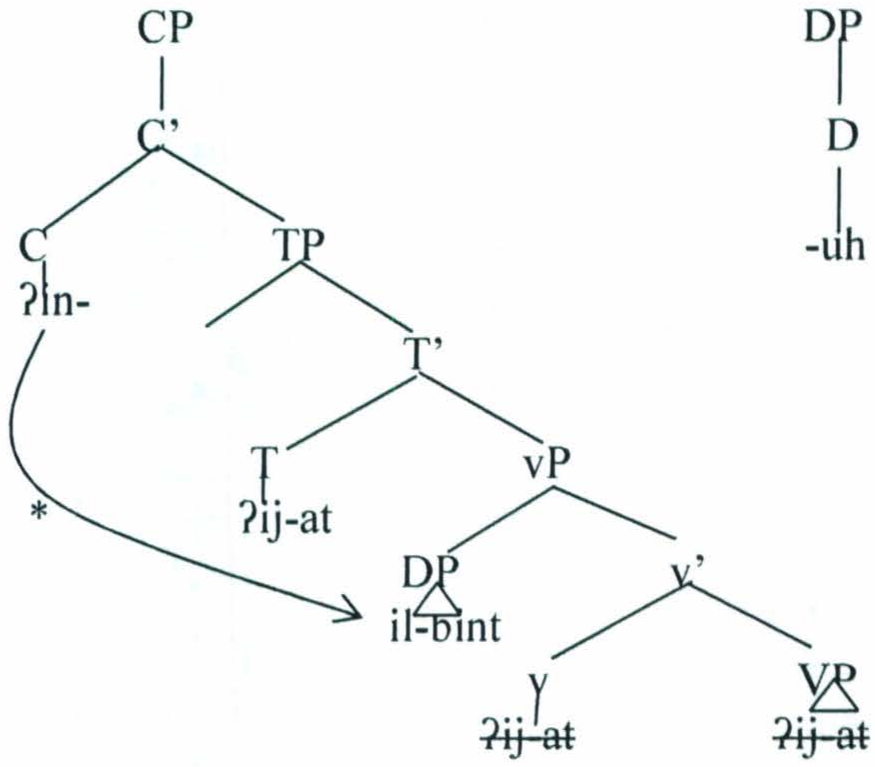
70. a. fakkar ʔinn-o raaħ-o l-baneet. (LA)
thought.3ms that-dft. left-3p the-girls
'He thought that the girls left.' (Aoun, Benmamoun, and Sportiche 1994:202)

b. *fakkar ʔinn-un raaħ-o l-baneet. (LA)
thought.3ms that-them left-3p the-girls
'He thought that the girls left.'(Aoun, Benmamoun, and Sportiche 1994:202)

I argue that the contrast between (69a) and (69b) follows from how C satisfies its provocative feature. The C head in (69a) is provocative and thus it needs to find a

matching goal. C searches for an internal goal, but since C can not reach the subject DP because the T head carrying phi-features intervenes, which results in a Minimality effect (Rizzi 1990), as illustrated in (71), C has no choice but to probe externally, where it finds *-uh* as its matching goal, deriving the structure in (69a).

71.



Further evidence in support of the 'locality' requirement for probing for an internal goal comes from the contrast between (72a) and (72b). When a topic element intervenes between C and the lexical subject, C has to probe for an external goal and thus it spots *–uh*, its matching goal, which accounts for the ungrammaticality of (72b).

72. a. Ali gaal ʔin-uh is-sayyaarah Ø biʕnaa-ha. (JA)
Ali said.3ms that-dft. the-car sold.1p-3fs
'Ali said that as for the car, we sold it.'

b. *Ali gaal ʔinn-na is-sayyaarah Ø biʕnaa-ha. (JA)
Ali said.3ms that-us the-car sold.3ms-3fs
'Ali said that as for the car, we sold it.'

c. *Ali gaal ʔinn-ha is-sayyaarah Ø biʕnaa-ha. (JA)
Ali said.3ms that-3fs the-car sold.3ms-3fs
'Ali said that as for the car, we sold it.'

To summarize, I have shown in this section that the default clitic is derived by the requirement of C to probe and merge with an external goal. When the goal for C is available within its complement domain, C may probe it and create an external copy of it in which case an agreeing clitic is derived, or alternatively C can probe an external goal that is already available in the numeration (where the default clitic is derived). However, when C cannot 'reach' its internal goal, it has to probe externally, in which case the default clitic is the pattern.

3.2.3.3 Subject clitics and null pro

In this section, I discuss the relationship between subject clitics and null pro. As described in chapter 1, JA allows for a pro subject in root clauses, as shown in (73).

73. (hummuh) liʕb-u.
    (they.m) played.3mp
    'They played.'

Since pro is allowed in root clauses, it is also expected to be available in embedded clauses. This expectation is supported by the fact that a null pro cooccurring with an agreeing clitic in embedded clauses can be spelled out under similar discourse conditions to those that license a null pro in root-type clauses. For example, as in (73) above where the null pro can be recovered for discourse reasons such as focus, the null pro cooccurring with the subject clitic *–ak* 'you.ms' in the following constructed dialogue can also be recovered under similar conditions:

74. A (to his friend (B)): ʔana ʕind-i muʃkilih kbiirih b-is-sayyaarah.
    I with-me problem big with-the-car
    'I have a big problem with the car.'

    B: ʔana bagdar ʔasʕallih-ha.

I can fix-3fs
'I can fix it.'

A: miin gall-ak [ʔin-ak (ʔintah) btigdar tsˤalliħ-ha?]
who told-you.m that-you.m you.m can fix-3fs
Literally: 'Who told you that you can fix it?'
Meaning: 'I doubt that you can do it.'

Thus, like in root clauses, I assume that a pro is also available in embedded clauses. However, this assumption might be challenged by the contrast between (75a) and (75b). What the contrast between (75a) and (75b) seems to indicate is that a pro is allowed in (75a) when the clitic agrees with the pro, while it is not allowed in (75b) where the clitic is the default one.

75. a. Ali gaal ʔin-ha pro ʔij-at. (JA)
Ali said.3ms that-her (she) came-3fs
'Ali said that she came.'

b. *Ali gaal ʔinn-uh pro ʔij-at. (JA)
Ali said.3ms that-dft. came-3fs
'Ali said that she came.'

I propose here that the contrast between (75a) and (75b) is a reflex of the mechanisms of provocation and pro licensing, in one hand, and how these mechanisms result in an economical derivation, on the other hand. In particular, I argue that in addition to bearing a provocative feature, C in JA is the licenser of pro, following De Crousaz and Shlonsky (2003).

Given these assumptions, the derivation of (75a) proceeds as follows. C is the licenser of pro in embedded clauses and it bears a provocative feature. Accordingly, once the pro is licensed by C, C provokes the null pro and creates an external copy of it, as illustrated in (76). The remerge of the external copy *–ha* with C derives (75a) above.

76. Ali gaal [$_{CP}$ C ʔin$_{[+P]}$ [$_{TP}$ pro [$_{vP}$ ʔij-at]]]

[$_{DP}$[$_{D}$ –ha] [$_{\cancel{NP}}$]]

However, in (75b), C licenses the pro, but instead of probing for and provoking the licensed pro, an internal goal, and creating an external copy of it, it chooses to probe for an external goal, the default clitic *–uh*. I view probing and provoking an external goal in the presence of an internal goal as a less economical option that results in the unacceptable structure in (75b).

Further support of the congruency of pro licensing and provocation in embedded clauses comes from the behavior of complementizers in other varieties of Arabic such as SA. This issue is discussed in section 4.3 below.

3.2.4 Embedded raising structures

In this section, I discuss how embedded raising verbs fit into the analysis of the derivation of clitics I am laying out here.

3.2.4.1 Raising structure in SA

Mohammad (2000:97) concludes that "there are no raising verbs in Arabic." This generalization is based on the behavior of the raising verb *yabduu* 'seem' in SA. While the verb in SA must fully agree with a preverbal subject (77), the raising verb *yabduu* 'seem' does not agree with the preverbal DP and must be realized in the third person masculine singular, as illustrated in the contrast between (78a) and (78b).

77. al-banaat-u yadrus-na fi al-maktab-i. (SA)
the-girls-nom study-3fp in the-office-gen
'The girls study in the office.'

78. a. al-banaat-u yabduu ʔanna-hunna ðahab-na. (SA)
the-girls-nom seem.3ms that-them.f left-3fp
'It seems that the girls have left.'

b. *al-banaat-u tabduu ʔanna-hunna ðahab-na. (SA)
the-girls-nom seem.3fp that-them.f left-3fp
'It seems that the girls have left.'

According to Mohammad, the agreement features shown by the verb in (78a) are due to an agreement relation between the verb and a null expletive pro occupying the Spec-TP position. Mohammad could be right about the existence of a null expletive pro in this type of structure, but this raises the question of what is the status of the preverbal DP and what position it occupies? Mohammad excludes the possibility that the preverbal DP has reached the preverbal position through movement with an *ad hoc* constraint that referential NPs are not allowed to occupy the subject position of raising verbs, as evidenced from the ungrammaticality of (78b). He further accounts for the ungrammaticality of structures such as (78b) by assuming that infinitives do not occur in Arabic and thus the movement of the DP *al-banaat* 'the girls' in (78b) to the matrix preverbal position is ruled out by minimality considerations. However, raising could still be possible even when the language does not have infinitives, as is the case in many Balkan languages (Roussou 2001). For example, in the absence of infinitivals, raising and control in subjunctive complements is allowed in the following Modern Greek data:

79. a. O Janis prospaθise na fiji.
the John tried-3s part. leave.3ms
'John tried to leave.'

b. I fitites fenonde na ðjavaʒum poli.
the students seem.3p part. read.3p a lot
'The students seem to study a lot.' (Roussou 2001:77)

Soltan (2008:102-103) argues that the preverbal DP in structures such as (78) is left-dislocated derived by base-generation. However, if we assume that the position occupied by the preverbal DP in the raising verb *yabduu* 'seem' is left-dislocated, we expect quantifier phrases to be barred from occurring in this position, contrary to fact. As shown in (80) quantifier phrases can occupy the preverbal position in the verb *yabduu* 'seem'. This indicates that this position is not in the left-periphery, simply because quantifier phrases cannot occupy a topic position (Rizzi 1997).

80. kull-u waaħid-at-in yabduu ʔanna-ha ðahab-at.
Every-nom one-fs-gen seem.3fp that-her left-3fs
'Every girl seems to have left.'

Based on the behavior of the raising construction in JA embedded clauses, I argue that the preverbal DP of raising constructions occupies an A-position and is derived by movement. In the next section, I introduce and describe the behavior of the raising verb *ʃikil* 'seem' in JA.

3.2.4.2 Raising constructions in JA

3.2.4.2.1 Introduction

As discussed in section 2.2, like in Palestinian Arabic (Mohammad 2000), *bidd* 'want' in JA requires a subject clitic and allows for the 'doubling' of a coreferential lexical subject (81).

81. bidd-ha il-bint tiʃrab. (JA)
want-her the-girl drink.3fs.subjn
'The girl wants to drink.'

Like *bidd* 'want', I observe that the raising element *ʃikil* 'seem' in JA requires a subject clitic and allows for the 'doubling' of a coreferential lexical subject, as illustrated in (82).[34]

82. ʃikil-hum lu-wlaad naam-u. (JA)
seem-them the-boys slept-3mp
'It seems that the boys have slept.'

The lexical DP that cooccurs with the clitic in *bidd* 'want' and *ʃikil* 'seem' constructions can occupy the preverbal position, as shown in (83)-(84), respectively.

83. il-bint bidd-ha tiʃrab. (JA)
the-girl want-her drink.3fs.subjn
'The girl wants to drink.'

84. lu-wlaad ʃikil-hum naam-u. (JA)
the-boys seem-them slept-3mp
'The boys seem to have slept.'

Two questions are raised about the preverbal DP in the structures such as (83)-(84): what position do they occupy? And how are they derived? The answers to these questions are provided in the next section.

3.2.4.2.2 Status of the preverbal DP in raising structure in JA

I argue in this section that the preverbal lexical subjects in *ʃikil* 'seem' and *bidd* 'want' occupy an A-position derived through movement.

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[34] The verb *ʃikil* can also function as a linking verb taking a predicative complement, as seen in (1).
1. ʃikil-hin il-banaat taʕbaan-aat. (JA)
seem-them.f the-girls tired-3fp
'The girls look tired.'

Evidence in support of their A-properties comes from two facts: the first is that quantifier phrases can occupy the preverbal position in both root and embedded clauses, as illustrated in (85) and (8586), respectively.

85. kul waaħad ʃikl-uh naam. (JA)
every one seem-him slept-3ms
'Every one seems to have slept.'

86. Ali gaal ʔin-uh kul waaħad ʃikl-uh naam. (JA)
Ali said.3ms that-dft. every one seem-him slept-3ms
'Ali said that every one seems to have slept.'

The other piece of evidence comes from long-distance wh-movement. While a wh-word cannot cross an embedded topic position (87), long-distance wh-movement crossing a preverbal DP in these structures appears to be unproblematic, as seen in (88).

87. *la-miin fakkart-u ʔinn-uh il-jaaʔiz-ih ʔaʕtˁ-uu-ha?
to-who thought-2fp that-dft. the-prize gave-3mp-3fs
'To whom did you think that the prize, they gave (it)?'

88. ʔʃuu fakkart-u ʔinn-uh Samyah ʃikil-ha iʃtarat ?
what thought-2fp that-dft. Samyah seem-her bought.3fs
'What did you think that Samyah seemed to have bought?'

Evidence in support of a movement analysis for the preverbal DP in the raising verb *ʃikil* 'seem' comes from two tests: reconstruction effects shown by preverbal quantifier phrases and idiomatic expressions.

The quantifier phrase that occupies the preverbal position in the *ʃikil* 'seem' constructions in (89) gives rise to the two possible readings in (90).

89. kul waħd-ih ʃikil-ha iʃtarat sayyaarah. (JA)
every one-f seem-her bought-3fs car
90. a. 'Every one(f) seems to have bought a car.'
b. 'It sounds that every one(f) has bought a car.'

The fact that the preverbal quantifier in (89) can give rise to the reading in (90b) indicates that the quantifier phrase has reached the preverbal position through movement from a lower position.

Further evidence in support of the idea that the verb *ʃikil* 'seem' is a raising verb comes from idioms. When raising the subject of the idiom in (91) to occupy the preverbal position of the verb *ʃikil* 'seem', as is done in (92), the idiomatic meaning continues to hold.

91. id-diik il-fa sˁiiħ mn il-beɪdˁah bisˁiiħ. (JA)
the-rooster the-eloquent from the-egg shout.3ms
Literal meaning: 'An eloquent rooster shows his eloquence from the egg.'
Idiomatic meaning: 'Smartness can be noticed at childhood.'

92. id-diik il-fa sˁiiħ ʃikil-uh min il-beɪdˁah bisˁiiħ.
the-rooster the-eloquent seem-him from the-egg shout.3ms
Literal meaning: 'An eloquent rooster seems to show his eloquence from the egg.'
Idiomatic meaning: 'Signs of smartness appear at childhood.'

The same observation is also found with the idiom in (93) below. Raising of the subject of the idiom in (93) does not cancel the idiomatic meaning of the proverb, as illustrated in (94).

93. gillit iʃ-ʃuɣul bitʕallim it-tatˁriiz. (JA)
lack the-work teach.3fs-imp the-weaving
Literal meaning 'The lack of work teaches a person to weave.'
Idiomatic meaning 'Unemployment makes people confused about what to do.'

94. gillit iʃ-ʃuɣul ʃikil-ha bitʕallim it-tatˁriiz.
lack the-work seem-her teach.3fs-imp the-weaving
Literal meaning 'The lack of work teaches a person to weave.'
Idiomatic meaning 'Unemployment makes people confused about what to do.'

In summary, I have shown that the preverbal DP in *ʃikil* 'seem' shows the property of an A-position and A-movement anlaysis. However, when the subject in these constructions appears in preverbal position in embedded structures, the clitic attached to the complementizer does not have the option of agreeing with the lexical subject and thus the only option is the default clitic, as illustrated in the contrast shown in (95).

95. a. Ali gaal ʔin-uh il-bint ʃikil-ha naam-at. (JA)
Ali said.3ms that-dft. the-girl seem-her slept-3fs
'Ali said that the girl seems to have slept.'

b. *Ali gaal ʔin-ha il-bint ʃikil-ha naam-at. (JA)
Ali said.3ms that-her the-girl seem-her slept-3fs
'Ali said that the girl seems to have slept.'

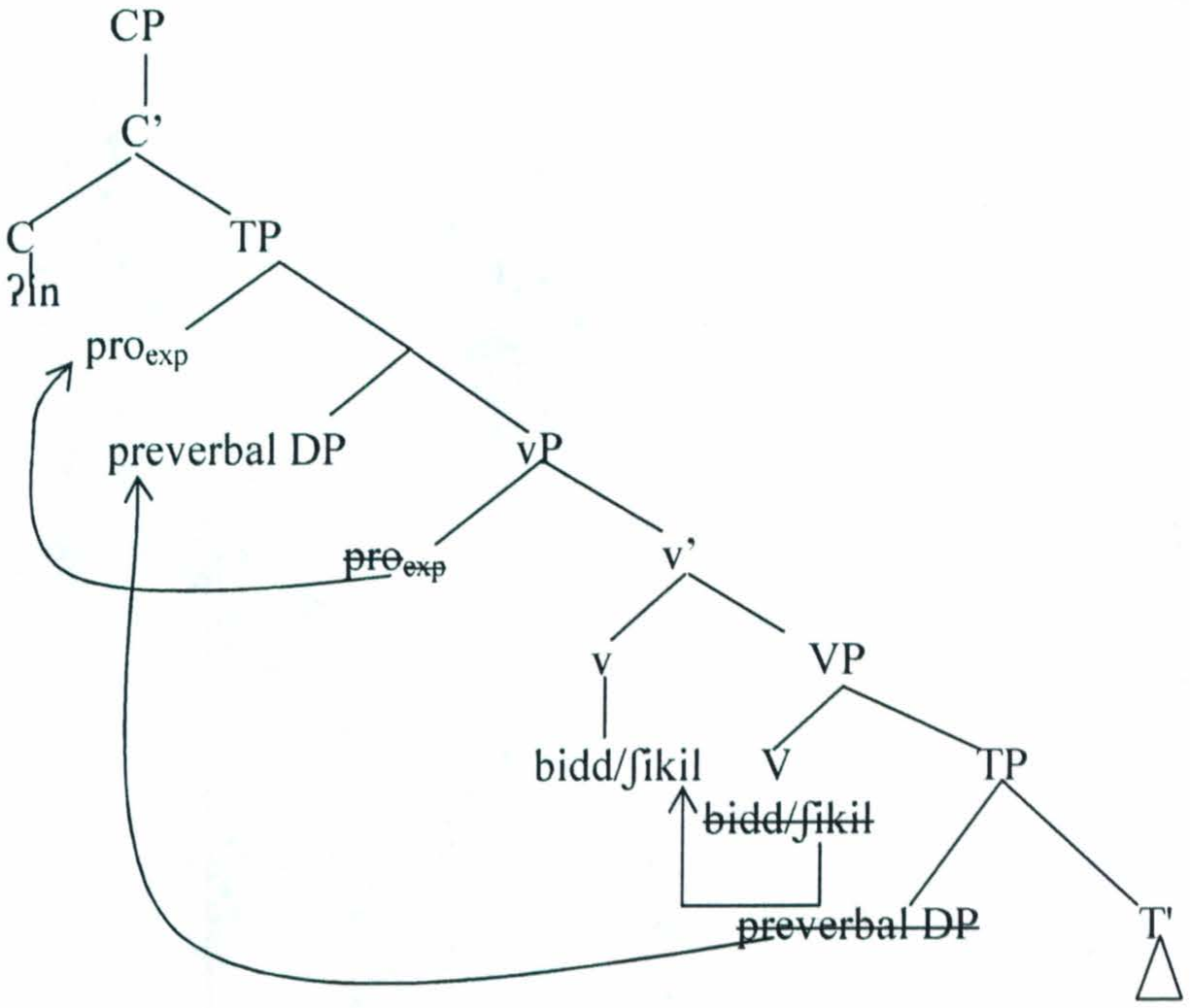
A similar contrast is also found with the verb *bidd* 'want', as seen in (96).

96. a. Ali gaal ʔin-uh il-bint bidd-ha tiʃtari sayyaarah. (JA)
Ali said.3ms that-dft. the-girl want-her buy.3fs.subjn car
'Ali said that the girl wants to buy a car.'

b. *Ali gaal ʔin-ha il-bint bidd-ha tiʃtari sayyaarah. (JA)
Ali said.3ms that-her the-girl want-her buy.3fs.subjn car
'Ali said that the girl wants to buy a car.'

I propose that the preverbal DP in *bidd* 'want' and *ʃikil* 'seem' structures moves from a lower Spec-vP position to a lower Spec-TP position. Following Mohammad (2000) and Buell (2009), I assume that the higher Spec-TP position is occupied by a null expletive pro element. Since the null expletive element cannot bear a theta-role, I assume, following Brandi and Cordin (1989:123), that the thematic role is transferred to the lexical subject. This whole structure is illustrated in (97).

97.



The structure proposed in (97) accounts for the contrast shown in (95) and (96) above. The fact that the default clitic is the pattern in these constructions comes from C probing for and provoking the expletive pro occupying the higher Spec-TP position.

Further evidence in support of the proposed structure comes from the contrast between (98), on the one hand, and (99-100), on the other hand.

98. *Ali gaal ʔinn-uh pro ʔij-at. (JA)
Ali said.3ms that-dft. came-3fs
'Ali said that she came.'

99. Ali gaal ʔin-uh ʃikil-ha naam-at. (JA)
Ali said.3ms that-dft. seem-her slept-3fs
'Ali said that it seems that she has slept.'

100. Ali gaal ʔin-uh bidd-ha tiʃtari sayyaarah. (JA)
Ali said.3ms that-dft. want-her buy.3fs.subjn car
'Ali said that she wants to buy a car.'

As discussed in section 3.2.3.3, the ungrammaticality of (98) results from C not probing for the pro that it has licensed, and choosing instead to probe for an external goal, the

default clitic, which is a less economical operation. However, given that the same process of derivation will apply in (99-100), no crash is expected because the clitic attached to C in this case would be the external copy created by C provoking the expletive pro occupying the higher Spec-TP position. In other words, C provokes the null expletive pro and creates an external copy of it. Then, the external copy remerges with C, deriving the structures in (99-100).

To summarize, I have proposed that the preverbal DP in the *bidd* 'want' and *ʃikil* 'seem' structures occupies a lower Spec-TP position, and the higher Spec-TP position is filled by a null expletive element in line with proposals made by Mohammad (2000) and Buell (2009).

I now look at the internal structure of the *bidd* 'want' and *ʃikil* 'seem' verbs. In particular, I argue that the clitic 'doubling' phenomenon can be accounted for in the provocative model I am adopting, but I show that these verbs manifest some peculiar properties that, on the one hand, make them differ from the clitic 'doubling' structure shown in the embedded clauses, and, on the other hand, make them differ even from the verb class. In other words, they show some nominal properties.

As shown in (81)-(82), repeated below in (101)-(102), the verbs *bidd* 'want' and *ʃikil* allow for a lexical subject to cooccur with the clitic.

101. bidd-ha il-bint tiʃrab. (JA)
want-her the-girl drink.3fs.subjn
'The girl wants to drink.'

102. ʃikil-hum lu-wlaad naam-u. (JA)
seem-them the-boys slept-3mp
'It seems that the boys have slept.'

The clitic 'doubling' constructions exhibited by these structures could be accounted for in the model I am adopting. Accordingly, I assume that the verbs *bidd* 'want' and *ʃikil* occupy a provocative head which provokes the lexical subject, as a goal, and then creates an external copy of it that merges with that head in the form of a clitic under the same principles an agreeing clitic is derived (see section 3.2.3.1). However, two properties of the clitic 'doubling' strategies shown by these verbs differ drastically from that in embedded structures. The first is that the clitic attached to these verbs must always agree with the lexical subject. In other words, a default clitic is not allowed to cooccur with the lexical subject as is the case in embedded structures, as evidenced from the contrast shown in (103) and (104).

103. a. bidd-ha il-bint tiʃrab. (JA)
want-her the-girl drink.3fs.subjn
'The girl wants to drink.'

b. *bidd-uh il-bint tiʃrab. (JA)
want-dft. the-girl drink.3fs.subjn
'The girl wants to drink.'

104. a. ʃikil-hum lu-wlaad naam-u. (JA)
seem-them the-boys slept-3mp
'It seems that the boys have slept.'

b. *ʃikil-uh lu-wlaad naam-u. (JA)
seem-them the-boys slept-3mp
'It seems that the boys have slept.'

A second difference in these structures can be demonstrated by clitic 'doubling'. The clitic shown in the complementizer must be the default when the lexical subject is in postverbal position, as shown in the contrast in (105). The clitic attached to the verbs *bidd*

'want' and *ʃikil* 'seem', however, must always show agreement with the lexical subject, as illustrated by the contrasts in (106) and (107), respectively.

105. a. ʔAli gaal ʔinn-uh ʔij-at il-bint. (JA)
Ali said.3ms that-dft. came-3fs the-girl
'Ali said that the girl came.'

b. *Ali gaal ʔinn-ha ʔij-at il-bint. (JA)
Ali said.3ms that-her came-3fs the-girl
'Ali said that the girl came.'

106. a. bidd-ha tiʃrab il-bint. (JA)
want-her drink.3fs.subjn the-girl
'The girl wants to drink.'

b. *bidd-uh tiʃrab il-bint. (JA)
want-dft. the-girl drink.3fs.subjn
'The girl wants to drink.'

107. a. ʃikil-hum naam-u lu-wlaad. (JA)
seem-them slept-3mp the-boys
'It seems that the boys have slept.'

b. *ʃikil-uh naam-u lu-wlaad. (JA)
seem-them slept-3mp the-boys
'It seems that the boys have slept.

The other peculiar property shown by *bidd* 'want' and *ʃikil* 'seem' is that they show two nominal properties. The first is that they do not inflect for tense. To indicate past tense with the verb *bidd* 'want', one needs to resort to the auxiliary verb *kaan* 'was', as shown in (108).

108. il-bint kaan-at bidd-ha tiʃrab. (JA)
the-girl was-3fs want-her drink.3fs.subjn
'The girl wanted to drink.'

In the case of the verb *ʃikil* 'seem', no tense change is expressed. Tense inflection is found in the verb that cooccurs with *ʃikil*. For example, past tense in (109) is only understood in the verb *naam* 'slept'.

109. ʃikil-hum lu-wlaad naam-u. (JA)
seem-them the-boys slept-3mp
'It seems that the boys have slept.'

The second nominal property is that they take the first person singular clitic *–i* rather than *-ni*. In JA, the first person singular clitic used in genitive case (110) is *–i*, while the first person singular clitic used in the accusative case must be *–ni* (111).[35]

110. jibt li-ktaab maʕ-i. (JA)
brought.1s the-book with-me
'I brought the book with me.'

111. ʃakar-ni.[36] (JA)
thanked.3ms-me
'He thanked me.'

To summarize, I have shown that the properties of the 'doubling' phenomenon shown by the verbs *bidd* 'want' and *ʃikil* 'seem' differ from those shown in embedded structures. Unlike clitic 'doubling' in embedded structures, these verbs do not allow for a default clitic to cooccur with the lexical subject, and the clitic must agree with the postverbal lexical subject. I have also demonstrated that these elements show some nominal properties. They do not inflect for tense and they take the clitic *–i*, which is used in genitive case. Examining the internal structure of these elements is beyond the scope of my thesis. I recommend this issue for further research.

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[35] This morphological distinction of the shape of the first person singular clitic may be a reflex of the idea that the case assigned to the clitic in the case of the verbs *bidd* 'want' and *ʃikil* 'seem' is a genitive case rather than an accusative case. Therefore, the clitics attached to these elements could be a result of a different process.

[36] The clitic *–ni* 'me is the one that attaches to the complementizers.

4 Parameterized provocation

4.1 Introduction

In this section, I show how the model adopted here can account for some of the attested variation in clitic doubling in other varieties of Arabic. In particular, I consider LA and SA.

4.2 Lebanese Arabic

In JA, an agreeing clitic can be 'doubled' by a pronoun, which is spelled out under some discourse requirements such as contrastive focus (112a) or by a full lexical DP (112b).

112. a. Ali gaal ʔin-hum (hummuh) ʔij-u. (JA)
Ali said.3ms that-them.m they came-3mp
'Ali said that they came.'

b. Ali gaal ʔin-hum iʃ-ʃabaab ʔij-u. (JA)
Ali said.3ms that-them.m the-guys came-3mp
'Ali said that the guys came.'

In contrast, an agreeing clitic in LA can be doubled by a null or overt pronominal subject of the embedded clause, but it cannot be doubled by a full lexical DP, as seen in the contrast between (113a) and (113b).

113. a. fakkar ʔinn-e (ʔana) ruħ-t. (LA)
thought.3ms that-1s (I) left-1s
'He thought that I left.' (Aoun, Benmamoun, and Sportiche 1994:201)

b. *fakkar ʔinn-un 1-baneet raaħ-o. (LA)
thought.3ms that-them the-girls left-3p
'He thought that the girls left.' (Aoun, Benmamoun, and Sportiche 1994:202)

Thus, both JA and LA accept the cooccurrence of an overt pronominal subject with an agreeing subject clitic (112a) and (113a), respectively), but they differ in whether

they allow a full lexical DP to cooccur with the agreeing clitic. The cooccurrence of a lexical DP with an agreeing clitic is acceptable in JA (112b), while this is reported to be ungrammatical in LA (113b). The question raised at this point is how can this contrast be handled in the model I am adopting? I assume that C in (112a) and (113a) is provocative and thus it must find its goal external to the phrase marker it heads. It can have the option of searching for a goal internal to the clause. It thus probes the null or overt pronominal subject and creates an external copy of it. The external copy of the internal goal will be identical to the original internal copy. This stage of derivation for (112a) and (113a) is schematized in (114) (ignoring the detailed structure of the TP for the sake of brevity). Then, the head/whole of each of the external copies is merged with C, which produces the structures in (112a) and (113a).

114. $[_{CP}$ C ʔin$_{[+P]}$ $[_{TP}$ pro]]

$[_{DP}[_{D}$ –hum/e]

On the other hand, the contrast between (112b) and (113b) comes from a parametric difference in which restrictions each dialect imposes on the shape of the external copy. While the external copy of the DP can be non-identical to the original copy in JA (see section 3.2.3.1 above), as illustrated in (115), LA seems to restrict the shape of the external copy to be identical to the original copy. Thus, when C provokes the lexical DP *l-baneet* 'the girls' in (113b), it will create an external copy that is identical to the original copy, as illustrated in (116).

115. $[_{CP}$ C ʔin$_{[+P]}$ $[_{TP}$ iʃ-ʃabaab]] (JA)

$[_{DP}[_{D}$ -hum] $[_{NP}$ ~~ʃabaab~~]]

116. $[_{CP}$ C ʔin$_{[+P]}$ $[_{TP}$ l-baneet]] (LA)

$[_{DP}[_{D}$ l] $[_{NP}$ baneet]]

Since the external copy in (116) is a full lexical DP, it cannot merge with C as a clitic, and the only option for it to merge would be in a Spec-position. However, since C must be at the edge of the clause (Pesetsky 1998), this possibility will also be ruled out. In this case, C has to probe for the LA default clitic *–o*, a goal that already exists external to the phrase marker, which derives the grammatical version of (113b) shown in (117).

117. fakkar ʔinn-o l-baneet raaħ-o. (LA)
thought.3ms that-dft. the-girls left-3p
'He thought that the girls left.' (Aoun, Benmamoun, and Sportiche 1994:202)

4.3 Standard Arabic

In SA, the subject of the embedded clause can be a lexical DP (118) or an agreeing clitic (119).

118. ħassibtu ʔanna al-marʔat-a ɣaadarat. (SA)
thought.3ms that the-woman-acc left.3fs
'I thought that the woman left.'

119. ħassibtu ʔanna-ha ɣaadarat. (SA)
thought.3ms that-her left.3fs
'I thought that she left.'

However, the 'doubling' of a subject clitic and a preverbal lexical subject is not allowed. For example, neither the 'default' clitic *–hu* (120a) nor a clitic agreeing with the subject (120b) is permitted to cooccur with the lexical subject.

120. a. *ħassibtu ʔanna-hu al-marʔat-a ɣaadarat. (SA)
thought.3ms that-dft. the-woman-acc left.3fs
'I thought that the woman left.'

b. *ħassibtu ʔanna-ha al-marʔat-a ɣaadarat. (SA)
thought.3ms that-her the-woman-acc left.3fs
'I thought that the woman left.'

I suggest that unlike JA, the C in SA is parametrically unprovocative. It follows that C in SA does not seek for an external goal. However, I assume that C in JA and SA are similar in having the ability to license pro. To illustrate, consider the following JA examples:

121. a. Ali gaal ʔin-ha pro ʔij-at. (JA)
Ali said.3ms that-her (she) came-3fs
'Ali said that she came.'

b. *Ali gaal ʔinn-uh pro ʔij-at. (JA)
Ali said.3ms that-dft. came-3fs
'Ali said that she came.'

As shown in (121), only an agreeing clitic can cooccur with a pro. As discussed in section 3.2.3.3, pro licensing in JA is coupled with provocation. Accordingly, the pro in (121a) is licensed and then provoked by C, and the external copy of the pro created by virtue of provocation is remerged with C to derive the structure in (121a). By contrast, the derivation of (121b) follows from C licensing the pro, but instead of provoking the licensed pro, C chooses to search for the default clitic *–uh*, an external goal. The unacceptability of (121b) is thus due to this less economical derivational process.

SA embedded clauses exhibit a pattern that is partially similar to the contrast shown in the JA data in (121) above. An agreeing clitic is allowed to cooccur with a null pro (122a), but when no agreeing clitic is shown on C, the sentence becomes ungrammatical (122b). In other words, like JA, SA allows for a null pro in embedded clauses only in the presence of an agreeing clitic.

122. a. ħassibtu ʔanna-ha ɣaadarat. (SA)
thought.3ms that-her left.3fs
'I thought that she left.'

b. *ħassibtu ʔanna ɣaadarat. (SA)
thought.3ms that left.3fs
'I thought that she left.'

I suggest that C in SA is the licenser of pro, and the formal ability to license a pro by C must be coupled with bearing a provocative feature. Therefore, C in (122a) licenses the pro and then provokes it, as an internal goal. It creates an external copy of the pro, which remerges with C to derive the structure in (122a). Thus, the ungrammaticality of (122b) follows from C failing to license and probe for the null pro.

Further support of the idea that pro licensing by C predicts that C will provoke the licensed pro as an economical option comes from the behavior of the default clitic with pro in LA. Unlike JA, it is possible for either an agreeing or a default clitic to cooccur with the pro, as illustrated in (123).

123. a. fakkar ʔinn-e (ʔana) ruħ-t. (LA)
thought.3ms that-1s (I) left-1s
'He thought that I left.'

b. fakkar ʔinn-o (ʔana) ruħ-t.[37]
thought.3ms that-dft. (I) left-1s
'He thought that I left.' (Aoun, Benmamoun, and Sportiche 1994:201)

The pattern shown in (123), where, unlike JA, the default clitic in LA can cooccur with a null pro, can be explained as a result of the difference in the pro licensing mechanism suggested above. In JA, C licenses and provokes the internal pro copy, a process that is derivationally more econominal than licensing the pro and searching for an external goal,

[37] Glossing for this example and other cited examples could be different from the original source for consistency reasons. For example, the clitic *–o* in the Lebanese data is glossed as *3ms*.

the default clitic *–uh*. In contrast, I suggest that C in LA bears a provocative feature, but it does not have the formal ability to license pro. In other words, the pro in LA could be licensed by another head, perhaps the T head. Because C in LA is provocative, it either probes for the pro and creates an external copy of it, which eventually derives the structure in (123a), or C chooses to find its matching goal externally by probing for the default clitic, which eventually derives the structure in (123b). Since C in this particular situation is not involved in the licensing process of the pro, searching for an external goal will not violate the economy of derivation.

To summarize, in this section, I have addressed the variation attested in embedded clauses with respect to clitic doubling between JA and other varieties of Arabic (LA and SA). The variation attested in the data and analysis is summarized in the following table:

Table 2: Syntactic analysis of the cross-linguistic variation in the embedded subject position in Arabic

The pattern of subjects in embedded clauses	JA	LA	SA	Analysis of Parametric variation
a. C-Clitic$_{dft}$ DP$_{subj}$ [$_{vP}$ ____ V]	√	√	NA	-C in both JA and LA is provocative; it values its provocative feature by probing for an external goal, the default clitic.
b. C-Clitic$_{agr}$ DP$_{subj}$ [$_{vP}$ ____ V]	√	X	NA	-The shape of the external copy created by provocation can be parametrically non-identical to the original copy in JA, while the external copy in LA must be identical. Thus, the external copy in LB will be a full lexical DP; therefore it cannot merge with C as a clitic.
c. C-Clitic$_{agr}$ pro$_{ref}$ [$_{vP}$ ____ V]	√	√	√	-C in JA and SA is the licenser of pro, and the formal ability to license a pro by C is coupled with

				bearing a provocative feature. Therefore, C in these structures licenses the pro and then prvokes it, as an internal goal. It creates an external copy of the pro, which remerges with C to derive the 'doubling' of an agreeing clitic and a lexical DP.
d. C-Clitic$_{dft}$ pro$_{ref}$ [$_{vP}$ ____ V]	X	√	NA	-C in JA is the licenser of pro and is endowed with a provocative feature. Unlike in (c) above, where C licenses and provokes the internal pro copy, C in this case licenses the pro and chooses to search for an external goal, the default clitic *–uh*, a process that is derivationally less economical than provoking

				the already licensed pro. -C in LA bears a provocative feature, but it does not have the formal ability to license pro. Thus, C can have the option to find its matching goal externally by probing for the default clitic.

5 Summary

In this chapter, I have provided an account for the pattern found in JA embedded subject position. I have argued that the C head in JA is endowed with a provocative feature. This feature forces the generation of a new, external copy of the original goal projection. The C probes for the preverbal subject, a close goal, and then creates an external copy of it. I have shown that the external copy of the preverbal subject in JA is not identical to the original goal copy. I take the shape of an external copy of a DP projection to be a pronoun with a deleted NP. Accordingly, when the provocative C probes for a preverbal subject such as *il-bint* 'the girl', the 'external' copy created by virtue of provocation will be $[_{DP}[_{D}$ *–ha]* $[_{NP}$ ~~*bint*~~*]]*. Then, the 'external' copy is merged with C, which eventually derives the 'doubling' of an agreeing clitic with the lexical subject (e.g., ʔin-ha il-bint… 'that-her the girl'). Since C is provocative, it also has the option to probe for an 'external' copy that is

already available. In this case, C probes for the default clitic *–uh*. C can have the option to directly probe for this 'external' copy even with the availability of a 'reachable' internal goal, where we get the 'doubling' of a default clitic and an overt subject (e.g., *ʔinn-uh* il-bint… 'that-dft. the girl'). The 'internal' copy in this case has to be realized overtly because the phi-features of one of the two copies (i.e., the original 'internal' and the 'external' copies) should be spelled out.

I have also shown that the probe-goal relation between C and the preverbal subject is subject to 'locality' constraints. For example, an intervening head, such as the T, is shown to interrupt the 'locality' relation when the subject is in postverbal position. In this case, the only option for C to satisfy its provocative feature is by merging with the 'external' goal *–uh*.

I have examined clitic doubling attested with the *bidd* 'want' and *ʃikil* 'seem' constructions. I have shown that clitic doubling in these two verbs is different from that shown in embedded clauses, and I have pointed out that these two elements have some nominal properties, which calls for a deeper investigation of this type of predicate, an issue that is beyond the scope of this study.

In the next chapter, I examine the discourse and pragmatic-semantic factors that constrain the overt and null realization of the subject in JA.

CHAPTER FOUR: Pragmatic Functions of Overt Subjects in JA

1 Introduction

One of the major focuses of research in Arabic discourse has been on the information status of the subject. Most of these studies have investigated the subject in written discourse (Moutaouakil 1989, Fakhri 1995, Khalil 2000) or brief constructed discourses (Eid 1983). However, a few other studies have examined the information status of the subject in spoken discourse such as plays (Parkinson 1987, Schulte-Nafeh 2005) or naturally occurring conversations (Owens *et. al.* 2010).

In this chapter, I present a quantitative analysis of the null and overt subjects in JA, a variety in which the variation in subject type (null or overt) has not been examined. In particular, I investigate the effect of a number of discourse and semantic-pragmatic factors on the choice of an overt or null subject by native speakers of JA. The study shows that this variation is constrained by pragmatic anaphora, antecedent salience and predicate type. In what follows, I review the relevant literature (section 2), describe the data and methodology (section 3), present the results (section 4), and discuss the findings (section 5).

2 Literature Review

Due to scope limitations of this chapter, I will constrain this section to only reviewing studies that have discussed the discourse factors constraining overt and null subjects. The whole literature on the subject in discourse will not be reviewed in this chapter.

2.1 Subject form and information structure

2.1.1 Cognitive status and subject form

The topic of discourse, defined as what the comment or the discourse is about (Reinhart 1983, Brown and Yule 1983), is the most salient entity in the discourse (Bosch 1983). This salient cognitive status of the topic has been shown to be correlated with the form of referring expressions used in the discourse (Prince 1981, Givon 1983, Grosz and Sidner 1986, Ariel 1988, 1990, 1994, Gundel, Hedberg, and Zacharski 1993, among others). Gundel, Hedberg, and Zacharski (1993) argue that the form of a referring expression in natural discourse is determined by the cognitive status of the referent as used in the particular context of situation. They propose the Givenness Hierarchy in (1), which consists of a set of cognitive statuses that are involved in determining the form of the referent in natural language discourse (Gundel, Hedberg, and Zacharski 1993:275).

1. The Givenness Hierarchy:

in focus	>	activated	>	familiar	>	uniquely identifiable	>	referential	>	type identifiable
{*it*}		{*that* *this* *this* N}		{*that* N}		{*the* N}		{indefinite *this* N}		{*a* N}

Particularly relevant to this study is the "in focus" status. According to Gundel, Hedberg, and Zacharski (1993:279), entities "in focus" condition are in short-term memory and also at the current center of attention. They are "likely to be continued as topics of subsequent utterances." Given the salient cognitive status of these elements, the form of the referring expression denoting them in the discourse will often be a null or an unstressed pronoun. For example, investigating the effect of the Givenness Hierarchy in a

number of languages, Gundel, Hedberg, and Zacharski (1993) show that in-focus antecedents in languages such as Spanish and Chinese are more likely to be correlated with null subjects or unstressed pronouns.

A similar claim is made by Ariel (1988, 1990). For her, the form of a referring expression is determined by the degree of accessibility of the antecedent at the time of the utterance. "Accessibility" refers to the degree of availability of the antecedent in one's working memory in the discourse model. Ariel (1990, 1994) suggests the Accessibility Marking Scale in (2) which marks the degree of accessibility of an antecedent of a referring expression. For instance, when an antecedent is highly "accessible" in the discourse, it will be encoded by the use of a null pronoun, while a less "accessible" referent will be denoted by a marked referring expression such as a definite NP.

2. zero < reflexives < cliticised pronouns < unstressed pronouns < stressed pronouns < stressed pronouns + gesture< proximal demonstrative (+ NP) <distal demonstrative (+ NP)< proximal demonstrative + NP + modifier < distal demonstrative + NP + modifier < first name or last name < definite description < full name.

The degree of accessibility of an antecedent can be affected by certain factors such as saliency.[38] Saliency refers to the importance of the antecedent in the discourse compared to other elements in the sentence. For example, according to Ariel's Saliency Criterion shown in (3), elements that function as topics are more salient than non-topics:

3. Saliency Criterion: (Ariel 1990)

   a. Topics >non topics.
   b. Grammatical subjects > non-subject (e.g., objects, NP-internal possessives).
   c. 1st and 2nd person > 3rd person.

[38] Only saliency is relevant here. Other factors suggested by Ariel, such as Unity, are not relevant to the current discussion.

d. Agent>non-agent.

It is worth noting here that although both Ariel's and Gundel's models seem to agree on the idea that a cognitively salient antecedent in the discourse is encoded by the use of pronouns, the two models seem to classify pronouns differently. For example, while null pronouns signal a higher degree of accessibility of an antecedent than stressed pronouns on Ariel's scale, Gundel, Hedberg, and Zacharski (1993) treat null and overt pronouns as marking equally high salience.

Gutman (2000) investigates the syntactic and discourse constraints on the use of null subjects in Hebrew. Following Ariel's (1990) Accessibility model, she finds that pro-drop in Hebrew is constrained by Saliency and Unity. For example, given that *Dafna* in (4) is the topic of the discourse and thus is a salient entity, the use of a coreferential null subject form becomes licit.

4. ? lo ta'aminu ma kara le-Dafna$_i$: lifney shvuayim Dani xakar
neg. believe. 2fP what happened to-Dafna before week.two Dani investigated
ota$_i$, ve-axarey xamesh dakot Ø$_i$ nimce'a ashema.
her and-after five minutes found.f guilty.f
'(You) wouldn't believe what happened to Dafna: two weeks ago, Dani investigated her, and five minutes, (she) was found guilty!' (Gutman 2000:178)

In my analysis, I look at the variables that constrain the realization of null vs. overt subjects (pronouns and lexical NPs) in JA. I treat null subjects as signals of a highly accessible antecedent, but I treat both overt pronouns and lexical subjects equally as signals of less accessible antecedents. Testing the reliability of this methodology, I made two separate runs: In the first run, I examined the factors favoring the realization of null subjects vs. overt subjects (collapsing overt pronouns with lexical NPs as one group), and in the other run, I looked at the factors favoring the realization of null vs. overt

pronominal subjects (i.e. NP subjects are excluded). I found that the results continue to hold. For example, in both runs, subject referents that function as the topic of discourse favored a null subject. The run examining the null vs. overt pronominal subject realization is also meant for examining features particularly relevant for pronouns such as person and point of view. This issue is discussed in section 5.3.

2.1.2 Pragmatic anaphora

Working in a Gricean framework, Levinson (1987, 1991) proposes a set of pragmatic principles to account for intra-sentential anaphora. Based on his analysis of English and Australian languages, Levinson (1987:384) suggests the following "general anaphora pattern": "the more minimal the form, the stronger the preference for a coreferential reading". He summarizes this pattern in (5), where moving to the right favors a coreferential reading, while a reversion to the left implicates a disjoint reading.

5. Lexical NP > Pronoun > Ø

According to Levinson, the pronoun in the English example in (6) tends to pick its reference from the last relevant NP, while the switch to a full lexical NP (the man) signals a disjoint reference.

6. John came into the room. He sat down. The man coughed.

The pragmatic account of anaphora in Levinson's model is inspired by "noting that anaphoric expressions are usually semantically general" (Levinson 1991:110). Thus, the local coreference relationship between the pronoun *he* and the NP *John* in (6) is induced by the semantically general nature of the anaphoric pronoun *he*. Similarly, the

local anaphoric relationship between *ferry* and *ship* in (7) is induced by the fact that *ship* is semantically more general than *ferry*.

7. The ferry hit a rock. The ship capsized.

Levinson argues that anaphoric relations are attributed to the Gricean Maxims of Quantity and Manner. According to Levinson (1991:110-11), the maxim of Quantity, which he renames as the Informativeness Principle (I-Principle), encourages speakers to use "maximally informative and cohesive interpretations from minimal linguistic specifications", while the Maxim of Manner (M-principle) "induces from the use of a prolix or marked expression an interpretation that is complementary to the one that would have been induced by the I-principle from the use of a semantically general expression". Thus, the anaphoric expressions *he* in (6) and *the ship* in (7), a semantically general expression, will pick their specific referential features from antecedents in the context. However, the use of the lexical NP *the man* instead of a pronoun in (6) will implicate a non-coreference interpretation by the M-principle.

Building on Levinson's (1987, 1991) neo-Gricean theory of anaphora, Huang (1991) argues that in addition to the effect of the I- and M-Principles proposed by Levinson, intersentential anaphora can be constrained by what he dubs 'consistency constraints'. Relevant to this study is the antecedent salience constraint. Huang points out that the use of the overt pronoun *ta* in (8b) instead of a null form in (8a) would be interpreted as non-coreferential with the topic *Xiaohua* by Levinson's M-principle, which predicts a disjoint reference when an overt pronoun is used in a position where a more minimal form (null pronoun) could have been used. However, Huang points out that Levinson's M-principle does not give the right predictions in this context. Both the null

pronoun (8a) and the overt form (8b) are interpreted as coreferential with the topic *Xiaohua*. Huang (1991:325-26) attributes the vanishing of Levinson's M-principle predictions in this context to the saliency of the topic antecedent. In other words, the use of an overt pronoun instead of a null pronoun deos not implicate a disjoint reference relation, which is due to to the saliency of the referent *Xiaohua* as the topic.

8. a. Xiaohua, Xiaoming yi jin wu, Ø jiu.
Xiaohua Xiaoming as soon as enter room EMP
ba men guan shang le
BA door close RV CRS
'Xiaohua$_1$, as soon as Xiaoming$_2$ enters the house, (he$_1$) closes the door.'
(Huang 1991:325)

b. Xiaohua, Xiaoming yi jin wu, ta jiu.
Xiaohua Xiaoming as soon as enter room 3SG EMP
ba men guan shang le
BA door close RV CRS
'Xiaohua$_1$, as soon as Xiaoming$_2$ enters the house, he$_1$ closes the door.'
(Huang 1991:325)

Blackwell (1998, 2000) examines the pragmatic constraints on anaphora in Spanish conversational discourse within a neo-Gricean anaphora model (Levinson 1987, 1991, Huang 1991, 1994). She shows that the variation in the form of a referring expression in discourse is constrained by Levinson's (1987, 1991) pragmatic model of anaphora plus the intervention of other factors such as the mutual knowledge of the speaker and addressee. She illustrates how Levinson's model works in Spanish discourse with the following example (Blackwell 1998:614):

9. Maria Jesus$_i$ tenia gallina, Ø$_i$ hizo un caldo$_j$, Ø$_i$ lo$_j$ puso en un termo.
Maria Jesus had.3s hen made.3s a broth it put.3s in the thermos
'Maria Jesus had a hen, made a broth, and put it in a thermos.'

According to Blackwell, the coreferential relationship between the subject of the verb *hizo* 'made' and the subject of the preceding verb, *tenia* 'had' is encoded by the use of a

minimal form (the null subject). Similarly, the coreferential relationship between the direct object of the verb *puso* 'put' and the object of the preceding verb *hizo* 'made' is encoded by the use of the pronoun *lo*.

Blackwell also shows that the use of minimal anaphoric expressions in Spanish can be constrained by other factors such as antecedent salience. Testing the applicability of Levinson's theory of pragmatic anaphora in Spanish, she reports that 69% of the respondants chose the subject *Juan* as the antecedent of the pronoun *él* 'him' in (10), and only 20% of them chose *Angel* as a possible antecedent. She points out that this is surprising because, according to Levinson's theory, the use of an overt pronoun will Q-implicate a non-coreferential relationship. However, speakers still favor to interpret the overt pronoun as coreferential with the subject antecedent *Juan*. Blackwell explains the "overriding" of Levinson's Anaphora principle in this context as follows: "because *Juan* is foregrounded or in focus, as a result of its subject status, it may have been perceived as 'what the utterance is about', thus explaining why *Juan* was chosen most frequently as the antecedent" (Blackwell 2000:407).

10. Cuando O llegaron al bar para darle la enhorabuena a Angel,
when pro arrived-3pl to-the bar for give-inf.-him the congratulation to Angel,
Juan pidió una cerveza para *él* y otra para su novia Marta.
Juan ordered a beer for him and another for his girlfriend Marta
'When (they) arrived at the bar to congratulate Angel, Juan ordered a beer for *him* and another one for his girlfriend Marta.' (Blackwell 2000:405)

Owens *et al.* (2010) examine the function of the variation in the overt and null realization of the subject in a corpus of three Arabian Peninsular dialects. Employing a multivariate analysis methodology, they find that coreference and person/number are significant variables for the choice of subject type (overt or null). In particular, they find

that overt subjects are favored in contexts where the subject is coreferential with the subject of an adjacent preceding sentence. Overt subjects are also shown to be favored with 3rd person pronominal subjects.

In the current study, I examine the effect of pragmatic factors such as coreference and antecedent salience in the choice of the form of the subject (null and overt) in JA. I show that the use of a null subject in JA is constrained by Levinson's "general anaphora principle" and antecedent salience (Huang 1991).

2.2 Switch-reference and disambiguity

Eid (1983) argues that the overt/null realization of the subject pronoun in Egyptian Arabic has certain communicative functions. She proposes that an overt subject pronoun can serve two functions: disambiguating a referent and signaling a subject switch. As shown in (11a), the verb in the relative clause *ʃatam* 'he insulted' is inflected for 3rd person masculine singular, and both *al-walad* 'the boy', the object of the matrix clause, and *Ali*, the subject of the matrix clause, are possible antecedents for the null subject in the relative clause. According to Eid, when the subject of the relative clause is null, it will be interpreted as coreferential with the closest antecedent *al-walad*, as seen in (11a). However, when the subject is overt, it serves as cue to the hearer that the antecedent of the subject is the remote NP *Ali*, the subject of the matrix clause, as illustrated in (11b) (Eid 1983:289).

11. a. Ali kallim il-walad illi Ø ʃatam-u imbaariħ.
Ali talked.to the-boy that insulted.3ms-him yesterday
'Ali talked to the boy that he (the boy) insulted him (Ali) yesterday.'

b. Ali kallim il-walad illi huwwa ʃatam-u imbaariħ.
Ali talked-to the-boy that he insulted.3ms-him yesterday
'Ali talked to the boy that he (Ali) insulted him (the boy) yesterday.'

In conjoined structures such as (12), Eid claims that unlike in (11), neither of the two clauses involves reference ambiguity. The null realization of the subject in (12a) indicates that the referent of the subject of the conjoined clause is coreferential with the matrix subject, whereas the overt subject pronoun in (12b) signals a subject-switch where the referent of the subject of the conjoined clause changes to be *Samiir*, the object subject of the matrix clause, as seen in (12b).

12. a. Ali dˤarab Samiir wi Ø ʃatam-u
Ali hit.3ms Samiir and insulted.3ms-him
'Ali hit Samiir and he (Ali) insulted him.'

b. Ali dˤarab Samiir wi huwwa ʃatam-u
Ali hit.3ms Samiir and insulted.3ms-him
'Ali hit Samiir and he (Samiir) insulted him.'

Eid's analysis of the function of overt pronouns in Egyptian Arabic is based on constructed discourses, and it is hard to obtain similar examples in naturally spoken data. For example, Parkinson (1987) finds only few examples (14/188) in his corpus of the type in (11b), where the subject of the relative clause is overt.

Parkinson (1987) investigates the constraints on the presence/absence of subject pronouns in a corpus of two Egyptian Arabic plays. Testing Eid's (1983) previous claims about the effects of disambiguity and subject switch, he notes that the disambiguity function does not seem to be testable in naturally occurring data due to a rarity of such ambiguous instances. Out of 14 occurrences of relative clauses with an overt subject, only two examples were found to be subject to the ambiguous possibilities discussed by Eid.

However, he finds that subject switch has a highly significant effect on the null/overt realization of the subject.

Parkinson also notes that first person pronouns favor an overt subject more than second or third person pronouns. While the current study confirms Parkinson's finding, I also provide an answer for this tendency for this type of subject to be overt. This issue will be discussed in section 5.3.

Schulte-Nafeh (2005) investigates the use of overt/null pronominal subjects in Egyptian Arabic. She argues that the overt/null realization of the subject in Arabic is not controlled by the person feature marked on the predicate; rather it is controlled by the context of discourse. This is based on the fact that null subjects are licit in zero-copula sentences, where the predicate in these clauses is not marked for person. For example, a null subject is possible in the conjoined clause in (13) although the participle predicate *sakta* "being quiet. fs" is not marked for person.

13. ana katma fii ʔalb-i uw Ø sakta.
I repressing.fs in heart-my and being quiet.fs
'I am repressing my feelings and keeping quiet.' (Schulte-Nafeh (2005:198)

The disambiguity function will not be addressed in this study due to methodological considerations; the contexts discussed by Eid (1983) would be rare in natural discourse. However, this study does investigate how subject switch is encoded in natural discourse. As discussed in section 5.1, subject switch contexts favor the use of an overt subject (pronoun and NP).

2.3 Subject form and predicate type

Several studies have shown that the overt/null realization of subject pronouns is correlated with the type of predicate (Enríquez 1984, as cited in Stewart 2003:199, Posio 2011). Posio (2011) provides a clause-level functional account for the variation in the frequency of subject pronouns with different types of verbs in spoken Peninsular Spanish. He finds that first person pronominal subjects of "cognitive verbs" such as *creo* 'I think' tend to be overt. Following Silva-Corvalán (1997, 2001), Posio explains this tendency as a result of the "focus of attention" on the speaker to express his/her personal point of view towards the subject matter. The "focus of attention" in Posio's proposal refers to the relative importance of the participant at the clause level. For instance, according to Posio, subject pronouns are more likely to be overt with cognitive verbs such as *creo* 'I think' because the subject of these verbs is the element under "focus of attention", expressing the speakers' personal point of view towards the subject matter. However, the subject in a highly transitive clause such as *I killed the cat* is more likely to be absent since the "focus of attention" will be drawn on the object of the sentence.

3 Data and methodology

3.1 Data

The data for this study are drawn from a corpus of interviews with seven native speakers of JA. All the interviews were conducted by the researcher in 2007 on Al al-Bayt University campus, Jordan. The length of the interviews was between 25-35 minutes.

Recordings were made using an analogue recorder and were then digitized in the Memorial University linguistics lab. Only one microphone was used in the interview.

All of the informants were between 18-22 years of age and were enrolled in an undergraduate program. The researcher has taken some steps to decrease the level of formality of the interview. For example, the topics raised in the interview were informal, such as informants' daily routine, experience with school, lifestyle, socializing, and future plans. In addition, the speakers were selected with the help of their professors who introduced the researcher as a friend and a colleague who had worked in the university. As well, almost all of the interviews (6/7) were conducted with one or two of the interviewee's friends present. This helped to create a comfortable atmosphere, as noted by the female speakers, in particular.

Following a normal sociolinguistic methodology (Tagliamonte 2006), statistical analysis in this study was carried out using the Windows application Goldvarb X (Sankoff, Tagliamonte, and Smith 2005).

A total of 1154 verbal sentences were coded. They were transcribed and coded in a Microsoft Excel sheet by the author. A time-stamp was also added to track back the utterances for a close analysis. The data were then copied into a token file created by Goldvarb X.

3.2 Coding and methodological considerations

This study examines the factors that may constrain the overt/null realization of the subject in verbal sentences. Thus, zero-copula sentences such as in (14) are not coded in the study.[39]

14. (ana) taʕbaan.[40]
    I tired.ms
    'I am tired.'

One of the reasons behind excluding this type of sentences is that when the subject of these sentences is null, it is difficult to determine whether the predicate is a complement of a true sentence with a null subject or simply a phrase.

Each verbal sentence was coded for the following discourse and pragmatic-semantic factors:

1. Subject type: full NP, null pronoun, overt pronoun, demonstrative pronoun.
2. Coreference: whether or not the referent of the subject of the target sentence is the same as the referent of the subject of the previous sentence. For this factor, a subject of a preceding zero-copula sentence was considered.
3. Discourse topic: whether the referent of the subject is active in the conversation (old topic) or not (new topic).

[39] Existential clauses such as those in (a) below also belong to this class, and thus they are not coded. Owens *et. al.* (2010: 28) report that these clauses were included in their analysis of null/overt subjects in Peninsular Arabic. However, the subject of these clauses is obligatorily overt. Moreover, existential sentences in spoken Arabic belong to the zero-copula clause type, which were not coded in the same study.

a. fii sayyaarah ʕind il-beit.
   there car next.to the-house.
   'There is a house next to the house.'

[40] Adjectives and participles functioning as complements of copular verbs in JA are marked for number and gender, but are not for Person (14). However, Prepositional Phrases and noun complements do not carry any form of agreement with the subject.

4. Person/number: 1st person (singular and plural), 2nd person (singular and plural), 3rd person (singular and plural).
5. Epistemicity of the verb: whether or not the verb is used to state the speaker's point of view. Only verbs with a 1st person singular subject were counted.
6. Animacy of the subject: animate or inanimate.
7. Transitivity of the verb: transitive with object, intransitive/transitive without object, copula (kaan 'was'/sˤaar 'became').
8. Clause type: matrix, coordinate, embedded, conditional, adverbial, interrogative.
9. Tense/aspect of the verb: perfect, imperfect, imperfect with a future auxiliary.

The following contexts were not coded/included in the analysis:

1. Imperative clauses: In addition to being rare in my data, these sentences are nearly categorical with a null subject.
2. Quotations: subjects in direct quotations were not coded. For example, the subject of the verb *baħib* 'like' in the following example was not coded because it was a direct quotation of what a third party said:

   a. "baħib axaalif il-qawaanin."
      like.1s break.subjn the rules
      '(I) like to break the rules.'

3. Relative clauses: the subject of these clauses is obligatorily null, as shown in the following example:

   a. il-walad$_i$ illi *huu$_i$/Ø$_i$ iʃtara sayyaarah.
      the-boy that he/ Ø bought.3ms car

4. The subject of a complement of a control predicate. For example, the subject of the verb *yinjaħ* 'succeed' in (a) below is not coded because it is obligatorily null and coreferential with the subject of the matrix verb. As well, the subject of the verb *iyʕiid-u* 'redo' in (b) is not coded because the subject is obligatorily overt.

   a. il-walad$_i$ ħaawal *huu$_i$/Ø$_i$ yinjaħ.
      the-boy tried.3ms he/Ø$_i$ succeed.3ms.subjn
      'The boy tried to succeed.'

   b. il-mudarris xalla itˤ-tˤullaab/*Ø iyʕiid-u li-mtiħaan.
      the-instructor let.3ms the-students redo-3mp the-test
      'The instructor let the students redo the test.'

4 Results

Data analysis was carried out using Goldvarb X (Sankoff, Tagliamonte, and Smith 2005).[41] Goldvarb binominal analysis identified a number of factor groups that are significant for the realization of overt vs. null subjects. These findings are summarized in Table (1), where a value greater than .50 indicates that this variable favors an overt subject, and a value under .50 indicates that this variable has a disfavoring effect. All of the factors selected as significant will be discussed in section 5 below.

[41] Golvarb assesses the effect of factor groups in the data for a particular dependant variable. Individual factors within factor groups selected as statistically significant are given values from 0 to 1 (Tagliamonte 2006).

Table 1: Factors contributing to the favoring of an overt subject

Factors	Factor weight	%	N (null and overt)
Referent			
Same as previous subject	0.19	5.6	355
Different from previous subject	**0.66**	49.7	799
Discourse topic			
Referent is not active/new topic	**0.78**	56.4	677
Referent is active/old topic	0.13	7.3	477
Point of view			
Speaker expressing his/her point of view	**0.81**	55.9	34
Not expressing a point of view	0.46	18.7	278
Animacy			
Animate	0.43	28.9	983
Inanimate	**0.85**	77.2	171
Transitivity			
Transitive with object	0.41	26.6	321
Intransitive/transitive without object	0.53	35.5	707
kaan, sʿaar	**0.56**	68.8	112
Clause type			
Adverbial	0.27	22.5	40
Matrix:	0.48	36.9	904
Coordinate	**0.75**	26.6	79
Conditional	0.51	38.5	26
Embedded	0.57	42.0	100
Interrogative	0.33	20.0	5
			Total N: 1154

Log likelihood = -393.083 Significance = 0.262

5 Discussion

5.1 Coreference

According to Levinson's general anaphora principle (5), repeated below in (15), the use of a null form signals a coreferential relationship with an adjacent antecedent, while the use of a pronoun or a lexical NP form implicates a non-coreferential relationship.

15. Lexical NP > Pronoun > Ø

This prediction is supported by the Goldvarb analysis. As shown in Table (1), overt subjects are favored in contexts where the referent of the target verb is different from the referent of the previous verb. This tendency is illustrated by the following excerpt:

16. il-waalid$_i$ bishtaɣil muwazziʕ. Ø$_i$ kaan yishtaɣil b-is-sʕuudiyyih.
the-father work.3ms distributor. was.3ms working.3ms in-the-Saudi.Arabia
Ø$_i$ rijiʕ. Ø$_i$ fataħ dukkaanih.
returned.3ms. opened.3ms store.
'My father works as distributor, (He) was in Saudi Arabia. (He) returned (from Saudi Arabia). (He) opened a store.'

The speaker in (16) introduces the new referent *il-waalid* 'the father' to the discourse in a full lexical form. However, the subsequent reference to *il-waalid* is encoded by a null subject form which picks its reference from subject NP.

5.2 Discourse topic

In addition to the effect of coreference discussed above, subject type is constrained by the cognitive status of the subject. As shown in Table (1), the use of an overt subject is favored when the subject is a new topic of the discourse, while old topic contexts favor a null subject form. To illustrate how this pattern works, consider the following example:

17. (...) fii waaħad. Hassan$_i$ ism-uh. Ø$_i$ maa kammal b-ij-jeɪʃ. Ø$_i$ tˤiliʕ gabul
there one. Hassan name-his. neg continue in-the-army. quit before
maa yitqaaʕad, uw Ø$_i$ iʃtara taxi. iʃtaraa-l-uh$_i$ ʔiyyah xaal-i
that retire.3ms, and bought.3ms taxi. bought.3ms-to-him it uncle-my
iθ-θaani. uw Ø$_i$ biʃtaɣil ʕaleɪ-h, uw lissah Ø$_i$ biʃtaɣil ʕaleɪ-h
the-other. And work.3ms on-it and still work.3ms on-it.
'(...) There is one. His name is Hassan. (He) didn't continue in the army. (He) quit before retirement, and (he) bought a taxi. My other uncle bought it for him. (He) works on it (the Taxi), and (he) is still working on it.'

As predicted by Levinson's anaphora principle, the use of a null subject form with the verbs *kammal* 'continued' *tˤiliʕ* 'went out', and *iʃtara* 'bought' implicates a coreference

relationship with the subject NP antecedent *Hassan*. The switch to the full NP subject form *xaal-i* 'my uncle' signals a disjoint reference relation with the previously introduced subject (Hassan) and introduces a new referent into the discourse. However, the null subject of the subsequent verb *biʃtaɣil* 'he works', which is repeated two times, does not pick its antecedent from the adjacent subject NP *xaal-i* 'my uncle'; rather it picks its reference from the non-adjacent subject NP *Hassan*. This can be explained by the cognitive status of *Hassan* in the current discourse segment. Given that *Hassan* is "in-focus", as the topic of the discourse segment, it is encoded by the use of a null subject form.

5.3 Person/number and predicate type

The following table is drawn from a separate run in which NP subjects and demonstrative pronouns were excluded from the person group.[42] Since all the NP subjects in the data are 3rd person, including them would shift the weight value to be favoring the 3rd person and thus would skew the findings for the person factor group. I divided the 1st person pronouns into two groups (singular and plural) because the point of view factor group mainly matters for 1st person singular pronouns. Both singular and plural 3rd person pronouns were collapsed into one group. As for 2nd person pronouns, only singular forms were found in the data. The finding for the person factor group is presented in Table (2) below.

[42] In the person factor group, NP subjects and demonstrative pronouns were not coded as 3rd person; rather they were given a different code to allow for possible exclusion from the analysis.

Table 2: The contribution of person/number factors to the favoring of an overt subject

Factors	**Factor weight**	(%)	**N (null and overt)**
Person/number			
1st sg	**0.898**	22.8	311
1st pl	0.429	26.1	69
2nd	0.073	4.1	74
3rd	0.234	5.1	395

As shown in Table (2), 1st person subject contexts favor an overt pronoun, while 2nd and 3rd subject contexts tend to favor a null subject. This finding is consistent with similar observations in other studies of Arabic dialects (Parkinson 1987). Parkinson (1987:356) notes that "speakers are using pronouns more often when they themselves are the subject of their sentences, than when either their addressee is the subject or when some other person or thing is the subject." In addition, following a qualitative methodology, Shulte-Nafeh (2005:193) observes that one of the obligatory positions for an overt 1st person subject pronoun in Egyptian Arabic is with the verb *ʔazʿun* 'I think'. This is otherwise surprising because 1st and 2nd person antecedents, unlike 3rd person subjects, are salient entities, being participants in the conversation, and thus they are more likely to be referred to by a null form (Ariel 1990).

Since the "first person singular subject is the prototypical site for expression of speaker point of view" (Scheibman 2002:63), I coded for the predicate type for first person singular subjects (null and overt). Predicates which the speaker used to express his/her opinion, such as *baħki* 'I say' *baʔayyid* 'I agree', and *baʃuuf* 'I see', were coded as epistemic,[43] while predicates that do not state the speakers' point of view were coded as non-epistemic. As shown in Table (1), epistemic predicates tend to favor an overt 1st

[43] These predicates were most recurring in the data.

subject pronoun, while non-epistemic tend disfavor it. This is consistent with findings reported in other studies in the literature (Posio 2011). "Lexical items in the cognitive group (e.g. think, know) with 1st and 2nd subjects have subjective function in discourse, and these usages do not extend to a subject that is not a speech act participant" (Scheibman 2002:89). This particular function of these verbs seems to constrain the type of subject used in the discourse. Thus, since the speaker is under the "focus of attention" expressing his/her own stance, these verbs tend to favor an overt subject (Posio 2011).

5.4 Animacy

Artstein (1999) proposes that the null/overt realization of subject pronouns in Hebrew is influenced by the following person/animacy markedness hierarchy (Aissen's 1998 version):

18. 1st/2nd person > Proper Noun 3rd > Human 3rd > Animate 3rd >Inanimate 3rd

According to Artstein (1999:4), "elements higher on the person/animacy scale tend to be realized as null subjects, while those lower on the scale tend to be realized overtly."

Although the person/animacy hierarchy in (18) does not give the right prediction for the person factor group in JA where, contrary to prediction, 1st person singular subjects favor an overt form,[44] the finding for animacy in JA confirms Artstein's predictions. As shown in Table (1), overt subjects are favored when the subject referent is inanimate.

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[44] As discussed in above, the favoring of a 1st person singular subject is due to the influence of predicate type.

5.5 Transitivity

As shown in Table (1), the verbs *kaan* 'was' and *sˤaar* 'became' favor an overt subject. These verbs function as a copula with complements such as a noun, an adjective, or a prepositional phrase, as illustrated in the following examples:

19. bikuun il-jaw raaʔiʕ.
    be.fut.3ms the-weather great
    'The weather will be great.'

20. sˤaar-at il-maadih sahlih.
    became-3fs. The-course easy
    'The course has become easy.'

Following Posio (2011:786), I account for the tendency to have overt subject with this type of verb as a result of the "focus of attention". Since "focus of attention" in these clauses is directed to the subject than to the complement, the subject tends to be overt.

5.6 Clause type

Previous studies have shown that the overt/null realization of the subject can be constrained by the type of clause (Prince 1999, Owens *et. al* 2010). For example, Owens *et. al.* (2010:35) finds that complement clauses in Peninsular Arabic favor an overt subject. However, although coordinate clauses in JA appear to favor an overt subject, as shown in Table (1), clause type does not otherwise seem to constitute an independent factor. A cross tabulation for the clause type and the reference factor groups shows that the favoring of an overt subject in coordinate clause contexts is an epiphenomenon of the reference factor group. In other words, the clause type factor is not an independent factor constraining the form of the subject. The following examples illustrate this pattern:

21. a. ʔabuu-i mitqaaʕid min il-jeiʃ uw Ø maa biʃtaɣl-iʃ.
father-my retired from the-army and neg work.3ms-neg
'My father is retired from the army, and (he) does not work.'

b. ʔana badrus hon uw ʔuxt-i btudrus fii jaamʕah θaanyih.
I study.1s here and sister-my study.3fs in university another
'I study here, and my sister studies in another university.'

As shown in (21a), the speaker tends to use a null subject for the coordinate clause because the subject is coreferential with the matrix clause subject. However, the speaker uses a lexical form in the coordinate clause in (210) since the subject has a new referent. Thus, it appears that the coreference factor has a stronger quantitative effect on the overt/null realization of the subject than the type of clause.

6 Summary

In this chapter, I have examined the discourse factors that constrain the variation in overt and null subjects in JA. I have shown that this variation is constrained by pragmatic anaphora, antecedent salience, predicate type, and animacy. With regard to pragmatic anaphora, null subjects are favored in contexts where they corefer with a preceding subject or when their antecedent has a salient position as the topic of the discourse segment.

Predicate type was also shown to be a factor constraining subject type in JA. Null subjects are disfavored with copula-type predicates such as *kaan* 'was' and *sˤaar* 'became'. This is explained as a result of the "focus of attention" at the sentence level being drawn to the subject rather than the complement, which thus favors an overt subject type. Predicates used to express speakers' opinions have shown an effect on subject type.

Speakers favor using an overt form of the 1st person subject pronoun when they express their opinion.

Overt subjects are also shown to be favored in contexts where the subject referent is inanimate. Following Artstein's (1999:4) proposal, I have explained this tendency by the person/animacy markedness hierarchy, where "elements higher on the person/animacy scale tend to be realized as null subjects, while those lower on the scale tend to be realized overtly".

CHAPTER 5: Concluding remarks

1 Summary

The main goal of this thesis has been to investigate a set of phenomena related to the subject in JA, following a generative and a functional frameworks.

In chapter 2, I examined the properties of the preverbal subject position and how the subject is derived. Based on scope tests in negation and quantifier phrases, I have argued that the preverbal subject position is an A-position, and the subject reaches this position through movement from a vP-internal position.

In chapter 3, following Branigan's (2010) theoretical model, I argued that the derivation of subject clitics and clitic doubling is a product of a provocation process. I proposed that the C in JA is endowed with a provocative feature. By virtue of being provocative, the C head imposes the creation of an external copy of its internal goal projection. The C locates the preverbal subject as a local goal and creates an external copy of it, whose shape can be identical or non-identical to the original goal. However, in JA, this copy appears to be non-identical to the original goal. I take the shape of an external copy of a DP projection to be a pronoun with a deleted NP, in line with the NP-deletion theory (Elbourne 2001). Accordingly, when the provocative C probes for a preverbal subject such as *il-bint* 'the girl', the 'external' copy created by virtue of provocation will be $[_{DP}[_{D}$ *–ha]* $[_{NP}$ ~~*bint*~~*]]*. The merger of the new, external copy with C will derive the 'doubling' of an agreeing clitic and the lexical subject. Since C is provocative, it also has the option to probe for an 'external' copy that is already available.

In this case, C probes for the default clitic *–uh*. C also has the option to directly probe for *–uh* even in the presence of a 'reachable' internal goal. In this case, we get the 'doubling' of a default clitic and an overt subject (e.g., *ʔinn-uh il-bint…* 'that-dft. the girl'). When this option is taken, the 'internal' copy has to be realized overtly because the phi-features of one of the two copies (i.e., the original 'internal' and the 'external' copies) should be spelled-out.

In chapter 4, I investigated the role of discourse and semantic-pragmatic factors in the null and overt realization of the subject. Following a quantitative methodology, I have shown that the favoring of an overt subject is influenced by pragmatic anaphora, antecedent salience in the discourse, predicate type, and animacy.

The data reveal that when the subject is coreferential with the subject of the preceding verb, it tends to be realized as null; however, new subject referent contexts favor an overt subject.

The salience of the subject antecedent in the discourse has also shown influence on subject type. The data show that when the subject is in-focus, it is more likely to be realized as null. However, when the subject is introduced as a new topic in the discourse, it is more likely to be realized overtly.

The overt and null form of the subject is also affected by predicate type. Copula-type verbs and inanimate subjects are shown to favor an overt subject. As well, speakers tend to use the overt form of the 1st person singular pronoun when they express their subjective point of view.

2 Conclusions

The discussion in this thesis implies that subject derivation and type in JA are subject to different syntactic and functional constraints. Syntactic constraints can be more easily captured by the provocation model. The idea that C is a provocative probe which can find its matching goal either through a provocative relation within its complement, or externally, in an independent phrase marker, can explain the variation in the clitic type shown on the embedded complementizer. An agreeing clitic is a result of the internal provocation relation between C and its local goal, the preverbal subject. The fact that the 'source' of the default clitic–*uh* does not seem to come from within the clause can be explained by a provocation relation between C and an external, independent phrase marker.

These findings further imply that the relation that holds between C and the preverbal subject pertains to the type of position occupied by the subject. It has been shown that a DP occupying an A'-position is not an appropriate goal for C. For example, when a left-dislocated element functions as a possible goal, the C head probes for an external phrase marker, the default clitic, as the only option. This implies that the C provocation probe-goal relation would not apply with the preverbal subject if it was in an A'-position.

At first glance, speakers' use of an overt or a null subject could be considered a 'free option'. However, this study identifies a number of contextual factors that influence the choice of subject type (overt or null). I have shown that the way speakers conceive the referent of the subject in the relevant discourse influences his/her choice of subject type.

Subject referents conceived as the topic of discourse are more likely to be realized in their 'minimal' form. While, according to Levinson's pragmatic anaphora model, 'minimal' forms implicate a coreferential relationship with a preceding antecedent, the data from JA show that these tendencies may sometimes be overridden by the salient cognitive status of the subject referent.

The study also shows that subject type can be affected by sentence-level factors. It provides an answer for observations noted in previous studies (Parkinson 1987) about the high frequency of using an overt 1st person singular pronoun in Arabic. The quantitative analysis of the data reveals that overt 1st person singular pronouns are favored with verbs used to express an opinion.

However, this study is by no means a complete survey of the issues related to the subject in JA; it leaves further questions for future research. Syntactic and functional properties of the subjects in zero-copula sentences in JA and how they relate to facts in SA is worth exploring. As well, the behavior of subjects in embedded clauses in other varieties of Arabic and how this relates to the analysis proposed in this thesis is an issue for further research.

The internal structure of *bidd* 'want' and *ʃikil* 'seem which show clitic doubling is also worth exploring. As shown in section 3.2.4.2, clitic doubling in these constructions exhibits some crutial differences from clitic doubling manifested in embedded clauses.

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