Subject extraction in Jordanian Arabic

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Abstract

This thesis proposes a minimalist and cartographic analysis of A-bar movement in Jordanian Arabic (JA) with a particular focus on subject extraction. Adopting the Criterial Freezing approach to A-bar movement and chain formation (Rizzi 2005, 2006, 2014, Rizzi and Shlonsky 2006, 2007), it argues that Spec,SubjP in this Arabic variety is a criterial position and, hence, subject to the effects of the so-called Subject Criterion that prevents movement from this position. In order to facilitate subject extraction from root clauses, the thesis argues that JA resorts to a set of skipping strategies ruled by the postulated *D(iscourse)-linking condition of the Subject Criterion* which requires Spec,SubjP to be filled with an element with the same D-linking status as the extracted subject wh-word. When the subject wh-word of a root clause is D-linked, Spec,SubjP is filled with the D-linking element *ʔilli*. The thesis also shows that Spec,SubjP in such cases may alternatively be filled with a deictic temporal/locative adjunct. Deictic temporal adjuncts may fill Spec,SubjP, regardless of the type of the verb used (i.e. transitive, unergative, or unaccusative), whereas deictic locative adjuncts only fill Spec,SubjP in questions with unaccusative verbs. The thesis shows that this discrepancy is due to the effects of the *Phase Impenetrability Condition* (PIC) (Chomsky 2000, 2001, 2005), which blocks Subj° from probing goals within the complement of v*P. The study provides evidence to the effect that locative adjuncts are adjoined to VP, whereas temporal adjuncts are adjoined to TP, something that makes them immune to the effects of the PIC. On the other hand, when the subject wh-word is not D-linked, Spec,SubjP is filled with an expletive pro.

In pursuit of exploring subject extraction from embedded clauses (introduced by the complementizer *ʔinn* 'that'), the thesis explores the derivations of the possible word orders used in such clauses. It also provides an account of the bound forms attached to the complementizer *ʔinn*, arguing that such forms are better treated as inflectional suffixes whose PF form is a consequence of the locality-ruled Agree relation between C° *ʔinn* and the closest c-commanded visible DP. Contra Chomsky's (2007) feature inheritance, the present thesis assumes that C° in JA retains its uΦ-features, while T° is separately endowed with a bundle of uΦ-features, given its positive setting of the postulated *T°-Φ parameter* (i.e. T° is endowed with Φ-features).

Additionally, the thesis shows that factivity is a key factor that determines the possibility of (subject) extraction from embedded contexts or lack thereof. Unlike the clauses embedded under a nonfactive predicate such as *jifkkir* 'to believe', no extraction is possible out of clauses embedded under a factive predicate such as *jiħzan* 'to regret'. A full analysis of subject extraction from nonfactive complements is provided, and the relevant observations such as the impossibility of A-bar movement of some elements within the same clause while the subject of the embedded clause is extracted are accounted for, using the feature-based approach to locality (Starke 2001). As for the ban against extraction out of factive complements, the thesis argues that such clauses are DPs, headed by a null determiner. In so doing, the thesis provides substance to the Kiparskian stand that the structural difference between factive and non-factive complements lies in subcategorization of the matrix verb. At the same time, the proposed analysis challenges several recent approaches to factive complements that have argued either for a reduced left periphery for factive complements (e.g. Haegeman 2006, de Cuba 2007) or for the presence of an operator that has the effect to block movement out of these clauses (e.g. Zubizaretta 2001, Starke 2004, Haegeman 2012).

Declaration and statement of copyright

Declaration

No part of the material contained within this thesis has been previously submitted for a degree at Newcastle University or any other university.

Statement of copyright

Acknowledgements

To my parents

Abbreviations

1,2,3	person
#	infelicitous
∗	ungrammatical
§	section
ACC	accusative case
Comp/C°	complementizer
DEF	definite
ECM	exceptional case marking
EXP	expletive
F	feminine
GEN	genitive
IND	indicative
JA	Jordanian Arabic
M	masculine
MSA	Modern Standard Arabic
NEG	negation
NOM	nominative case
PIC	Phase Impenetrability Condition
PL	plural
Q	question morpheme
REL	relative
SG	singular
Spec	specifier position
T°	tense
Φ	agreement features

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Chapter ONE: Introduction

1.1   General background

The present thesis explores several instances of A-bar movement (i.e. movement to a c-commanding position of a projection whose head is not lexical in nature; Baltin 2000) in Jordanian Arabic (JA, henceforth) with a particular focus on subject extraction. It also explores a number of interrelated yet independent phenomena, including movement to Spec,SubjP, word order variation and complementizer agreement. The thesis adopts the latest version of the Minimalist Program (Chomsky 2000, 2001, 2005, 2007, and related works by other researchers) and feeds into the cartographic approach to syntactic structures (cf. Rizzi 1997, Cinque 1999, Belletti 2001, 2004, among many others) to account for the interesting and sometimes puzzling observations regarding the phenomena under investigation.

After scrutinizing such phenomena, it appears that JA makes available a chance to refine some of the theoretical assumptions posited with a universal character, such as the so-called feature inheritance (Chomsky 2007, 2008, 2013) as well as the structural conditions on Agree (Chomsky 2000, 2001). Additionally, the current work provides substance to some other approaches, most notably the Criterial Freezing Approach to chain formation and A-bar movement (Rizzi 2005, 2006, 2014, Rizzi and Shlonsky 2006, 2007), as it proves successful in accounting for several phenomena whose syntactic account is still lacking under other approaches. Such phenomena include the use of the particle *ʔilli* in questions with subject/object extraction.

The following subsection briefly sheds light on the central issues the current work aims to investigate. It also includes the main claims made in this thesis to account for these issues. Afterwards, a sketch of JA is provided with attention to the issues most relevant to the current thesis.

1.2   Thesis outline

Chapter 2 investigates the cases where the subject is extracted (i.e. questioned) from main clauses as in *who went home?* The study shows that subject extraction in JA is sensitive to several factors, including the D(iscourse)-linking status of the subject wh-word. Here, the main emphasis is placed on the use of the particle *ʔilli* when the subject is extracted as well as what appears as a true instance of locative/temporal stylistic inversion when *ʔilli* is dropped.

Using the Criterial Freezing approach, the study claims that *ʔilli* is used to facilitate subject extraction. Spec,SubjP (where the thematic subject is supposed to reside in) is a criterial position with a certain interpretive property, i.e. aboutness. Following the Criterial Freezing approach where criterial positions are traps, the element that occupies Spec,SubjP is frozen therein and cannot move any further. This state of affairs poses a challenge against subject extraction in JA, as the subject is the 'normal' element that occupies this position. The study argues that *ʔilli* fills Spec,SubjP, when the subject is extracted, hence first fulfilling the demand of Subj° to have its Spec filled and second facilitating subject extraction. In so doing, the current thesis departs away from several recent approaches to *ʔilli* where it has been categorically treated as an X° when it appears in questions (see, Shlonsky 2002, Gad 2011, Soltan 2011, Algryani 2012, Sulaiman 2016). This chapter also investigates subject extraction in questions with non-D-linked wh-words, arguing that Spec,SubjP is filled here with an expletive pro. The chapter concludes that Spec, Subj is filled with an entity with the same D-linking status as the subject wh-word, a state of affairs encoded as the *D(iscourse)-linking condition of the Subject Criterion*.

In **Chapter 3**, more attention is paid to locative/temporal inversion and the syntactic conditions that license it. This chapter shows that only deictic temporal/locative adjuncts may fill Spec,SubjP when the extracted subject wh-word is D-linked, hence capturing the systematic alternation between such types of adjuncts and *ʔilli* with respect to filling Spec,SubjP. Furthermore, this chapter investigates the optional use of *ʔilli* in object extraction, a seemingly unexpected observation following the postulated use of *ʔilli* as an XP element filling Spec,SubjP (i.e. given that the subject is still available to undertake this task). Here, the study shows that what seems as counter-evidence turns to be an argument in favour of the proposed analysis. *ʔilli* is only used when the object wh-word is featurally richer than the subject, a matter that turns the object wh-word into a barrier against movement of the subject to Spec,SubjP following the feature-based approach to locality (Starke 2001). It is generalized that *ʔilli* is used in D-linked questions when the subject fails to occupy Spec,SubjP.

Having investigated subject extraction out of main clauses, the attention is then shifted onto subject extraction out of embedded clauses in the remaining chapters of the thesis. Given that the subject extraction interacts with the overt complementizer, word order variation, and factivity of the matrix verb, the present work explores these three phenomena. What also motivates this investigation is the fact that these phenomena are not yet received proper

attention in the related literature on Arabic. Although there are few recent studies attempting to investigate some of them, including complementizer agreement (see, e.g. Omari 2011), analysis has been kept to the minimum and without linking these phenomena either with each other or with subject extraction.

Chapter 4 looks at word order variation in embedded clauses which are introduced by the complementizer ʔ*inn*. It provides a cartographic-based analysis (cf. Rizzi 1997, Cinque 1999, Belletti 2001, 2004) to this variation. It begins with the unmarked word order SVO, assuming that the subject here is a topic rather than a true subject, unlike the case in root clauses. This assumption is based on the fact that a preverbal non-contrastive indefinite subject is prohibited. Spec,SubjP is assumed to be filled with an expletive pro. All other word order permutations are argued to be generated mainly by further movement of the object (OSV), the verb (VSO), the verb and object (OVS), the subject and the object (SOV/SOV) or TP/vP (VOS) to the left periphery. Each derivation is backed by empirical evidence.

This chapter constitutes empirical evidence in favour of the cartographic approach to the left periphery of JA, a framework that 'seeks to determine the number, type, and layering of the functional heads in clause structure as well as in the internal structure of nominal expressions and other phrases' (Brugé 2012: 3; see also Cinque and Rizzi 2008). Surveying related literature, it is remarkably apparent that only few studies working on Arabic grammar have used this framework to probe into the rich structure of Arabic left periphery and (high and low) IP areas, even in the works that are dedicated to this purpose (see, e.g. Aoun *et al.* 2010). Arabic left periphery is still conceived of as one projection, i.e. CP, which, as recent literature demonstrates, lacks the power to account for several phenomena which are neatly accommodated within a more richly layered structure of this functional domain. For instance, the fact that JA allows the subject and the object to appear preverbally, accompanied by other adjuncts with an obviously relaxed word order between them (mainly in root clauses) is hard to explain under an analysis with a single projection dominating TP. The study shows that the cartographic approach to syntax reveals how rich the Arabic functional domains are; it is able to account for the interpretive distinctions of various word orders.

In **Chapter 5**, the thesis presents an analysis of the bound forms attached to the complementizer ʔ*inn* that introduces embedded clauses. The study provides evidence to the effect that such forms are inflectional suffixes in the sense of Shlonsky (1997), namely PF reflexes of valuation of ʔ*inn*'s unvalued Φ-content. This implies that Chomsky's (2007)

feature inheritance is not working for JA. That is because the complementizer *ʔinn* still retains its Φ-content, not passing it down to its complement T°, as would be predicted under feature inheritance. T° is assumed to be independently endowed with a separate Φ-content, given its positive setting of the postulated *T°-Φ parameter*, i.e. Tº is endowed with Φ-features. This assumption accounts for the observation why verbs in JA and other Arabic varieties always agree with their subject even in situations where C° is supposed not to project.

Chapter 6 investigates subject extraction from embedded clauses, a largely unexplored issue in Arabic grammar. It shows that data from JA gives rise to the division between factive vs. non-factive verbs, w.r.t. to (subject) extraction. The present thesis shows that factive complements (embedded under factive verbs) are strong islands for extraction. In order to account for this, I follow Kiparsky and Kiparsky (1970) and related work that factive complements are, with updated terminology, DPs which are widely assumed to be absolute islands in Arabic. With this being the case, the current thesis challenges a recent line of research (Heageman 2012, among others) that a factive complement has a clause-typing operator in the left periphery. The study provides a number of arguments against going down to this path as far as JA is concerned. As for non-factive complements, the study argues that such complements are not islands for extraction, and, hence, the subject can undergo movement to the left periphery. Additionally, the study assumes that the ensuing restriction banning the object and locative adjuncts to appear preverbally (while the subject is extracted) is due to the richly featured content of the subject wh-word that acts as a barrier against movement of elements that fall within its c-command.

This way, the current thesis provides a full-fledged analysis of subject extraction in JA with a syntactic account of almost all interrelated issues that affect subject extraction (in)directly. In order to add credence to the assumptions and claims proposed in this thesis, they are backed where convenient by cross-linguistic evidence from other Arabic varieties and from other (un)related languages. Furthermore, one potential advantage of this thesis as a whole is the use of the cartographic approach to syntax in combination with the Minimalist Program. This thesis provides supportive evidence of how assumptions made from the two frameworks can systematically and elegantly capture a set of observations which apparently require stipulative assumptions had the study worked under one framework, separately.

The next subsection lays the ground for subsequent chapters by providing a sketch of JA in terms of its main relevant syntactic properties. The main descriptive facts pertaining to subject

extraction and related issues will be introduced in the relevant chapters for ease of exposition and thesis readability. Additionally, the main theoretical assumptions will be explained also in the relevant chapters, so the analysis taken becomes motivated.

1.3   Jordanian Arabic (JA): A brief background

Existing only as a spoken variety of Arabic, JA belongs genetically and typologically to the Semitic language family (cf. Al-Sarayreh 2013: 11). According to the Ethnologue, JA is the de facto national working language in the Hashemite Kingdom of Jordan with approximately eight million speakers. One look at the related literature reveals that JA is a relatively well-studied Arabic dialect, as compared to other Arabic dialects (see, e.g. El-Yasin 1985, Al-Wer 2007, Malkawi and Guilliot 2007, Musabhien 2009, Omari 2011, Al-Aqarbeh 2011, 2015, Al-Momani 2011, Alqassas 2012, 2015, Al-Sarayreh 2013, Al Bukhari 2016, Al-Shawashreh 2016).

As is the case with other Arabic vernaculars, JA has lost its overt case and mood markings from nouns and verbs, respectively. Only overt pronouns obtain morphological case distinctions whereby NOM-assigned pronouns are surfaced as free-standing elements, whereas ACC- and GEN-assigned pronouns are surfaced as bound pronouns attached to their assigners, as shown in the following examples:[1]

(1) a. ʔil-walad   ʃaaf   ʔil-bint   bi-s-suug
       DEF-boy   saw.3SG.M   DEF-girl   in-DEF-market
       'The boy saw the girl in the market.'

   b. (huu)   ʃaaf-ha   bii-h
      He   saw.3SG.M-her   in-it
      'He saw her in it.'

Notice that the subject pronoun in (1b) appears between two parentheses, as an indication of its optionality. Like other Arabic varieties, JA is a null-subject language, as the full Φ-content of the subject can be recovered by means of the richly inflectional paradigm of the verb. Assuming the taxonomy of null-subject systems of Roberts and Holmberg (2009), JA is classified as *a consistent null-subject language* as all persons in all tenses can feature an

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[1] All examples in this thesis are from JA, unless otherwise stated.

unexpressed pronoun.[2] Like the case in other null-subject languages, subject pronouns in JA only appear in accented contexts, serving some pragmatic function.

As for the unmarked word order in JA, the common view is that SVO is the unmarked constituent order (see Al-Shawashreh 2016 for a motivation). JA is again no different from most other Arabic vernaculars where the SVO word order is the unmarked word order, in the sense that it is produced in discourse-neutral contexts (cf. Holes 1995). See, Aoun *at al* (1994) for a similar view for Lebanese Arabic, Shlonsky (1997) and Mohammad (2000) for Palestinian Arabic, Benmamoun (2000b) and Edwards (2006) for Egyptian Arabic, Mahfoudhi (2002) for Tunisian Arabic, Fassi Fehri (1993) for Moroccan Arabic, and Algryani (2012) for Libyan Arabic, but see Sulaiman (2016) for a different view of Syrian Arabic. This does not imply that other word order permutations are not available. As is shown in Chapter 4, JA allows approximately for all possible word order permutations under specific intonational conditions (i.e. SOV, VSO, VOS, OVS, and OSV) with distinct syntactic and interpretive properties of each.

Another important property of JA as compared to Modern Standard Arabic (MSA) is the fact that the verb shows full agreement with the subject, irrespective of the word order utilized. To illustrate, it is widely known that MSA shows asymmetries of subject-verb agreement, sensitive to the word order used. In the VSO word order, the verb shows partial agreement (i.e. only in person and gender) with its subject as in (2a) below, but in a SVO word order the verb shows full agreement (i.e. all in persons, genders, and numbers) as (2b) demonstrates (see, Mohammad 1990, 2000, Fassi Fehri 1993, 2005, 2012, Bolotin 1995, Benmamoun 2000a, 2000b, Benmamoun and Lorimor, 2006, Johns 2007, Soltan 2007, Aoun *et al.* 2010) (the following examples are adapted from Musabhien 2009: 23).[3]

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[2] Roberts and Holmberg (2009) classify null-subject languages into four types: *consistent null-subject languages* such as JA, *expletive null -subject languages* such as German where expletive null subjects, but not referential ones, can be obtained*, discourse pro-drop languages* such as Chinese where null subjects are allowed but entirely without agreement marking of any kind, and *partial null-subject languages* like Hebrew where null subjects are obtained only in certain persons/tenses.

[3] Bahloul and Harbert (1993) and Harbert and Bahloul (2002) show that subject-verb agreement asymmetries do not hold in MSA if the subject is a pronoun. Additionally, Aoun *et al.* (1994) investigate the interaction of such asymmetries with the so-called first conjunct agreement. The reader is referred to these works for further discussion.

(2) a. wasˤal-a   ʔal-ʔawlaad-u

       arrived.3SG.M-IND   DEF-boys-NOM

       'The boys arrived.'

     b. ʔal-ʔawlaad-u   wasˤal-u

       DEF-boys-NOM   arrived-3PL.M

       'The boys arrived.'

When the two examples in (2) are changed to JA, it becomes clear that JA does not manifest SVO/VSO agreement interactions like those in MSA. The verb fully agrees with the subject, irrespective of the word order used:

(3) a. wisˤl-u   l-iwlaad

       arrived-3PL.M   DEF-boys

       'The boys arrived.'

     b. l-iwlaad   wisˤl-u

       DEF-boys   arrived-3PL.M

       'The boys arrived.'

Chapter 2 furnishes a syntactic account of agreement symmetries in JA. The main argument is that T° enters into an agreement relation with the subject in the sense of Chomsky (2000), resulting in valuing all T°'s unvalued, uninterpretable features (i.e. the features which make no difference to the semantics of a sentence; Adger 2003: 66). I assume that what appears as subject-related agreement morphemes on the verb are a morphological realization of this valuation.

As for wh-movement, JA is a wh-movement language (Al-Momani and Al-Saiat 2010, Yasin 2013, Abdel-Razaq 2015). This means that wh-operators move to the left periphery in the overt syntactic cycle, as demonstrated in the following examples (4a is a declarative sentence, whereas (4b-d) are possible questions):

(4) a. ʔil-walad   ʃaaf   ʔil-bint   bi-s-suug

       DEF-boy   saw.3SG.M   DEF-girl   in-DEF-market

        'The boy saw the girl in the market.'

b. miin	ʃaaf	ʔil-bint	bi-s-suug
who	saw.3SG.M	DEF-girl	in-DEF-market

'Who saw the girl in the market?'

c. miin	ʔil-walad	ʃaaf	bi-s-suug
who	DEF-boy	saw.3SG.M	in-DEF-market

'Who did the boy see in the market?'

d. ween	ʔil-walad	ʃaaf	ʔil-bint
where	DEF-boy	saw.3SG.M	DEF-girl

'Where did the boy see the girl.'

(4b) questions the subject, (4c) questions the object, and (4d) questions the locative adverbial. The whole picture is more complicated when other cases are factored in. For instance, in the two questions (4b,c) the word *ʔilli* can be inserted after the wh-word, providing the resulting question with a reading that the speaker presupposes a set of alternatives out of which he/she is asking for a choice (see, Shlonsky 2002 for a similar observation in Palestinian Arabic). Chapter 2 is dedicated also to explaining this use alongside the syntactic conditions that rule it.

Furthermore, JA allows for long (subject) wh-movement, where the relevant wh-word moves from an embedded clause to the main clause, as shown below:

(5) miin	ʔaboo-i	fakkar	ʔinn-uh	ʃaaf	ʔil-bint
who	father-my	believed.3SG.M	that-3SG.M	saw.3SG.M	DEF-girl

'Who did my father believe saw the girl?'

One important proviso here is that if the matrix verb is replaced with *ħizin* 'regretted', the resulting question would become sharply ungrammatical, a fact I attribute to the assumption that wh-movement is blocked out of factive complements which introduce an established fact. Such complements are headed by a null determiner D° that makes them absolute islands.

The remainder of the thesis is dedicated to exploring these facts in addition to several interrelated issues, including the restrictions against possible word orders when the subject is

extracted and the fact that verbs in JA (and other Arabic dialects) are always inflected for agreement.

Chapter TWO: A Criterial Freezing Approach to Subject Extraction in Jordanian Arabic

2.1   Introduction

The current chapter investigates subject extraction facts from root clauses in JA using the Criterial Freezing approach (Rizzi 2005, 2006, 2014, Rizzi and Shlonsky 2006, 2007). This chapter shows that JA allows for different ways to satisfy the so-called Subject Criterion when the subject is extracted. These strategies include the use of the particle *ʔilli*, a deictic temporal/locative adjunct, and an expletive *pro*. The choice between these strategies is not random but follows from strict conditions, most notably D(iscourse)-linking. Spec,SubjP must be filled with an element whose D-linking status is identical to that of the subject wh-word, a state of affairs that I formulate as *the D-linking condition of the Subject Criterion*. In this chapter, main emphasis is placed on the descriptive facts pertaining to subject extraction out of main clauses in JA with an analysis of the use of the D-linking particle *ʔilli*. Discussion related to the use of deictic adjuncts as a strategy to filling Spec,SubjP is deferred to the next chapter for ease of exposition and better coverage.

The current chapter is organized as follows. Section 2.2 sheds light on subject extraction as well as the theoretical approach the discussion is based on, namely the Criterial Freezing approach with special reference to the Subject Criterion. Section 2.3 introduces subject extraction facts of JA, whereas section 2.4 sketches out the main previous approaches to the use of *ʔilli* in questions, casting doubt on their assumptions with respect to the grammatical function of this lexical item in questions. Under the criterial view, this section also argues that *ʔilli* is a D-linking XP element that fills Spec,SubjP. Section 2.5 elaborates on this assumption and discusses the reasons why *ʔilli* is sometimes optional when the verb shows [3SG.M] form. Section 2.6 concludes the chapter.

2.2 Subject extraction and Criterial Freezing

In this section, I provide a brief background on subject extraction as well as the Criterial Freezing approach.

2.2.1 Subject extraction

Subject extraction has been the focus of a great deal of research on a variety of languages (see, e.g. Taraldsen 1986, Campos 1997, Rizzi and Shlonsky 2007, Shlonsky 2014a, Shlonsky and Rizzi 2016, Abe 2015). These studies, among others, have looked at the strategies natural languages provide for subject extraction. The main reason for this interest has been that there appeared to be special conditions on subject extraction which do not hold for other extractions, including object extraction. The obvious problem is that it is difficult to determine the extraction site of the subject (see, Demuth 1995, Potsdam 2006, Rizzi 2014, for more discussion).

For the purposes of the current work, subject extraction refers to the cases where the subject is questioned, as in the following examples ((1a) from English and (1b) from Québec French):

(1) a. Who saw John?

    b. Qui   qui   est   venu?
       who   QUI   has   come
       'Who has come?'   (Rizzi and Shlonsky 2007: 130)

Note here that in Québec French the particle *qui* is used, whereas no corresponding particle is used in English. The particle *qui* indicates that the subject wh-word (also *qui* in this case) moves to the left periphery in Québec French, whilst there is no apparent evidence for movement of *who* in English, as far as example (1a) is concerned (for instance there is no subject-verb inversion). This difference between English and Québec French is indicative of the fact that each language makes use of a different strategy to extract the subject. This variation of subject extraction strategies is supposed to follow from the so-called Subject Criterion which requires each language to resort to some strategy when the subject is extracted. In the following subsection, I shed light on this Criterion as well as the Criterial Freezing Approach under which the Subject Criterion is operative.

2.2.2 Criterial Freezing

Criterial Freezing, first formalized and labelled by Rizzi (2006), is defined as a constraint on movement and chain formation. It ensures a three-way mapping between a syntactic phrase, a particular syntactic position, and a particular scope-discourse interpretation (Shlonsky 2014a: 59). The basic idea behind Criterial Freezing is that an element is first merged in a position in which it is semantically-selected, and then it may be internally-merged in a position that is dedicated to scope-discourse semantics, resulting in an A-bar chain that must terminate in a 'criterial' position. This restriction against any further movement of the element attracted by criterial features is attributed to what Rizzi (2006) calls Criteria, which are defined as configurations in which a head shares a major interpretable feature with its Spec. Such features include [Q], [TOP], [FOC], and [R] for questions, topics, foci, and relatives, respectively (see, Rizzi 2015). When a criterion is met by a phrase with the matching criterial feature, the relevant phrase is frozen in place (cf. Rizzi 2006: 110). Criterial Freezing is thus "an economy condition that ensures a unique correlation of heads of chains, syntactic positions, and specific interpretative properties" (Shlonsky 2014a: 79). Note in passing that Criterial Freezing is different from a probe-goal theory of derivational syntax (Chomsky 2001) in that it demands a Spec-head relation between the criterial head and a phrase with a matching criterial feature. Additionally, unlike probe-goal relations, movement is not a reflex of Φ-Agree in Criterial Freezing. For Shlonsky (2014a), the criteria are constraints on chain formation; they delimit chains and ensure that scope as well as discourse-related properties such as focus and topic, 'are represented as symbols in a syntactic representation. These symbols are manipulated by a computational device which outputs representations accessible to semantic interpretation.' (p. 59). Given that criterial positions cannot be filled with silent copies, criteria can be viewed as a GB-style derive-and-filter grammar in the sense of Chomsky and Lasnik (1978), i.e. well-formedness conditions on surface structures.

As an illustration of Criterial Freezing, Rizzi (2006: 112) argues that (2b) below is ungrammatical because the same wh-element *which book* cannot fulfil the requirements of the indirect question and the direct question, both included in the same sentence. (2a) is an intermediate step (unpronounced lower occurrences being notated within angle brackets throughout the thesis):

(2) a. Bill wonders [which book [she read <which book>]]

   b. *Which book does Bill wonder [<which book> [she read <which book>]]?

Once the wh-phrase *which book* satisfies the Question Criterion in the embedded C-system, it becomes frozen in place in Spec,Focus Phrase of the embedded question. The movement of the wh-phrase *which book* to the main C-system is consequently prohibited, being already a criterial goal. Note here that the wh-element *which book* cannot move to the main C-system unless it moves first to the embedded C-system, given locality considerations which force successive-cyclic movement. Criterial Freezing is formulated as follows:

(3) Criterial Freezing (Rizzi 2010: 149):

   A phrase meeting a criterion is frozen in place.

Criterial Freezing is thus thought of as an economy condition that minimizes movement and determines optimally simple chains with unique occurrences of the fundamental ingredients: unique Ө-role and unique scope-discourse marking (Rizzi 2006). An inevitable consequence of Criterial Freezing is that criteria cannot be satisfied in passing with unpronounced copies; otherwise (2b) would be grammatical because the copy of the wh-phrase *which book* would satisfy the Question Criterion in the lower C-system.[4]

A relevant point here is the Subject Criterion (Rizzi 2005, 2006, 2014, Rizzi and Shlonsky 2006, 2007), which is responsible for the movement of lexical items to Spec,SubjP. I introduce this criterion in the following subsection.

2.2.3 The Subject Criterion

Rizzi and Shlonsky (2007) formulate the Subject Criterion, building on the observation that subjects share some interpretive property on a par with topics. This interpretive property is the 'aboutness' relation that links subjects with predicates as it links topics with comments. Movement to the subject position hence has interpretive consequences: the argument selected as the subject is the starting point in the description of an event, which is presented as being about the selected argument (Rizzi 2010: 151). Subjects, especially when they appear pre-

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[4] Because criteria cannot be satisfied in passing (i.e. by silent copies), one might propose that such constraints are prosodically motivated. For instance, a topicalized element should be pronounced with a special intonation which, of course, cannot be maintained if the topic position is filled with a silent copy. This possibility should be testable, but I leave this open pending further research.

verbally, correspond to given information. Such an interpretive property of 'preverbal' subjects indicates that the subject position cannot be filled with a copy of a moved element. In other words, there would be no movement from the subject position. This constraint on any movement from the subject position and the demand to fill it is translated into the Subject Criterion, which is satisfied once the Spec position of a dedicated functional phrase, namely Subj Phrase (SubjP), a projection carrying the subject-of-predication property (cf. Cardinaletti 2004) is filled. The Subject Criterion is formulated as follows:

(4) Subject Criterion:
The functional head Subj° attracts a nominal to its Spec and determines the subject-predicate articulation (Rizzi and Shlonsky 2007: 149).

Any phrase that occupies Spec,SubjP therefore meets a Criterion; hence this phrase resists any further movement to a distinct and higher criterial position (Rizzi and Shlonsky 2007: 149). In this regard, Rizzi and Shlonsky (2007) propose that the classical EPP can be advantageously reanalysed as the Subject Criterion.[5] As a result, expletives of various kinds are taken as direct evidence for the Subject Criterion. For instance, in structures where there is no external argument of the verb, the subject position should be expressed by a non-referential pronominal element in non-null subject languages like English as in (5) and French as in (6) (the examples are adapted from Rizzi 2006: 119):

(5) a. There came a man.
   b. It seems that John left.

(6) Il   semble   que   Jean   est   parti.
    It   seems   that   Jean   is   left
    'It seems that Jean has left.'

---

[5] The Subject Criterion demands Spec,SubjP be filled with some category, irrespective of its content, whence the use of pleonastic elements. Rizzi and Shlonsky (2007: 12) mention the following with respect to why the element in Spec,SubjP need to be overt:

True, the use of expletives seems to be more widespread in subject position than in A' constructions, in that 'many languages lack any kind of partial A' movement, while some form of overt or null subject expletive is presumably available in all languages. Still, this state of affairs is not difficult to understand if we think of the special status that the Subject Criterion must inevitably be assumed to have in the system of Criteria. The Subj layer defines a structural zone connecting the CP and the IP systems. As such, it may be assumed to share properties with both systems. The CP zone is specialized in creating dedicated positions to express scope-discourse properties, topicality, focus, scope of different kinds of sentential operators; such positions are formally optional…..On the other hand, a notable characteristic of the IP zone is obligatoriness, at least the obligatoriness of the heads forming the backbone of the 'functional' IP hierarchy.

On the other hand, the Subject Criterion poses a problem for subject extraction. That is because the Subject Criterion is normally satisfied by the thematic subject. Once the thematic subject satisfies this criterion, it cannot move any further to an upper position with a different criterial property, such as Spec,Focus Phrase (cf. Abe 2015: 159). This implies that when the subject meets the requirement of the Subject Criterion through filling Spec,SubjP, the subject cannot be questioned/extracted, a state of affairs that every language has to deal with (Homberg and Roberts 2009: 20). In this respect, Rizzi and Shlonsky (2007) assume that different languages exhibit different strategies to handle this problem. They argue that such strategies fall into two broad categories:

(7) a. Fixed subject strategies: The subject does not move but remains in its freezing position in Spec,SubjP, and a well-formed A-bar construction involving the subject is obtained with no movement at all (so a resumptive pronoun is used in the subject position) as in Hebrew or with movement of a larger constituent, including the frozen subject (i.e. clausal pied-piping) as in Imbabura Quechua.

b. Skipping strategies: The subject moves, but it is allowed to skip the freezing position being extracted directly from its thematic position or from some other predicate-internal position as in Italian, French, and, as we will see, JA.

Examples of these strategies are given below.

In Hebrew, a resumptive pronoun can satisfy the Subject Criterion as in (8a) below. Any further movement of the resumptive pronoun renders the respective sentence ungrammatical, as in (8b, c) (The resumptive pronoun that fills Spec,SubjP is in boldface. All examples are from Hebrew, adapted from Rizzi and Shlonsky 2007: 120):

(8) a. kaniti   et   ha-šulxan   še   xana   amra še   dalya
    (I) bought   ACC   the-table   that   Hannah   said   that Dalya
    ta'ana   še   **hu**   ya'ale   harbe   kesef.
    Claimed   that   he   will cost   a lot   money
  'I bought the table that Hannah said that Dalya claimed will cost a lot of money.'

b. *kaniti   et   ha-šulxan   še   xana   amra   še   **hu**

(I) bought   ACC   the-table   that   Hannah   said   that   he

Dalya   ta'ana   še   <**hu**>   ya'ale   harbe   kesef.

Dalya   claimed   that   he   will cost a lot   money

c. *kaniti   et   ha-šulxan   še   **hu**   xana   amra   še

(I) bought   ACC   the-table   that   he   Hannah   said   that

<**hu**> Dalya ta'ana   še   <**hu**>   ya'ale   harbe   kesef.

he   Dalya   claimed that   he   will   cost   a lot   money

Hebrew thus appeals to the resumptive strategy to fill Spec,SubjP in contexts where the subject is extracted or relativized (see Shlonsky and Rizzi 2016 for further evidence from copular constructions).

On the other hand, Imbabura Quechua employs clausal pied-piping of the whole CP that contains Spec,SubjP when the subject satisfies another criterion. The following examples from Rizzi and Shlonsky (2007: 124) illustrate this point.

(9) a. *pi -taj   Maria -ka   chayamu-shka   -ta   kri   -n?

who-Q   Maria TOP   arrive-NOMINALIZER   ACC   believe AGR

'Who does Maria believe (that) has arrived?'   (Imbabura Quechua)

b. [pi   chayamu-shka   -ta   -taj]   Maria   kri   -n?

who arrive-NOMINALIZER   ACC   Q   Maria   believe AGR

'Who does Maria believe (that) has arrived?'

Lit. '[Who has arrived] does Maria believe?'   (Imbabura Quechua)

Sentence (9a) is ungrammatical because the subject wh-word *pi* 'who' satisfies the Subject Criterion in the embedded clause *pi chayamu-shka-ta-taj* 'who has arrived'; then *pi* moves to Spec,Focus Phrase in the main clause C-system, violating as such the Subject Criterion. On the other hand, sentence (9b) is grammatical because the Subject Criterion is not violated, given that the whole embedded clause is pied-piped along with the movement of the subject wh-word *pi* to the next higher C-system. The pied-piping option allows the subject to bypass

the Criterial Freezing.[6] Hebrew and Imbabura Quechua represent instances of fixed subject strategies: resumptive and clausal pied-piping, respectively.

On the other hand, in null subject languages the subject is assumed to be extracted directly from its thematic position to the CP-system. Spec,SubjP is filled with an expletive *pro* (Rizzi and Shlonsky 2007). Consider the following Italian example, taken from Rizzi and Shlonsky (2007: 126):

(10)   Chi   credi   che   vincerà?
         who   think   COMP   will.win
         'Who do you think will win?'

Here, by hypothesis, an expletive *pro* occupies Spec,SubjP in the embedded clause, allowing the thematic subject to escape the effects of Criterial Freezing.

This way, the Subject Criterion essentially provides us with an important clue to the observations that subjects are harder to move than objects, given that there is no Object Criterion, and that the subject position is an obligatory component of the form of clauses (Diercks 2010, Polinsky *et al.* 2013).

On the other hand, few studies have been conducted on subject extraction in various dialects of Arabic despite the fact that Arabic is a null-subject language with apparently two common word orders (i.e. SVO and VSO) which makes subject extraction more complicated to account for. The surveyed literature related to subject extraction in Arabic has focused largely on one specific issue: the agreement discrepancies between these two unmarked word orders in Standard Arabic (e.g. Kenstowicz 1989, Mohammad 1990, Bahloul and Harbert 1993, Olarrea 1994, Al-Shorafat 1998, Harbert and Bahloul 2002, Soltan 2006, 2007, Al-Horais 2009, 2012, Aoun *et al*. 2010, Ackema and Neeleman 2012, Ouhalla 2013). No comprehensive study has examined how the subject is extracted in Arabic. Couched in terms of the cartographic framework (cf. e.g. Rizzi 1997, 2004 Cinque 1999, Belletti 2001, 2004), the current study provides a description and a theoretical account of subject extraction in JA, for the first time. It will become clear that JA makes use of a set of skipping strategies in fending off the effects of Subject Criterion, that is, the subject is allowed to skip the freezing position (i.e. Spec, SubjP) and is extracted directly from its thematic position, as in French and Italian.

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[6] See also Basque (Arregi 2003) and Finnish (Brattico 2012) as other examples of clausal pied-piping languages.

Spec,SubjP is filled with *ʔilli*, a deictic adjunct or an expletive *pro*, depending on the D-linking status of the subject wh-word (D-linked vs. non-D-linked). This makes JA special, as it poses D-linking-related restrictions on the category that fills Spec,SubjP.

In the following section, I introduce the basic descriptive facts of subject extraction in JA.

2.3   Descriptive facts of Subject extraction in JA

As a methodological preliminary, note that JA examples in this thesis depend on the researcher's intuition (i.e. idiolect), motivated by Brustad's (2000) suggestion that the study of all syntactic aspects of Arabic dialects should ideally be done by native speakers of their mother-tongue. All examples are also verified by 30 JA speakers.

In JA, subject extraction is sensitive to a series of factors, including:

  i.   The morphological form of the verb (overtly inflected for agreement or not)
  ii. The presence of a deictic temporal/locative adjunct between the subject wh-word and the verb.
  iii. The type of the question (existential vs. non-existential).

To illustrate, when the verb shows [3SG.M] form, the particle *ʔilli* is optionally used when the subject is extracted. Consider the following examples where the verb shows [3SG.M] form (*ʔilli* is glossed as 'ʔILLI' up to the point it is made clear that it is a D-linking particle):

(11)   a. miin   (ʔilli)   ʔaχað   ʔil-mafatiiħ?
        who   ʔILLI   took.3SG.M   DEF-keys
        'Who took the keys?'

        b. miin   (ʔilli)   rawwah?
         who   ʔILLI   went home.3SG.M
         'Who went home?'

On the other hand, when the verb is inflected for agreement, *ʔilli* is obligatory, unless there is a deictic adjunct that appears between the subject wh-word and the main verb, as the following examples demonstrate:

(12)   a. miin   *(ʔilli)   ʔaχað-at   ʔil-mafatiiħ?

         who   ILLI   took-3SG.F   DEF-keys

         'Who took the keys?'

         b. miin   ʔimbaariħ   ʔaχað-at   ʔil-mafatiiħ?

         who   yesterday   took-3SG.F   DEF-keys

         'Who took the keys yesterday?'

         c. miin   *(ʔilli)   rawwaħ-at   bakiir?

         who   ILLI   went.home-3SG.F   early

         'Who went home early?'

         d. miin   ʔimbaariħ   rawwaħ-at   bakiir?

         who   yesterday   went.home-3SG.F   early

         'Who went home early yesterday?'

In (12a, c), the subject is extracted, and *ʔilli* is called for because the verb is inflected for agreement (i.e. the [3SG.F] agreement marker –*at* is attached to the verbs *ʔaχað* and *rawwaħ*, respectively). On the other hand, *ʔilli* is not called for in (12b, d) as the deictic temporal adjunct *ʔimbaariħ* 'yesterday' is interpolated between the subject wh-word *miin* and the main verb *ʔaχaðat* and *rawwaħat*, respectively.[7]

It should be noted here that in transitive sentences, the fronted deictic adjunct that replaces *ʔilli* should be a temporal adjunct; otherwise the given question would be ungrammatical. For instance, if the deictic temporal adjunct *ʔimbaariħ* is replaced with the deictic locative adjunct

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[7] Shlonsky (2002) shows that Moroccan Arabic also displays the same correlation between the use of *ʔilli* and the verb being inflected for agreement rather than [3SG.M]. He reports the following examples where the question in (i) is grammatical with the absence of *ill* (the Moroccan counterpart of JA *ʔilli*), given that the verb shows default agreement, i.e. [3SG.M]. (ii) is ungrammatical as the verb is inflected for agreement, and *ill* is not used. When the verb is inflected for agreement, *ill* should be used as (iii) demonstrates:

   i.   ʃkun   mʃa?
        who   left(3SG.M)
        'Who left?'
   ii. *ʃkun   mʃat/ mʃaw?
        who   left.3FS/ left. 3PL.M
        'Who left?'
   iii. ʃkun   Ili   mʃa/ mʃat/mʃaw?
        who   that   left.3MS/ left.3FS/left(3PL.M)
        'Who left?'

biddukaanah 'in the shop', the resulting question would be ungrammatical, unless *ʔilli* is used to the right of the locative adjunct:

(13)   miin   bi-d-dukaanah   *(ʔilli)   ʔaχað-at   ʔil-mafatiiħ?
        who   in-DEF-shop   ʔILLI   took-3SG.F   DEF-keys
        'In the shop, who took the keys?'

On the other hand, this restriction does not hold in cases of questions with unaccusative predicates (cf. Perlmutter 1978) where *ʔilli* can be replaced with a deictic locative adjunct, as in the following question:

(14)   miin   bi-d-dukaanah   wigʕ-at?
        who   in-DEF-shop   fell down-3SG.F
        'Who fell down in the shop?'

Note here though that deictic locative adjuncts do not replace *ʔilli* in questions with unergative predicates:

(15)   miin   bi-d-dukaanah *(ʔilli) ħaka-t   ʔib-sˤoot   ʕaali?
        who   in-DEF-shop   ʔILLI spoke-3SG.F   with-sound   high
        'Who spoke loudly in the shop?'

It also bears mentioning that *ʔilli* is obligatory in cases with other adjuncts, say frequency or manner adjuncts, even if the question comes with an unaccusative verb, as shown in the following ill-formed examples:

(16)   a. miin   ʕaadatan   *(ʔilli)   ʔibtagaʕ   bi-l-midrasih?
           who   usually   ʔILLI   fall down.3SG.F   in-DEF-School
           'Who usually falls down at the school?'

        b. miin   ʔibwagaaħa   *(ʔilli)   ħaka-t?
           who   rudely   ʔILLI   spoke-3SG.F
           'Who spoke rudely?'

Furthermore, *ʔilli* and a fronted temporal deictic adjunct may occur together following the subject wh-word, provided that *ʔilli* occurs to the right of the fronted adjunct, forcing a topicalization reading of the accompanying adjunct, as in (17):

(17)   miin   ʔimbaariħ   ʔilli   ʔaχað-at   ʔil-mafatiiħ?

            who   yesterday   ʔILLI   took-3SG.F   DEF-keys

            'Yesterday, who took the keys?'

Finally, when the subject is extracted out of an existential sentence, *ʔilli* is prohibited in the presence of the expletive *fiih*. In cases without *fiih*, *ʔilli* or a deictic (temporal/locative) adjunct is obligatory. Consider the declarative sentence in (18a), and the possible questions in (18b-d).

(18)   a. fiih zalamih   ʔib-daar-na.

            EXP man   in-house-our

          'There is a man in our house.

        b. miin   (*ʔilli) fiih   ʔib-daar-na?

          who   ʔILLI EXP in-house-our

          'Who is in our house?'

        c. miin   *(ʔilli)   ʔib-daar-na?

          who   ʔILLI   in-house-our

          'Who is in our house?'

        d. miin   hala   ʔib-daar-na?

          who   now   in-house-our

          'Who is in our house right now?'

All the facts about the use of *ʔilli* while the subject is extracted are summarized in Table 1.[8]

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[8] The concept of '*fronted deictic adjuncts*' refers here to the adjuncts that appear to the immediate left of the tensed verb. Such adjuncts do not obtain topicalization nor focalization readings.

Condition	The use of *ʔilli*	Representing example
with a verb appearing in [3SG.M] form	+/-	(11a,b)
With a verb inflected for other than [3SG.M] agreement	+	(12a, c)
With a fronted deictic temporal adjunct in an intransitive sentence	-	(12d)
With a fronted deictic temporal adjunct in a transitive sentence	-	(12b)
With a fronted deictic locative adjunct in an unaccusative sentence	-	(14)
With a fronted deictic locative adjunct in a transitive sentence	+	(13)
With other fronted adjuncts (e.g. frequency, manner, etc.)	+	(15a,b)
Existential questions with *fiih*	-	(18b)
Existential questions without *fiih*	+	(18c)

Table 1: The use of *ʔilli* in questions with subject extraction

All the discussion below in this chapter and the following chapter is dedicated to accounting for these observations, reaching a unified explanation of all of them. As a starting point, let's begin our analysis with instances of *ʔilli*, whereas the discussion on deictic adjuncts is postponed to the following chapter.

2.4   *ʔilli* **and the Subject Criterion**

In this section, I argue that *ʔilli* in questions fills Spec,SubjP in JA. Before explaining that I introduce some background information, including what other previous approaches that addressed *ʔilli* in questions with subject extraction said about this.

2.4.1   *ʔilli's grammatical function*

As clearly shown in the previous section (§ 2.3), one way of having the subject extracted in JA is through the insertion of *ʔilli* to the left of the main verb. Several studies on various Arabic dialects, including Egyptian Arabic (Wahba 1984, Gad 2011), Gulf Arabic (Holes

1995), Palestinian Arabic (Shlonsky 1992, 2002), Lebanese Arabic (Aoun *et al.* 2010) and Najrani Arabic (Fakih 2014), addressed the function of *ʔilli* in questions and relative clauses. Looking at these studies, one observes that no consensual view has been obtained regarding the actual syntactic function of this lexical item. In general, there are two main opposing views on the function of *ʔilli* when it appears in questions. Several researchers hold the view that *ʔilli* is a complementizer, occupying the head position of the CP (i.e. the head of Force Phrase in the sense of Rizzi's 1997 Split-Comp-Hypothesis), while others assume that *ʔilli* heads Focus Phrase. In what follows, a sketch of these two approaches is provided.

2.4.2 Previous approaches to *ʔilli*

2.4.2.1 *ʔilli* as a complementizer

Treating *ʔilli* as a complementizer is by and large the dominant view in the related literature. For instance, Osman (1990: 50) characterises *ʔilli* as an invariant complementizer when it is used in questions in Egyptian Arabic. He claims that *ʔilli* has no complex morphology and heads the CP complement of a relative clause. He refers to questions with *ʔilli* as relativized wh-questions. Furthermore, Shlonsky (1992: 451) differentiates between two complementizers in Palestinian Arabic: *ʔinno* and *ʔilli*. He assumes that the former is a complementizer that signals regular subordination, whereas the latter is restricted to heading CPs that serve as predicates. Thus, the use of *ʔilli* in relative clauses of all kinds, clefts, and interrogative clauses is, for him, justified. In addition, following the feature system developed by Rizzi (1990) for classifying complementizers, Shlonsky (1992) postulates that *ʔinno* is a [-predicational] C°, while *ʔilli* is a [+ predicational] C°.

The same view is later reiterated in Shlonsky (2002) commenting on the strategies employed in the formation of questions with what he calls wh-constituents (i.e. wh+DP/NP) in Palestinian Arabic. Here, Shlonsky (2002: 139) asserts that in forming such questions a fronted wh-constituent is followed by the complementizer *ʔilli*. He introduces the following example:

(19)   ʔani bint ʔilli l-ʔasad   ʔakal-ha   mbaarih?
        which girl   COMP DEF-lion   ate.3SG.M-3SG.F   yesterday
        'Which girl did the lion eat yesterday?'

In (19), the fronted wh-constituent *ʔani bint* 'which girl' is followed by *ʔilli*, which is taken for granted as a complementizer. Shlonsky (2002) proposes a bi-clausal analysis of such questions. He claims that questions with *ʔilli* are copular clauses that consist of a subject DP and a predicate, which is here a free relative clause that functions as a nominal predicate providing a definite description, and hence the clause in which it appears as a predicate is a statement of identity. The wh-phrase is base-generated in Spec,TP of the copular clause and then moves to the Spec position of the higher CP. Consider the following schematic presentation (Shlonsky 2002: 152):

(20)
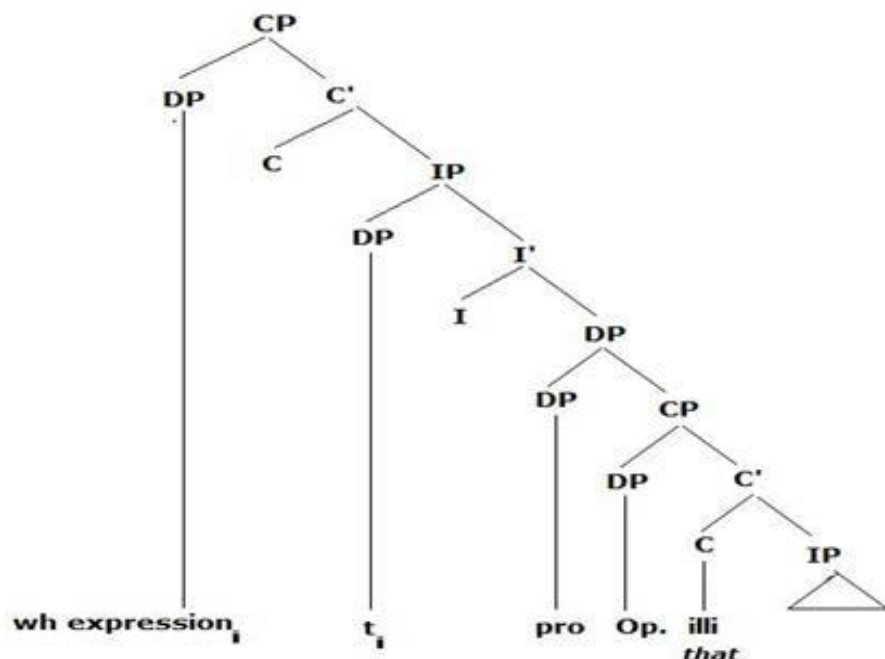
Under this proposal, *ʔilli* is treated as C^0 that heads the lower CP.

Treating *ʔilli* as a complementizer when it is used in questions (and in relative clauses) has been also eschewed in much recent work that have addressed other Arabic dialects such as Syrian Arabic (Sulaiman 2016), Moroccan Arabic (Benmamoun 2000b), Modern Standard Arabic (Soltan 2011), JA (Al-Momani 2015), and Najdi Arabic (Lewis 2013). For these studies, *ʔilli* is a phonologically-reduced counterpart of Modern Standard Arabic's relative complementizer *ʔallaði*.

On the other hand, neither of the studies referred to above has figured out the theoretical motivation for using *ʔilli* in direct questions. In general, their treatment of *ʔilli* as a

complementizer is based on a carefully selected subset of the relevant observations. For example, although some studies argued that *ʔilli* is a complementizer in questions, no satisfactory argument of any kind has been advanced accounting for its necessity in questions with subject extraction but its optionality in questions with object extraction. Likewise, it is clearly evident from the data some studies relied on, especially in Palestinian Arabic and Egyptian Arabic, *ʔilli* is optional in questions with subject extraction when the verb appears in [3SG.M] form. Nonetheless, no comprehensive syntactic proposal has been made to account for this observation. Rather, the main emphasis has been placed on the pragmatic import of such questions (Shlonsky 2002: 141).

These reasons coupled with other arguments (discussed below) have led a number of authors to cast doubt on the analysis of *ʔilli* as a complementizer when it is used in questions. Instead, these studies have argued for the hypothesis that *ʔilli* is a focus particle that heads Focus Phrase, a separate layer within the Split CP domain (cf. Rizzi 1997). The next section explains this view.

2.4.2.2 *ʔilli* as a head of Focus Phrase

Gad (2011) argues that *ʔilli* should not be treated as a complementizer in Egyptian Arabic due to the distinct distributional properties of *ʔilli* and other complementizers. Gad draws her conclusion based on two interrelated observations. Firstly, the complementizer *inn* precedes the clausal complements of some verbs, as shown in (21a) below, whilst *ʔilli* first introduces headless relative clauses which occur in an argument position, as shown in (21b) and second is used in questions, as (21c) indicates (the gloss in the examples is Gad's):

(21) a. Mona   sadda'it   inna-ha   faazt   bi-l-gayza

        Mona   believed3SF.PAST   that-she   won.3SF.PAST   with-the-prize

        'Mona believed that she won the prize'.

      b. illi ʕirif   ħall   il-fazuura   kisib   filuus

        that knew.3SM.PAST   answer the-puzzle   won.3SM.PAST   money

      'The one who knows the answer of the puzzle won money.'

    c. miin   illi   Mona   'uxt-uh?

      who   that   Mona   sister-his

     'Mona is the sister of whom?' '

Secondly, Gad argues that *inn* and *ʔilli* cannot be used interchangeably. If *ʔilli* and *inn* replace each other in sentences in (21), the resulting sentences would be ungrammatical.

Although such differences can be readily accommodated in Shlonsky's (1992) analysis following Rizzi's (1990) feature system (-predicational vs. +predicational), they are taken by Gad (2011) as a counterargument against the complementizer-status of Egyptian Arabic *illi*. Following Cheng (1997), Gad (2011) rejects also the assumption that *illi* is a wh-particle when it is used in questions. She draws on the hypothesis that it is not possible for a wh-question to have a wh-phrase and a wh-particle at the same time. She assumes instead that *illi* is a relative pronoun that heads Focus Phrase in wh-questions. Under her proposal, there is a strong Focus feature [FOC] that triggers wh-movement to occur before Spell-out, hence justifying the presence of a wh-phrase to the left of *illi*. Additionally, in order to account for the restriction that adjunct wh-phrases cannot co-occur with *illi*, she claims that *illi* and the argumental wh-phrases carry [+nominal] features, suggesting that *illi* and the wh-word have to agree in categorial features. See Fakih (2014) who espouses a similar analysis on Najrani Arabic, arguing that *illi* is a morphological realization of the strong Focus feature on Foc°, the head of Focus Phrase.

However, this proposal of *ʔilli* is descriptively and explanatorily inadequate because several questions remain unanswered. For example, why is *ʔilli* as a head of Focus Phrase not used (or realized) in clauses with argument focalization? Why is *ʔilli* optional in questions with object extraction but (in most cases) obligatory in questions with subject extraction? Is *ʔilli* used in questions different from the one that introduces relative clauses? If yes, what are the differences? If no, it follows that relativisation would be derived by focalization, in contrast to the general line of current generative reasoning on derivation of relative clauses. Within the recent syntactic theory, relative clauses are determined by the feature [REL] on the head of Force Phrase whose Spec serves as a host of overt *wh*-pronouns or a null relative operator (see, Vries 2002, Arsenijević 2009, Sullivan 2016). In marked contrast to these two approaches, the current research argues that *ʔilli* is an element used in questions with subject extraction in order to escape the effects of Criterial Freezing. This contention is argued for in the following subsection.

2.4.3 *ʔilli as a filler of Spec,SubjP*

I argue that *ʔilli* is an element that is used in questions with subject extraction to meet the requirements of the Subject Criterion in that Spec,SubjP is filled. This amounts to saying that *ʔilli* is an XP rather than X^0. The Subject Criterion demands Spec,SubjP to be filled with some entity. In declarative sentences, the normal entity to fill Spec,SubjP is the thematic subject, hence the SVO word order is the unmarked word order. Given the fact that the verb in JA appears with rich inflectional morphology, it is assumed to move to T^o (cf. Fassi Fehri 1993, Bobaljik 2002, Holmberg and Roberts 2013).[9] So, the occurrence of the subject to the left of the tensed verb indicates the movement of the subject to a higher position, i.e. Spec,SubjP. This being so, the declarative sentence in (22) has the derivation in (23):

(22)   l-iwlaad   ʔaχað-u   ʔil-mafatiiħ.

             DEF-boys   took.3PL.M   DEF-keys

             'The boys took the keys.'

(23)
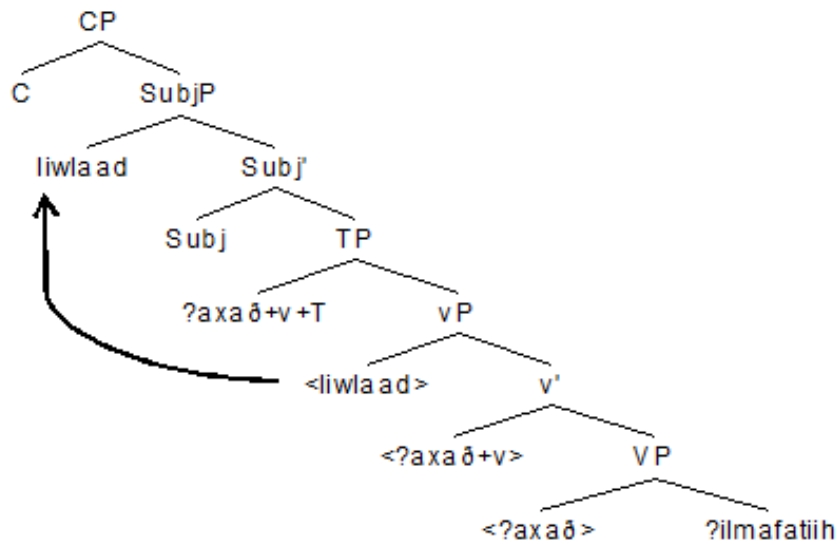
The subject *liwlaad* 'the boys' moves from Spec,vP to Spec,SubjP to satisfy the Subject Criterion.

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[9] Benmamoun (2000b, 2008) argues that the main verb head-moves to T^o in the past and future tenses in the Arabic sentence, given the specification of these two tenses with [+D] and [+V] features. On the other hand, the main verb remains adjoining to v^o in the present tense which is specified only for [+D]. For Benmamoun, movement of the verb to T^o depends whether tense is endowed with [V] or not. See Al-Balushi (2012) for refutation of this assumption, though, and see Al-Aqarbeh and Al-Sarayreh (2017) for a different approach.

On the other hand, in cases of subject extraction, the subject would not move to Spec,SubjP because it would resist any further movement to CP domain, due to the effects of Criterial Freezing. As mentioned above, Spec,SubjP is a place dedicated to a criterial property of aboutness and thus cannot be satisfied in passing (cf. Rizzi 2006).[10] For instance, if the Subject Criterion could be satisfied in passing, a question like the one in (24) would be grammatical, contrary to fact:

(24)   *miin   ʔaχað-u   ʔil-mafatiiħ?
          who   took-3PL.M   DEF-keys
         'Who took the keys?'

The ill-formed question in (24) also shows that wh-in-situ is not a viable strategy for subject questions in JA. One way of salvaging the grammaticality of question (24) is through inserting *ʔilli* between the subject wh-word and the verb:

(25)   miin   ʔilli   ʔaχað-u   ʔil-mafatiiħ?
          who   ʔILLI   took-3PL.M   DEF-keys
         'Who took the keys?'

I propose that *ʔilli* acts as a facilitator for the subject *liwlaad*, enabling it to move directly to left periphery from its thematic position. The requirement for Spec,SubjP to be filled is accomplished by *ʔilli*; so there are no demands imposed on the subject to move to Spec,SubjP.

A cautionary note is in order here. The criterial property of aboutness on Subj° does not imply that topicalized elements which the whole discourse is about (i.e. the Aboutness Topic, see Chapter 4) may fill Spec,SubjP. The latter position is filled with an element which the predicate says something about. On the other hand, aboutness topics are understood to be the elements that are ''newly introduced, newly changed or newly returned to'. Aboutness Topics occupy a very high position in their clauses and are limited to root contexts. See Chapter 4 (§ 4.5) for details.

The question that becomes relevant at this point concerns the presence of (agreement) suffixes on the verb. According to this analysis, the subject wh-word *miin* in (25) does not move to Spec,SubjP (and presumably nor to Spec,TP). So how is the presence of the agreement suffix

–*u* [3PL.M] attached to the verb *ʔaχað* accounted for? There is a large literature on this issue which I cannot do justice to in here. In general, this suffix is treated as a morphological manifestation of agreement between the subject and Tº while the former is in Spec,TP (or Spec,AgrSP) (cf. Aoun *et al.* 1994, Benmamoun 1998, Harbert and Bahloul 2002). At face value, the current analysis does not predict the presence of any agreement suffix given the subject does not move to Spec,SubjP in such cases. Abstracting slightly from their assumption (i.e. Aoun *et al.* 1994, Benmamoun 1998, Harbert and Bahloul 2002) and following the latest Minimalist assumptions (i.e. Agree-based approach; Chomsky 2001, et seq.), I propose that this suffix is a morphological manifestation of agreement between the subject and Tº while the former is in Spec,vP (see, Soltan 2007 for a similar approach to MSA). My proposal is compatible with the notion that agreement between the subject and Tº occurs before subject extraction is performed.

Following the theory in Chomsky (2000, 2001), I claim that agreement between the subject and Tº is established while the former is *in situ* through the so-called probe-goal relation. In Chomsky (2000, 2001), the operation Agree has been reformulated so that movement is seen as a last resort.[11] Instead of viewing Move as the basic tool for valuing uninterpretable features (as in Chomsky 1993), uninterpretable/unvalued features are valued by the operation Agree, which is formulated in (26) (Chomsky 2001: 122).

(26)   The probe α agrees with the goal ß providing that:
   a. α has uninterpretable Φ-features.
   b. ß has matching interpretable Φ-features.
   c. ß is active by virtue of having an unvalued Case feature.
   d. α c-commands ß.
   e. There is no potential goal Ɣ intervening between α and ß.

Agree is triggered by the assumption that uninterpretable features are inherently unvalued, but need to be assigned a value in the course of the derivation. They play no role in interpretation and consequently must be deleted before convergence at LF (Chomsky 2007: 18). This requirement of valuation and deletion of uninterpretable features is forced by so-called Full Interpretation, a principle that demands nothing but interpretable elements at the two interfaces: LF and PF (see Chomsky 1995: Ch. 4). With this reasoning of the operation Agree

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[11] Movement in this theory is also triggered as a secondary effect of Agree, if the probe has an EPP-feature, as is the case with heads with interpretive properties.

in place, the presence of the subject agreement suffixes attached to the verb is accounted for assuming that T° which has a set of uninterpretable Φ-features agrees with the subject being the highest constituent with Φ-features and an unvalued Case feature.

Back to the question in (25), reproduced below as (27) for convenience, let's start from the point where the subject wh-word *miin* enters the derivation.

(27)   miin   ʔilli   ʔaχað-u   ʔil-mafatiiħ?
         who   ʔILLI   took-3PL.M   DEF-keys
         'Who took the keys?'

The wh-word *miin*, endowed with interpretable Φ-features, merges externally with little *v'*, forming vP. Then, the whole vP merges with T°, yielding TP. In its turn, TP merges first with Subj^0, forming SubjP and then C° which comes endowed with a set of unvalued Φ-features, an EPP-feature, and an interpretable tense feature, projecting CP. Following Chomsky's (2008) proposal on feature inheritance, C°'s features are inherited by T° (I refine this point in Chapter 5, but nothing hinges on it for the moment). As a result, T° is a probe and begins searching for an element with matching interpretable Φ-features. Assuming Chomsky's (2000, 2001) proposal that the sentence derivation proceeds by phases (i.e. cycles of syntactic computations that are sent to LF and PF components; Legate 2003, Jiménez-Fernández 2009), T°'s search is limited in domain because it is governed by the so-called the Phase Impenetrability Condition, which is stated below.

(28)   The Phase Impenetrability Condition (PIC)
         In Phase α with head H, the domain of H is not accessible to operations outside α, only
         H and its edge are accessible to such operations (Chomsky 2001: 14).

The terms of the PIC can be diagrammed as follows:
(29)

$$[_{ZP} \quad Z.... [_{HP} \ (SPEC) \ H \ [... \quad XP \quad .... \ ] \ ]]$$

.......EDGE...   ...COMPLEMNT
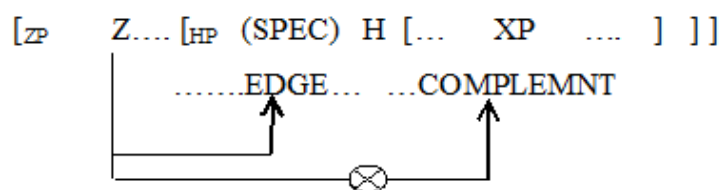
(Gallego and Uriagereka 2007: 47)

Phases are typically the propositional categories: CP (the complete expression structure) and v*P (the complete argument structure) (Miyagawa 2010; Gallego 2012). The elements with interpretable Φ-features that Tº searches for within its visible c-command domain are located in its complement (understood here as any functional phrase between TP and vP), down to the edge of the v*P phase, and the head v*. The domain of Tº's search can be schematically represented as follows:

(30)
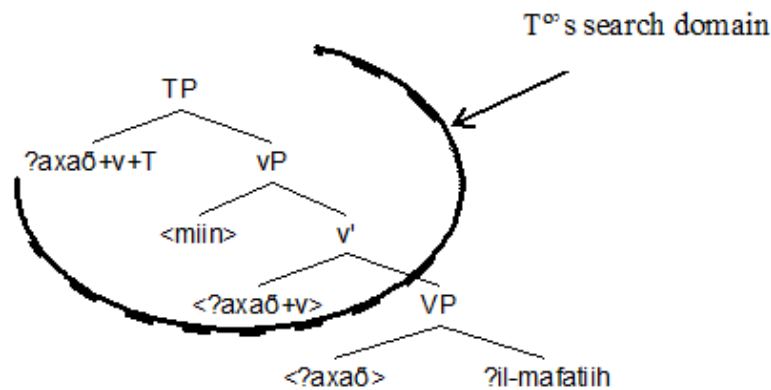
Probing down, Tº finds the subject, *miin*, as an active goal with interpretable features and whose structural Case is still unvalued. A probe-goal relation is established between Tº and the subject wh-word, *miin*. As a result, the uninterpretable features of Tº are valued as [3PL.M], which determines the form of the verb at PF, while at LF, such features are deleted. As an outcome of this valuation, a synthetic suffix –*u* [3PL.M] specified with the same Φ-content of the subject is realized on the verb *ʔaχað*.

One remark on the Φ-features of the subject wh-word is in order. As is clear from all examples above, the subject wh-word *miin* is invariant.[12] The actual specification of interpretable Φ-features of wh-word *miin* can be determined once a probe-goal relation is established between it and Tº.[13] In question (31a) below, the speaker asks about the girl who took the keys. This is manifested by the agreement marker –*t* [3SG.F] on the verb. In (31b) the speaker asks about the girls who took the keys, resulting in the [3PL.F] agreement marker –*n* on the verb.

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[12] When the subject is intended to be non-human, the subject wh-word used is either *ʃuu* or *eeʃ* which are interchangeably used with all inflected forms of the verb; but see, Abdel-Razaq (2015) for a nano-syntactic proposal on the potential differences between them.

[13] The fact that the wh-words have a bundle of Φ-features is clearer in Iraqi Arabic and Kuwaiti Arabic contexts, where some wh-words bear a pronominal clitic with overt Φ-content, as in Iraqi Arabic wh-word *men-o* [who-him].

(31)   a. miin   ʔilli   ʔaχað-at   ʔil-mafatiiħ?
         who   ʔILLI   took-3SG.F   DEF-keys
      'Who took the keys?'

      b. miin   ʔilli   ʔaχað-n   ʔil-mafatiiħ?
         who   ʔILLI   took-3PL.F   DEF-keys
      'Who took the keys?'

What is important here to mention is that it is not sufficient for the derivation of the relevant question to converge that the uninterpretable Φ-features on Tº are valued. The demands of the Subject Criterion must be satisfied, as well. As shown above, the normal procedure to do so in declarative clauses is through the movement of the subject to Spec,SubjP. Nonetheless, the derivation cannot be pursued following this path because the subject wh-word once it satisfies the Subject Criterion would resist movement, and no subject extraction would be possible, as schematically indicated in the following structure.

(32)
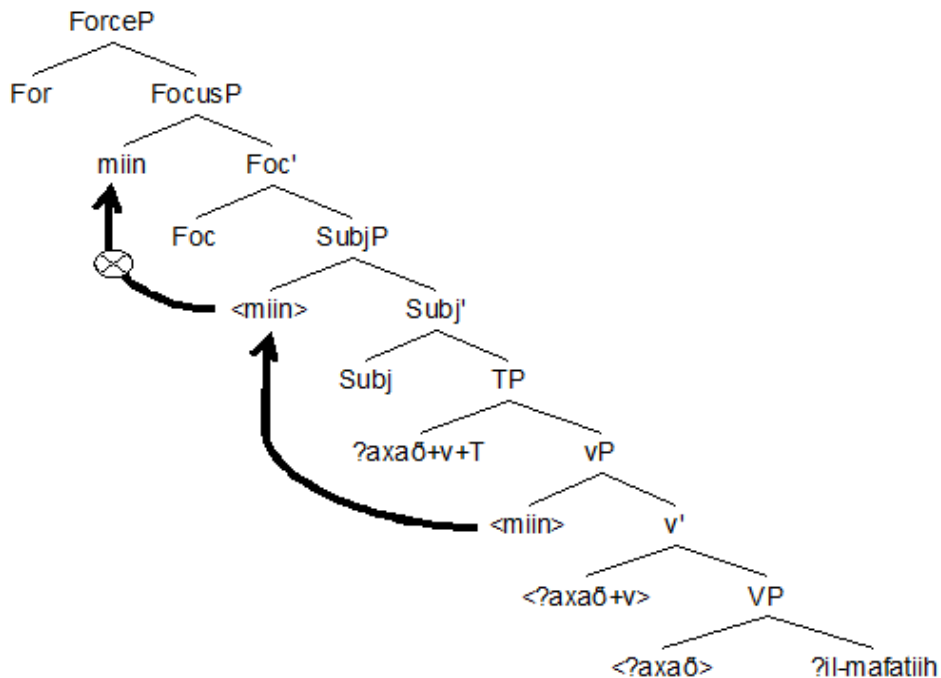
Given that the subject wh-word *miin* is endowed with an uninterpretable [Q] feature, it must raise to Spec, Focus Phrase, attracted by the [Q] feature on Focº to satisfy the Question

Criterion (cf. Rizzi 2006).[14] Accordingly, at one point of the question derivation, the Subject Criterion and the Question Criterion both demand the subject wh-word *miin* to meet their requirements at the same time. This state of affairs can be seen as a conflict of interest since both criteria are at work and must be satisfied. The Question Criterion is what, metaphorically speaking, *wins* in attracting the subject wh-word, implying that JA employs some strategy to void the violation of the Subject Criterion. Some empirical evidence for the movement of the wh-word *miin* to CP-system of the respective question comes from the position of the wh-word *miin* relative to the evidential particle *ʃikil*, which indicates that the speaker is not certain of the truth value of propositional content of his/her utterance, though he/she has indirect evidence for it (see, Jarrah and Alshamari 2017, to appear, for discussion). Following Cinque (1999), I assume that *ʃikil* is a head that projects Evid_ential Phrase in the high IP area. As shown from the contrast between the two sentences (33b, and 33c), the wh-word *miin* must appear to the left of *ʃikil*, indicating that *miin* does actually move to the left periphery, satisfying the Question Criterion. (Sentence (33a) represents an instance with a non-extracted subject).

(33)   a. ʃikil-hum   l-iwlaad   ʔaχað-u   ʔil-mafatiiħ
           PRT-3PL.M   DEF-boys   took-3PL.M   DEF-keys
        'The boys have evidently taken the keys'

        b. miin   ʃikil-hum   ʔilli   ʔaχað-u   ʔil-mafatiiħ?
           who   PRT-3PL.M   ʔILLI   took-3PL.M   DEF-keys
        'Who has evidently taken the keys?'

        c. *ʃikil-hum   miin   ʔilli   ʔaχað-u   ʔil-mafatiiħ?
           PRT-3PL.M   who   ILLI   took-3PL.M   DEF-keys
        Intended: 'Who has evidently taken the keys?'

The question that arises here is how the requirements of the Subject Criterion are met. I argue that once the subject wh-word is unable (or unavailable) to meet the requirements of the Subject Criterion, *ʔilli*, as an XP, is used just to do so. Following the proposed analysis, the question in (27), reproduced below as (34), has the schematic representation in (35):

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[14] Note here that a number of authors have argued that focus elements and wh-words occupy the same surface syntactic position due to their complementary distribution with each other (something that turns Focus Phrase into a multi-functional projection) (see, Bakir 1980, Horvath 1986, Zubizarreta 1998, Szendroi 2004).

(34)   miin   ʔilli   ʔaχað-u   ʔil-mafatiiħ?

          who   ʔILLI   took-3PL.M   DEF-keys

          'Who took the keys?'

(35)
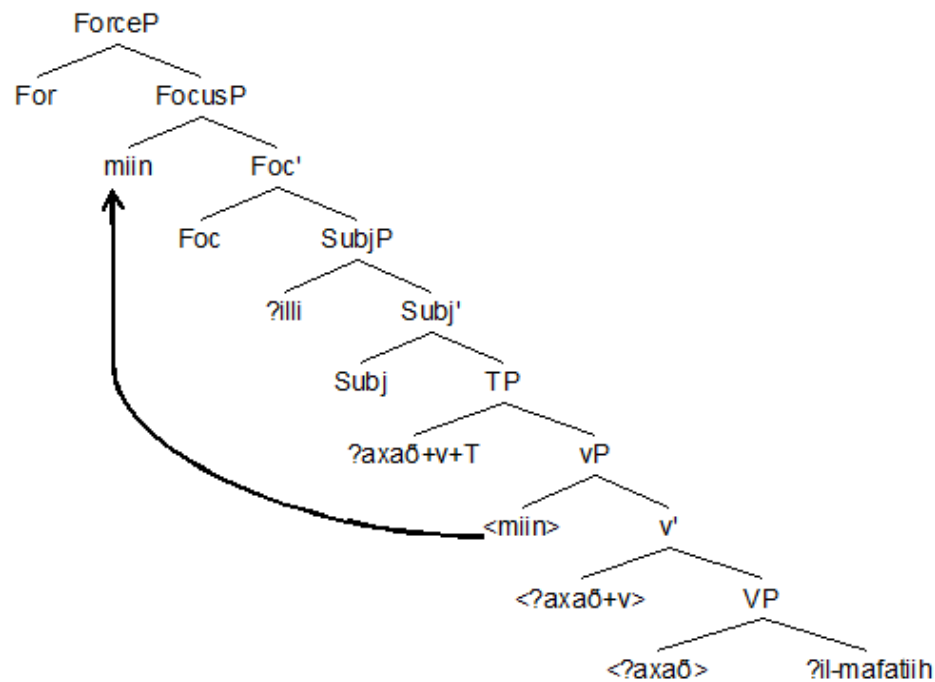
In order to show that *ʔilli* is in Spec,SubjP, I bring below first several pieces of evidence that *ʔilli* is located in a position below CP. This evidence comes mainly from the position of *ʔilli* relative to dislocated elements to CP. Having established this, I bring afterwards evidence that *ʔilli* is an XP element that fills Spec,SubjP. This evidence comes from the complementary distribution of *ʔilli* and the expletive *fiih.*

Some evidence for *ʔilli* being in a position below CP can first be induced likewise by its position relative to the evidential particle *ʃikil*. Under no circumstances can *ʔilli* appear to the left of *ʃikil*. Consider the following example:

(36) miin   (ʃikil-hum)   ʔilli   (*ʃikil-hum) ʔaχað-u   ʔil-mafatiiħ?

     who   PRT-3PL.M   ʔILLI PRT-3PL.M took-3PL.M   DEF-keys

     'Who has evidently taken the keys?'

ʃikil as an evidential particle occupies the head of Evid_{ential} Phrase which is according to Cinque (1999) is high in the IP area, c-commanding SubjP (and TP). *ʔilli* is thus positioned under Evid_{ential} Phrase.

Further evidence for *ʔilli* being in a position below CP comes from the position of *ʔilli* with respect to the position of topicalized elements which should appear in JA to the left of *ʔilli*. For instance, in (37) below the topicalized adjunct *ʔimbaariħ* 'yesterday' appears to the left of *ʔilli* but to the right of the displaced subject wh-word *miin*, indicating that *ʔimbaariħ* is fronted to Topic Phrase, situated below Focus Phrase (cf. Rizzi 1997). Note here that *ʔimbaariħ* in such contexts should be followed by an intonation break and is contrastively interpreted:

(37)   miin   ʔimbaariħ,   ʔilli   ʔaχað-at   ʔil-mafatiiħ?

             who   yesterday   ʔILLI   took-3SG.F   DEF-keys

             'Yesterday (not last week), who took the keys?'

The same adjunct *ʔimbaariħ* can appear to the left of the wh-word *miin*, landing in the upper Topic Phrase, situated above Focus Phrase (cf. Rizzi 1997).

(38)   ʔimbaariħ   miin   ʔilli   ʔaχað-at   ʔil-mafatiiħ.

             yesterday   who   ʔILLI   took-3SG.F   DEF-keys

             'Yesterday, who took the keys?'

Additionally, the subject wh-word *miin* can be sandwiched between two topicalized elements which both should precede *ʔilli*, as shown below:

(39)   ʔimbaariħ   miin   ʔibsurʕah   ʔilli   ʔaχað-at   ʔil-mafatiiħ.

             yesterday   who   quickly   ʔILLI   took.3SG.F   DEF-keys

             'Yesterday, who quickly took the keys?'

Following the assumption that there is only one focus constituent per a clause (Calabrese 1992, 1992, Belletti 2001, Rizzi 1997), sentences (37-39) are bona fide evidence for the lower position that *ʔilli* occupies. Assuming that the wh-word *miin* is in Spec,Focus Phrase, *ʔimbaariħ* 'yesterday' is in (39) positioned in the upper Topic Phrase (labelled as TopP (1) in the tree below), whereas *ʔibsurʕah* 'quickly' is in the lower Topic Phrase (labelled as TopP (2)):[15]

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[15] Following Rizzi (2004), the adjunct *ʔibsurʕah* 'quickly' might move to ModP (rather than lower Topic Phrase). This is not a significant issue here as ModP and lower Topic Phrase are located in the same area of CP, i.e. c-commanded by Focus Phrase but c-commanding SubjP.

(40)

ForceP
  For   TopP (1)
     ʔimbaariħ   Top'
              Top   FocusP
                  miin   Foc'
                       Foc   TopP (2)
                          ʔibsurʕah   Top
                                  Top   SubjP
                                     ʔilli   Subj'
                                          Subj   .....
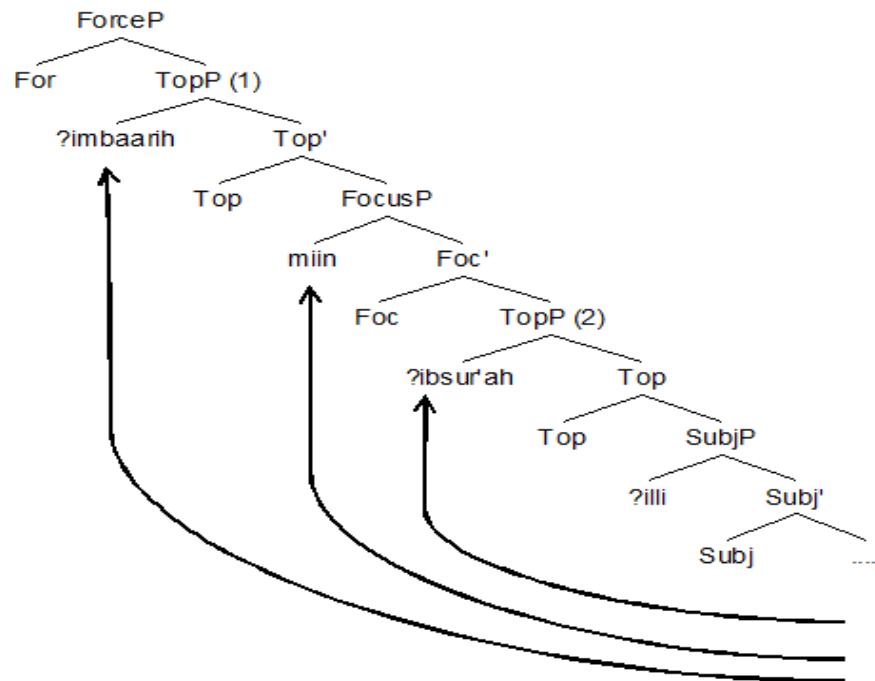
What also lends support to my contention that *ʔilli* occupies Spec,SubjP comes from object topicalization. The fronted object does not appear between *ʔilli* and the verb. This indicates that there is no structural position available for the fronted object between *ʔilli* and the verb, as demonstrated by the ill-formed question in (41a) below. The object can be preposed to a position directly to the left of *ʔilli,* as in (41b) or even to the left of the subject wh-word *miin*, as in (41c).

(41)   a. *miin   ʔilli   ʔil-mafatiiħ   ʔaχað-u-hin?
            who   ʔILLI   DEF-keys   took-3PL.M -3PL.F
         'Who took the keys?'

        b. miin   ʔil-mafatiiħ   ʔilli   ʔaχað-u-hin?
            who   DEF-keys   ʔILLI   took-3PL.M-3PL.F
         'The keys, who took them?'

        c. ʔil-mafatiiħ   miin   ʔilli   ʔaχað-u-hin?
            DEF-keys   who   ʔILLI   took-3PL.M-3PL.F
         'The keys, who took them?'

In view of this, *ʔilli* is situated in a position below CP but above T^0.

One conclusive piece of evidence for *ʔilli* being in Spec,SubjP and an XP element comes from its complementary distribution with the expletive *fiih* in existential questions. The necessity for *ʔilli* no longer holds in the presence of the expletive *fiih*. Consider the following example:

(42)   miin   fiih   ʔib-daar-na?
          Who   EXP   in-DEF-our
          'Who is in our house?'

If *ʔilli* is inserted either to the left or to the right of *fiih*, the resulting question would be ungrammatical.

(43)   miin   (*ʔilli)   fiih   (*ʔilli)   ʔib-daar-na?
          who   ʔILLI   EXP   ʔILLI   in-DEF-our
          'Who is in our house?'

The only conceivable way to use *ʔilli* in existential questions is to replace *fiih* itself, a reliable sign that *ʔilli* fills the same position of *fiih*. *ʔilli* and *fiih* compete for the same structural position, complying with the strong requirements of the Subject Criterion.

(44)   miin   ʔilli   ʔib-daar-na?
          who   ʔILLI   in-DEF-our
          'Who is in our house?'

Note that examples (42-44) imply that *ʔilli* is not a head, given it alternates with the expletive *fiih* that clearly occupies the subject position (see, Alsarayreh 2012, Jarad 2012, Abdel-Ghafer and Jarbou 2015, Al-Momani 2015 for that *fiih* is an expletive in JA).[16]

Accordingly, Gad's (2011) contention that *ʔilli* is a focus particle does not hold true of JA grammar. *ʔilli* is an element used to satisfy the strong demands of the Subject Criterion. In addition, the findings thus far contradict the long-standing view that *ʔilli* is an overt complementizer in questions (cf. Shlonsky 2002, Soltan 2011).

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[16] Additional evidence in favour of the assumption that *ʔilli* is an XP element comes from the facts that unlike heads in Arabic *ʔilli* cannot be suffixed or prefixed, and it can be replaced with a locative or temporal adjunct as will be shown in the following chapter. However, one might suggest that *ʔilli* being a particle is a X° element that heads SubjP. I argue against this possibility but it is still subject to further research.

The natural question that arises here is why *ʔilli* is optional in questions with the verb displaying [3SG.M] content. I argue that the answer to this question lies in the hypothesis that *ʔilli* is a D-linking element which satisfies the Subject Criterion only when the subject wh-word is D-linked, a matter I take up in the next section.

2.5 *ʔilli* as a D-linking particle

As shown in section 2.3, *ʔilli* is more or less optional when the verb displays [3SG.M] content, as shown in the following examples:

(45)   a. miin   (ʔilli)   ʔaχað   ʔil-mafatiiħ?
            who   ʔILLI   took.3SG.M   DEF-keys
         'Who took the keys?'

          b. miin   (ʔilli)   rawwah?
            who   ʔILLI   went home.3SG.M
         'Who has gone home?'

In (45), *ʔilli* is optional as the main verb displays [3SG.M] content in sharp contradiction with the instances where the verb shows different agreement, rather than [3SG.M]. So why does the absence of *ʔilli* not make the question ungrammatical though there is no a deictic adjunct occurring to the immediate left of the tensed verb? First and foremost, the possibility that the subject wh-word in such cases does not move to CP but rather to Spec,SubjP is ruled out. That is because it should appear to the left of the evidential particle *ʃikil,* as shown in (46):

(46)   (*ʃikil-uh)   miin   (ʃikil-uh)   ʔaχað   ʔil-mafatiiħ?
            PRT-3SG.M   who   PRT-3SG.M   took.3SG.M   DEF-keys
         'Who has evidently taken the keys?'

It is clear that the Question Criterion is satisfied by the subject wh-word *miin*. The question to ask here is how the Subject Criterion is met under such cases. One direct possibility is that since JA is a pro-drop language, it can be postulated that Spec,SubjP being a non-argument position can be filled with an expletive *pro*, a pronominal that is analogous to overt pronominals such as English *it,* minus phonological content (cf. Cardinaletti 2004: 132).

Hence, the demands of the Subject Criterion are met. One might wonder here why the verb shows only [3SG.M] agreement in such cases. I assume that the wh-word used in such cases is not endowed with Φ-features (being non-D-linked, i.e. non-referential, as will be shown below). The uninterpretable Φ-features of T° are accordingly valued as default, namely [3SG.M]. Note that in Arabic it just happens that affixes encoding lack of Φ-features have the same phonetic form as those specified as [3SG.M] (Fassi Fehri 1993, Johns 2007). In line with this possibility, the question (45a) when *ʔilli* is not used is schematically represented as follows:

(47)
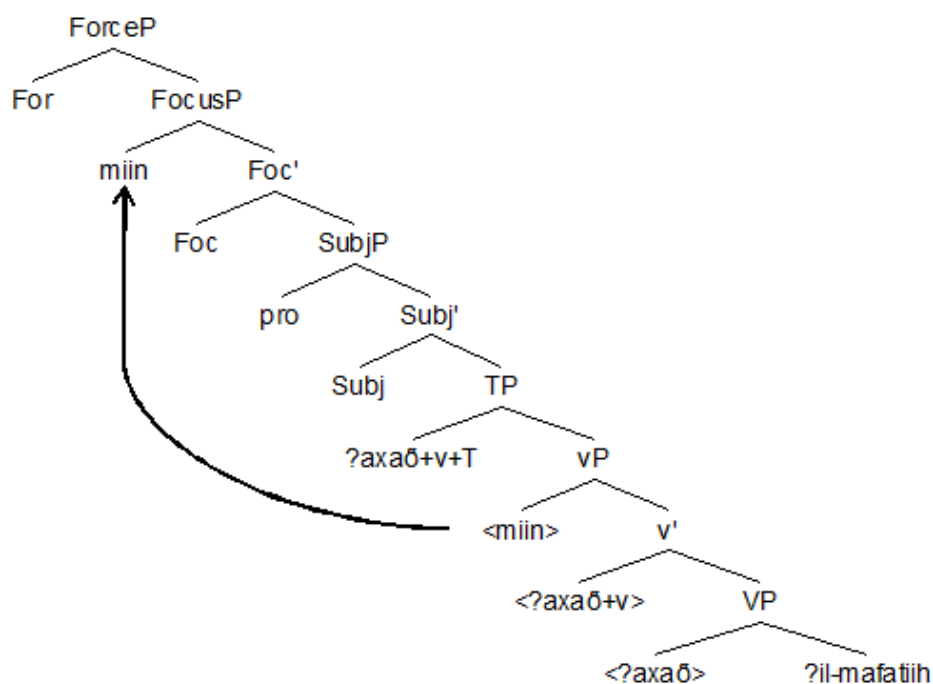
The next question to ask here is why *ʔilli* is still an available mechanism of satisfying the demands of the Subject Criterion when the verb shows [3SG.M] content. Once this issue is resolved, a better account of subject extraction can be made. One promising account for this issue is based on the observation that questions with *ʔilli* are different from the questions without it in that the former imply presupposition while the latter do not (see Eilam and Lia 2009 for an argument that not all types of questions are presuppositional). Shlonsky (2002) argues that the use of *ʔilli* in questions in Palestinian Arabic triggers presupposition. He reports the following examples (Shlonsky 2002: 142):

(48)   a. miin   ħall   l-muʃkile?
            who   solved   the-problem
         'Who solved the problem?'

b. miin ʔilli ħall l-muʃkile?

who that solved the-problem

'Who solved the problem?'

Shlonsky argues that *ʔilli* in (48b) is prompted because the speaker presupposes that there is one having solved the problem; hence it provides a definite description, and the clause in which it appears as a predicate is a statement of identity. (48a) does not imply such presuppositional effects. Shlonsky also argues that when the question lacks presupposition, the verb of the interrogative clause can only bear default [3SG.M] agreement.

The same presuppositional effects arise in questions with *ʔilli* in JA. Using *ʔilli,* the speaker implies existence of a set of alternatives from which he/she is asking for a choice. Consider the following examples:

(49)   a. miin ʔilli ʔaχað-at ʔil-mafatiiħ?

who ʔILLI took-3SG.F DEF-keys

'Who took the keys?'

b. miin ʔilli ʔaχað-u ʔil-mafatiiħ?

who ʔILLI took-3PL.M DEF-keys

'Who took the keys?'

The speaker in (49a) presupposes that the person who took the keys is a female rather than a male entity, while in (49b) the speaker implies that who took the keys is a set of male people. In the two cases, the speaker implies some discourse knowledge on which he/she establishes his/her presupposition. One piece of evidence for my assumption that questions with *ʔilli* indicate a presupposition comes from the impossibility of using such questions in out-of-the-blue contexts which requires no previous discourse (cf. Frey 2004, Rizzi 2005, Adger 2007), as shown in the following example:

(50)   ʃuuh (*ʔilli) sˤaar?

what ʔILLI happened.3SG.M

'What happened?'

Question (50) is ungrammatical with *ʔilli* despite the observation that *ʔilli* is in most cases optional when the verb displays [3SG.M] content. The ungrammaticality of question (50) with *ʔilli* is readily accounted for assuming that *ʔilli* is only used in questions preceded by discourse. Following this line of thought, I claim that *ʔilli* is only used in questions where the subject wh-word is D-linked, that is, implying the existence of a set of contextually determined entities from which the speaker is asking for a choice (cf. Jiménez-Fernández 2009: 119). A relevant point here is that *ʔilli* cannot be used in a *who* question out of the blue, as shown in the following example:

Context: a teacher entering a classroom and directly asking the following question:

(51)   miin   (*ʔilli)   ʔidʒiib   massaaħa   la-l-looħ?
         who   ʔILLI   bring.3SG.M   rubber   to-DEF-whiteboard
         'Who bring a whiteboard rubber?'

The question in (51) occurs in an out-of-the-blue context where there is no previous discourse between the teacher and the students. In such cases, *ʔilli* is disallowed, something that lends support to my analysis that *ʔilli* is licensed by D-linking.

Some convergent evidence for this contention can also be adduced with reference to subject extraction with the wh+DP expressions (as in *which man*). Such wh-expressions are necessarily D-linked by the virtue of their complement NP/DP that determines the relevant entities from which the speaker is asking for a choice. When the subject wh-word comes as a wh+NP/DP expression, *ʔilli* must be used (or a deictic temporal/locative adjunct must appear between the wh-phrase and the verb, an observation I return to later) even if the verb shows [3SG.M] agreement. Consider the following example:

(52)   miin   ʔiz-zalamah   *(ʔilli)   ʔaχað   ʔil-mafatiiħ?
         who   DEF-man   D-PRT   took.3SG.M   DEF-keys
         'Which man took the keys?'

Although the verb in (52) shows [3SG.M] content, *ʔilli* is obligatory. The question in (52) is interpreted as the speaker asks about a man (not a woman, a child, etc.) who took the keys. Using the wh+DP expression *miin ʔiz-zalamah* 'lit. which the man', the speaker determines the entities (i.e. men) from which he/she asks for a choice. This discussion makes the most

sense when coupled with the observation that *ʔilli* must be also used when the wh-word used is modified, even if the verb shows [3SG.M] content, as exemplified in the following example:

(53)　　　miin　　ʔitˤ-tˤawiil　　*(ʔilli)　　ʔaχað　　ʔil-mafatiiħ?

　　　　　who　　DEF-tall　　ʔILLI　　took.3SG.M　　DEF-keys

　　　　　'Which tall (man) took the keys?'

In (53), the speaker delimits the candidates for the answer of his/her question. With an appropriate context of the question in (53) in mind (e.g. the speaker addresses school boys) the speaker assumes that a tall person must have taken the keys, presupposing that they are located in a place that is accessible only to tall people.

Additional corroboratory evidence that *ʔilli* is used when the question is D-linked comes from the answer of the questions with the verb displaying [3SG.M] agreement. For instance, it is felicitous to answer the question in (54a) with a [3SG.M] entity only, whereas the answer for the question in (54b) would be any entity, irrespective of its Φ-content (Infelicity is marked by #):[17]

(54)　　　a. miin　　ʔilli　　ʔaχað　　ʔil-mafatiiħ?

　　　　　who　　D-PRT　　took.3SG.M　　DEF-keys

　　　　　'Who took the keys?'

　　　　　A'. ʔibin　　ʕamm-i

　　　　　　son　　uncle-my

　　　　　　'My male cousin'

　　　　　A''. #binit　　ʕamm-i

　　　　　　Daughter　　uncle-my

　　　　　　'My female cousin,

　　　　　A'''. #ʔisˤħaab-i

　　　　　　Friends-my

　　　　　　'My friends'

---

[17] A sentence/utterance is grammatical if it satisfies all the syntactic, semantic, morphological and phonological principles of the grammar, whereas it is felicitous when its information structure matches the information packaging of its context (topic/comment; theme/rhema structure) (Szendrői 2004: 296).

b. miin   ʔaχað   ʔil-mafatiiħ?

   who   took.3SG.M   DEF-keys

'Who took the keys?'

A'. ʔibin   ʕamm-i

   Son   uncle-my

'My male cousin'

A''. binit   ʕamm-i

   Daughter uncle-my

'My female cousin,

A'''.ʔisˤħaab-i

   Friends-my

'My friends'

The proposed answers for the question in (54a) which includes *ʔilli* and where the verb displays [3SG.M] agreement show that the answers with [3SG.M] content are more felicitous than the answers with any other Φ-content. That is because the speaker presupposes that who took the key is a [3SG.M] entity. On the other hand, the proposed answers for the question in (54b) which does not include *ʔilli* and where the verb displays [3SG.M] content show that answers with any content would be felicitous. That is because the speaker does not presuppose the existence of a set of contextually determined entities from which he/she is asking for a choice. As a result, the [3SG.M] form of the verb is in such cases a product of lack of agreement, where the verb is assigned the default form (henceforth, I gloss *ʔilli* as D-PRT, a shorthand for a discourse particle).[18]

---

[18] What can also be evidence that *ʔilli*-questions are presuppositional is that such questions can be answered with *nobody* or *nothing*. This is evidence on the ground that presuppositions can be negated (Seuren 1988):

   i.   miin   ʔilli   ʔaχað   ʔil-mafatiiħ?
         who   D-PRT   took.3SG.M   DEF-keys
         'Who took the keys?'
   ii.   wala-ħada!
         nobody
         'Nobody!'

In view of these pieces of evidence (i.e. subject extraction with wh+DP expressions, subject extraction with modified wh-words, and the possible answers for the question with *ʔilli*), I argue that SubjP is still projected in questions with the verb that displays default agreement. Additionally, the requirement of Spec,SubjP to be filled with some material is satisfied by an expletive *pro* whose null PF content does not affect its licensing in Spec,SubjP (see, Rizzi and Shlonsky 2007). These observations can be translated into what I label as '*The D-linking condition of the Subject Criterion*', which is formulated as follows:

(55)   The D-linking condition of the Subject Criterion:
     Spec,SubjP is filled with an element with the same D-linking status as the subject wh-word (D-linked vs. non-D-linked)

JA appears unique to other null-subject languages in that the D-linking condition of the Subject Criterion is operating. Additionally, due to the requirement of D-linking 'sameness' between Spec,SubjP and the extracted wh-word, it can be postulated that the condition in (55) is a form of an agreement condition.

Along these lines, I can account for why *ʔilli* is optional in questions with the verb displaying [3SG.M] content. Logically speaking, when asking such questions, the speaker has two options, depending on his/her discourse knowledge of the questions. Firstly, he/she is really asking about a male singular entity. In this situation, *ʔilli* is used since the subject wh-word is D-linked. The [3SG.M] form of the verb is an agreement-produced form. Secondly, the speaker does not identify any entities from which he/she is asking for a choice. The subject wh-word is therefore non-D-linked, and it lacks agreement features. The [3SG.M] form of the verb in such cases is a PF reflex of invariant default agreement. Consequently, *ʔilli* is not an available strategy, given the D-linking condition of the Subject Criterion. Spec,SubjP is filled with an expletive *pro*, being a non-referential, non-D-linked element.

It is also clear why the interaction with D-linking does not arise when the verb displays agreement rather than [3SG.M]. That is because the question in such cases is always D-linked. The speaker refers to a specific subset which is pre-established in the context of the relevant question; hence the wh-words in such questions are referential (cf. Cinque 1990). For instance, when the verb comes out as [3PL.F], the speaker has identified girls as a subset of the context from which he/she asks for a choice. Even if the speaker does not refer to a specific girl, he/she singles out girls of the whole context which includes men. When the verb

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shows any inflected agreement, the speaker presupposes some discourse-related knowledge of the question. This is why *ʔilli* is always used when the verb shows agreement other than [3SG.M].

It is timely to explore at this point one piece of evidence that has been widely assumed to be the driving force for treating *ʔilli* as a complementizer, namely the occurrence of what has been frequently called a copula pronoun that appears between the wh-word and *ʔilli*.

2.6   *ʔilli* and copular pronouns

For many authors (e.g. Ouhalla 1999, Shlonsky 2002, Soltan 2011, Abdel-Razaq 2015), what appears as a copular pronoun (which appears in boldface in the following example) is a morphological realization of the head that mediates between the cleft or upper CP and the lower CP, an analysis known as bi-clausal analysis.

(56)   miin   **huu**   ʔilli   ʔaχað   ʔil-mafatiiħ?
          who   he   D-PRT   took.3SG.M   DEF-keys
          'Who took the keys?'

For these authors, my analysis of questions with *ʔilli* would not predict the occurrence of such a pronoun, and hence it would count as a serious challenge against treating *ʔilli* as an XP element that fills Spec,SubjP. I reject this potential objection as these authors have apparently failed to notice two significant observations that obviously undermine these proposals and, at the same time, offer more credit to my analysis.

The first observation that would receive no explanation under the bi-clausal analysis to *ʔilli*-questions is the fact that the (copular) pronoun is totally banned when the wh-word is a constituent wh-word (i.e. wh+DP):

(57)   miin   ʔiz-zalameh   (***huu)**   ʔilli   ʔaχað   ʔil-mafatiiħ?
          who   DEF-man   he   D-PRT   took.3SG.M DEF-keys
          'Who took the keys?'

The assumption that the boldfaced pronoun is a copula leaves us with no room to explain the ban against the occurrence of the pronoun in such cases. On the other hand, if we suppose that

the wh-word and the pronoun is one constituent (i.e. wh+PRON) that moves to Spec,Focus Phrase, the ban against the pronoun in questions with constituent wh-words (wh+DP) is readily accounted for. The DP and the pronoun vie for the same slot inside the wh-phrase, resulting in their complementary distribution. Given the occurrence of the pronoun which is D-linked as it narrows down the candidates that the speaker is looking for a potential choice from them, Spec,SubjP must be filled with a D-linked element, whence the use of *ʔilli*. Note that the pronoun is variant, in the sense that it is inflected for agreement which delimits the set of candidates that the speaker is considering:

(58) miin **hii/hum/hin**   ʔilli   ʔaχað-t/-u/-n   ʔil-mafatiiħ?

     who   she/they.M/they.F   D-PRT took.3SG.F/3PL.M/3PL.F   DEF-keys

     'Who took the keys?'

The second observation that the clausal analysis is also incapable of accounting for, which is by itself evidence that the pronoun is part of the wh-phrase which also includes the wh-operator, is the occurrence of a nominal modifier right after the pronoun:

(59)   miin   huu   ʔis-aafil   ʔilli   ʔaχað   ʔil-mafatiiħ?

       who   he   DEF-bad   D-PRT took.3SG.M   DEF-keys

       'Which bad person took the keys?'

The occurrence of the nominal modifier *ʔissaafil* is never predicted under the bi-clausal analysis. This problematic fact for the latter analysis is straightforwardly accounted for under my proposed analysis. The nominal modifier is simply a part of the DP which moves to the left periphery and which also includes the wh-operator and the pronoun (wh+PRON+nominal modifier). Given that nominal modifiers in Arabic appears post-nominally, the occurrence of the nominal modifier after the pronoun is expected. It is clear that my analysis is better equipped to account for all observations related to subject extraction. Additionally, it requires less computational load as the whole question is one clause that includes no clefts nor upper CP (I discuss the use of *ʔilli* in questions with object extraction in the following chapter; see §3.4)

2.7   Conclusion

This chapter shows that subject extraction facts of JA fit under Criterial Freezing and the Subject Criterion. The main assumption advocated here is that *ʔilli* is an element used in JA to escape the Subject Criterion effects in cases where the subject wh-word is D-linked, following the postulated D-linking condition of the Subject Criterion. *ʔilli* is base-generated in Spec,SubjP, ensuring question convergence when the subject is extracted out of its thematic position. *ʔilli*'s position relative to the topicalized object and the evidential particle *ʃikil*, and its complementary distribution with the expletive *fiih* have been taken as diagnostics for *ʔilli* being in Spec,SubjP. The major advantage of this approach to *ʔilli* is that it does not appeal to a complex derivation of such questions, as compared to other approaches (Shlonsky 2002, Abdel Razaq 2015), but deals with them on a rather intuitive basis. Furthermore, this chapter suggests that in questions where the subject wh-word is not D-linked (with a verb displaying the default form, i.e. [3SG.M]), Spec,SubjP is filled with an expletive *pro* in agreement with the postulated D-linking condition of the Subject Criterion which allows Spec,SubjP to be filled with a non-D-linked element as the subject wh-word is not D-linked.

A major line of evidence in favour of the co-relation between D-linking and satisfaction of the Subject Criterion comes from the other mechanism JA provides to meet the requirements of the Subject Criterion, namely a deictic temporal/locative adjunct, the main concern of the following chapter.

Chapter THREE: Deictic adjuncts and subject extraction

3.1 Introduction

In the previous chapter, I have argued in length in favour of the assumption that *ʔilli* is an XP element used in JA to escape the Subject Criterion effects in cases where the subject wh-word is D-linked, following the postulated D-linking condition of the Subject Criterion. *ʔilli* is base-generated in Spec,SubjP, thus acting as a strategy to save the question derivation when the subject is extracted. *ʔilli*'s position relative to the topicalized object and the evidential particle *ʃikil* and its systematic strict complementary distribution with the expletive *fiih* provide evidence for *ʔilli* being in Spec,SubjP.

In this chapter, I offer further evidence in favour of the correlation between D-linking and the filling of Spec,SubjP in JA. I will show that deictic temporal adjuncts like *yesterday* and deictic locative adjuncts (though constrained to unaccusative questions) can also fill Spec,SubjP when the wh-word is D-linked, given that they are D-linked, by virtue of first containing a nominal TIME/PLACE element (cf. Kayne 2005, Stanton 2016) and second referring to a particular point in discourse. I label this use as locative/temporal stylistic inversion (§ 3.2). This gives rise to the free variation between *ʔilli* and such adjuncts with respect to filling Spec,SubjP. On the other hand, when the subject wh-word is not D-linked, Spec,SubjP is filled with an expletive *pro*, as suggested in the previous chapter (see § 2.5). All these ways stand for what Rizzi and Shlonsky (2007) call skipping strategies where the subject is moved directly from its thematic position, and Spec,SubjP is filled with a different element. Furthermore, I provide empirical evidence to the effect that deictic temporal adjuncts are adjoined to TP, whereas deictic locative adjuncts are adjoined to VP (§ 3.3), accounting for the observation that locative stylistic inversion is restricted to unaccusative questions. In addition, I investigate the use of *ʔilli* in object extraction, arguing that its use is forced because the thematic subject cannot fill Spec,SubjP due to the intervention effect invoked by the heavily featured object wh-word (§ 3.4).

3.2 Temporal/locative stylistic inversion

A crucial observation for my analysis of subject extraction in JA is the observation that the need for *ʔilli* is obviated in instances like (1), even if the verb is inflected for agreement:

(1) miin   ʔimbaariħ   ʔaχað-at   ʔil-mafatiiħ?
    who   yesterday   took-3SG.F   DEF-keys
     'Who took the keys yesterday?'

In such cases, a deictic temporal/locative adjunct must appear to the left of the verb. As shown in Chapter 2 (§ 2.3), this adjunct must be a deictic temporal adjunct if the question is transitive (or unergative). For instance, if the adjunct *ʔimbaariħ* 'yesterday' is replaced with a locative adjunct like *min l-xzaanih* 'from the closet' as in (2) below, the particle *ʔilli* should be used when the verb is inflected for agreement. Note that the given locative adjunct in (2) is construed as a topicalized element when it precedes *ʔilli*.

(2) miin   min   ʔil-xzaanih   *(ʔilli)   ʔaχað-at   ʔil-mafatiiħ?
    who   from   DEF-closet   D-PRT   took-3SG.F   DEF-keys
     'From the closet, who took the keys?'

On the other hand, if the adjunct *ʔimbaariħ* 'yesterday' is replaced with a locative adjunct in an unaccusative question (consider (3) below), the resulting question remains grammatical even if the verb shows agreement. This implies that the restriction against the use of locative adjuncts in the absence of *ʔilli* is relaxed in unaccusative questions. Note that the locative adjunct is not construed as a topicalized element in such cases but has an unmarked interpretation (i.e. no topicalization nor focalization).

(3) a. miin   ʔimbaariħ   wigʕ-at?
       who   yesterday   fell down.3SG.F
        'Who fell down yesterday?'

    b. miin   min   sˤ-sˤatˤiħ   wigʕ-at?
       who   from   DEF-floor   fell down.3SG.F
        'Who fell down from the (upper) floor?'

Following Holmberg (2000) and Rizzi and Shlonsky (2006), I assume that adjuncts in JA might play a subject-like role.[19] When there is a subject gap, adjuncts can move out of their base position, filling Spec,SubjP. There is no need thus for *ʔilli* as the Subject Criterion is satisfied by a fronted deictic adjunct.

One piece of evidence that fronted adjuncts in (3) above are not in CP but rather in Spec,SubjP comes from the fact that no discourse-scope reading (i.e. topicalization) is obtained for the fronted adjuncts. For instance, no intonational break after the deictic temporal adjunct *ʔimbaariħ* is required when saying questions like (3a) above, nor does the sentence have an interpretive reading about this adjunct (i.e. the adjunct is not a topic nor a focus). This suggests that the adjunct *ʔimbaariħ* is not in CP. Furthermore, the object cannot appear between the fronted adjunct and the main verb. The following example illustrates this point:

(4) *miin   ʔimbaariħ   ʔil-mafatiiħ   ʔaχað-at-hin?
     who   yesterday   DEF-keys   took-3SG.F-3PL.F
      Intended: 'Yesterday, who took the keys?'

There is no structural position available for the fronted (topicalized) object between the fronted adjunct *ʔimbaariħ* and the main verb *ʔaχað*. The same analysis holds for (3b).

On the other hand, this discussion does not imply that such adjuncts cannot be topicalized. They can be fronted to the left periphery if *ʔilli* is used. Consider the following examples, where the adjunct *ʔimbaariħ* is construed as a topicalized entity:

(5) a. ʔimbaariħ,   miin   *(ʔilli)   ʔaχað-at   ʔil-mafatiiħ?
         yesterday   who   D-PRT   took-3SG.F   DEF-keys
         'Yesterday, who took the keys?'

     b. miin   ʔimbaariħ   *(ʔilli)   ʔaχað-at   ʔil-mafatiiħ?
         who   yesterday   D-PRT   took-3SG.F   DEF -keys
         'Yesterday, who took the keys?'

---

[19] Cross-linguistically growing literature attests the assumption that Spec,SubjP/TP can be filled with adjuncts (Bobaljik 2002, Holmberg and Hróarsdóttir 2004, Landau 2007).

If *ʔimbaariħ* 'yesterday' is either positioned to the right or to the left of the subject wh-word *miin*, *ʔilli* must be used when the topicalization reading of this adjunct is intended. In (5a), a break in the intonational contour is forced, signalled by a comma after it. In question (5b), the speaker is concerned about the person who took the keys yesterday not another day, implying, for instance, that who took the keys yesterday is different from the one who usually takes them.

At this point, there are two questions that deserve consideration; (1) why do only deictic adjuncts militate against *ʔilli* in unaccusative questions and (2) why do only deictic temporal adjuncts militate against *ʔilli* in transitive (and unergative) questions?

As for the first question, I have shown above (see, §2.3) that other types of adjuncts (e.g. manner, frequency etc.) do not behave like deictic adjuncts in the presence or absence of *ʔilli*. Consider the following example:

(6) miin	ʔibwagaaħa/ ʕaadatan	*(ʔilli)	ħakat?
who	rudely/usually	D-PRT	spoke.3SG.F

  'Who rudely/usually spoke?'

The grammaticality of the question in (6) with *ʔilli* implies that deictic adjuncts have special properties that license them in Spec,SubjP, as compared to other types of adjuncts. Following Kayne (2005) and Stanton (2016), I assume that deictic (temporal/locative) adjuncts can occupy Spec,SubjP because they contain some nominal category PLACE and TIME, respectively. Note here that deictic adjuncts must be distinguished from any other types of temporal/locative adjuncts. That is because if other temporal/locative adjuncts had replaced *ʔilli*, the question would be ungrammatical, as shown in the following examples that show that *ʔilli* should be used in conjunction with a fronted durational temporal adjunct *l-χamsat ʔayyaam* 'within five days' in (7a) or the locative adjunct *l-χamsat ʔimtaar* 'for five meters' in (7b).

(7) a. miin	l-χamsat	ʔayyaam	*(ʔilli)	ʔaχað-at	ʔil-mafatiiħ?
who	for-five	days	D-PRT	took-3SG.F	DEF-keys

  'For five days, who took the keys?'

b.miin	l-χamsat	ʔimtaar	*(ʔilli)	ʃaal	ʔil-kursi?
who	for-five	meters	D-PRT	carried-3SG.F	DEF-chair

'For five meters, who carried the chair?'

The questions in (7) indicate that the adjunct which replaces *ʔilli* must first have a nominal category and second be referential (i.e. referring to a specific point in the universe).

As for the second question which is why only fronted deictic temporal adjuncts militate against *ʔilli* in transitive and intransitive questions, while deictic locative adjuncts do only so in unaccusative questions, I assume that deictic temporal adjuncts can function as fillers of Spec,SubjP due to their visibility to Subj°. Subj° attracts the adjuncts that are located within its accessible domain to fill Spec,SubjP. I argue that deictic temporal adjuncts are adjoined to the TP level; they are always visible to Subj°, regardless of the type of the lexical verb. On the other hand, locative adjuncts are low constituents that are adjoined to, most probably, VP which is contained within a different phase, that is, v*P whose PF transfer happens at the point when C° enters the derivation, following Chomsky (2001) (cf. Felser 2004). Locative adjuncts are thus inaccessible to Subj° due to the effects of the PIC which ban Subj° to attract phrases not located at the edge of v*P. By contrast, in intransitive questions with unaccusative verbs where there is no lower v*P (see, Chomsky 2007), all adjuncts adjoining to VP are accessible to Subj°. In the following section, I provide empirical evidence for these assumptions that temporal adjuncts are high, adjoining to TP, whereas locative adjuncts are low adjuncts adjoining to VP and that unaccusative predicates are not phases in JA.

3.3 Structural positions of deictic temporal and locative adjuncts

This section accounts for why temporal stylistic inversion occurs in JA, irrespective of the verb being transitive or intransitive, whereas locative inversion is limited to contexts with an unaccusative verb. It argues that this distinction correlates with the base-generation of temporal/locative adjuncts; temporal adjuncts are base-generated adjoining to TP, whereas locatives are base-generated adjoining to VP. Temporal but not locative adjuncts resist fronting with vP, demand the use of a tense copula (or a tensed verb), and are not subject to deletion along with the lexical verb. With the assumption that Spec,SubjP must be filled with a non-silent copy due to the effects of Subject Criterion (Rizzi and Shlonsky 2007), a temporal or locative adjunct, if there is any, fills this position instead of the extracted thematic subject. Given its low position, a locative adjunct is accessible to Subj^0 only when there is no

v*P, hence the account of the intimate association between locative inversion and the type of the verb used.

I offer evidence from left-dislocation (§ 3.3.1), coordination (§ 3.3.2), ellipsis and cross-linguistic evidence (§ 3.3.3), for the high position of temporal adjuncts and the low position of locatives in the clause whereby they merge.

3.3.1 *Left-dislocation*

The first piece of evidence that temporal adjuncts are high in the clause and adjoin to TP comes from the observation that such elements are not preposed along with the verb and its object in, among others, sentences with the past tense copula *kaan* 'was' that occupies T^0 in the Arabic sentence (cf., Fassi Fehri 1993, 2012, Baker 2003, Benmamoun 2008). In sentences with *kaan*, the main verb is forced to stay in situ, adjoining to little v° (see, Rahhali and Souali 1997). Consider the following examples where (8a) represents the unmarked case of the word order in JA:

(8) a. ʔibin   ʕamm-i   kaan   jiʕmal   buʃaar   ʔimbaarih
    son   uncle-my   was.3SG.M   make.3SG.M   popcorn   yesterday
   'My cousin was making popcorn yesterday.'

b. jiʕmal   buʃaar   ʔibin ʕamm-i   kaan   ʔimbaarih
    make.3SG.M   popcorn   son   uncle-my   was.3SG.M   yesterday
  'Make popcorn is what my cousin did yesterday.'

c. *jiʕmal   buʃaar   ʔimbaarih   ʔibin ʕamm-i   kaan
    make.3SG.M   popcorn   yesterday   son   uncle-my   was.3SG.M
   Intended: 'Make popcorn is what my cousin did yesterday.'

In (8b), the temporal adjunct *ʔimbaarih* 'yesterday' is not pied-piped along with the verb *jiʕmal* 'making' and the object *buʃaar* 'popcorn', whereas the temporal adjunct is proposed in (8c), something that leads to the sentence being ungrammatical. This observation can be accounted for assuming that the complex V+O moves to the left periphery (Spec,Focus Phrase, cf. Rizzi 1997) as one unit. Given that the lexical verb in Arabic moves to little *v°* in narrow syntax (V^0 head-adjoins to v^0, cf. Fassi Fehri 2003, 2012, Balushi 2011, Alshamari

and Jarrah 2016), it is most likely that the whole phase v*P in (8b) is what moves to the left periphery. If the temporal adjunct *ʔimbaarih* 'yesterday' adjoins to vP/VP, it would be preposed all along with the fronted VO, contrary to fact.

The evidence that fronted VO chunk is one unit occupying one slot in the left periphery is supported by the observation that the object cannot appear to the left of the preposed V, as asserted by the ill-formedness of sentence (9).

(9) * buʃaar   jiʕmal(uh)   ʔibin   ʕamm-i   kaan   ʔimbaarih

       popcorn   make.3SG.M-3SG.M   son   uncle-my   was.3SG.M   yesterday

    'Make popcorn is what my cousin did yesterday.'

It is hard to account for the ban against the object appearing preverbally in such situations if the two categories would move singly to the left periphery. Notice here that *jiʕmal* is a head that does not block movement of an XP category such as the DP object *buʃaar*, given the relativized minimality (Rizzi 1990, 2004, 2013). On the other hand, the ungrammaticality of sentence (9) is automatically explained in structural terms under the proposal that VO is one constituent. By extending the proposal that there is no sub-extraction out of a previously moved domain (Stepanov 2001: 52, following Wexler and Culicover's 1980 Freezing Principle) to JA, the ungrammaticality of sentence (9) follows. The object is sub-extracted out of vP which already moves to the left periphery. Consider the following schematic representation of the ill-formed example in (9) (words may appear slightly different in the tree for typographical reasons).

(10)
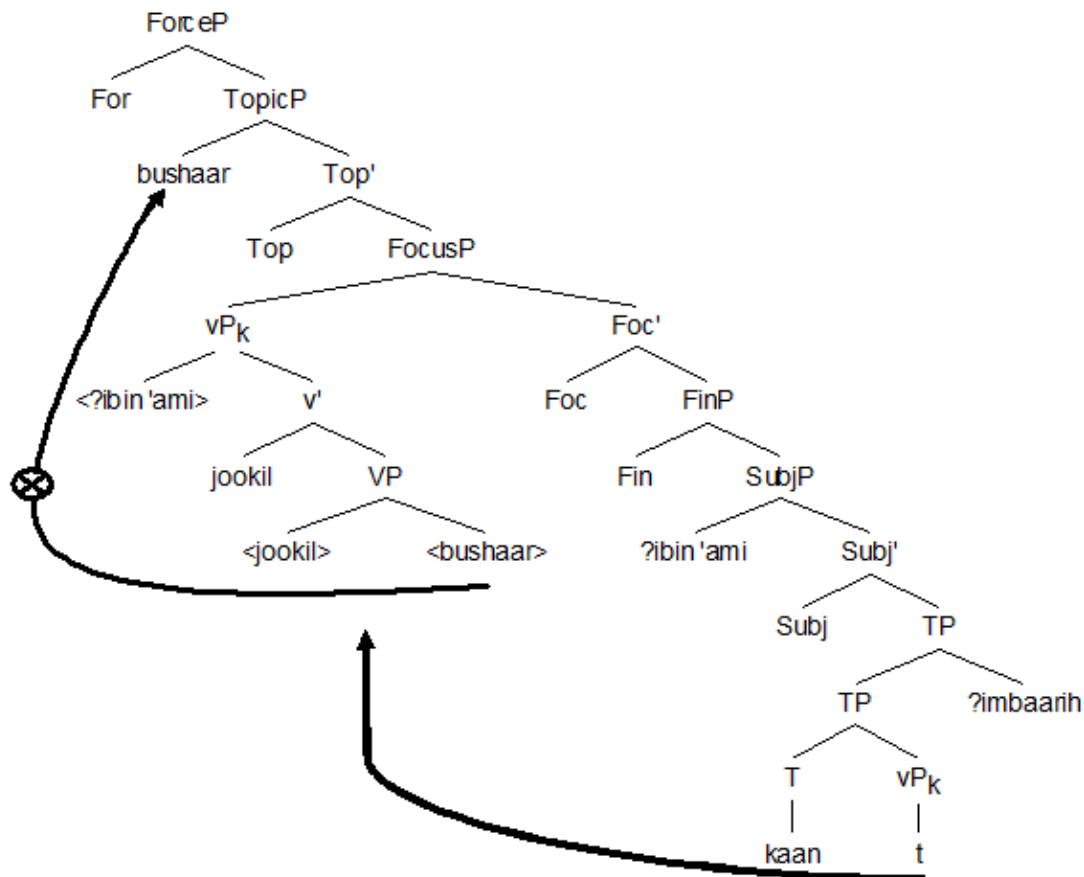
The object is not allowed to move out of vP, while the latter occupies Spec,Focus Phrase. As shown in tree (10), the temporal adjunct *Ɂimbaarih* 'yesterday' adjoins to TP and hence the ban against its movement along with v*P material is motivated.[20] Given that what moves to the left periphery is the whole phrase (vP), the linear order between the verb and object remains intact in their new position in the left periphery.

Additionally, the potential objection that verb and the object in (8b) are not part of the phrasal unit in the left periphery is undermined by the fact that VO material is not discontinuous. Consider the following example, where the locative adjunct *Ɂibdaarna* 'at our house' intervenes between the verb and the object, with an ungrammatical result.

(11) *ji\ʕmal   Ɂib-daar-na   bu\ʃaar Ɂibin ʕamm-i   kaan   Ɂimbaarih

     make.3SG.M at-house-our   popcorn son   uncle-my   was.3SG.M   yesterday

     'Make popcorn at our house is what my cousin did yesterday.'

---

[20] I depart here from Kayne's (1994) restrictive theory of word order and phrase structure (i.e. *Linear Correspondence* Axiom) and follow, instead, Abels and Neeleman's (2006) proposal that allows for right adjunction (caused by base-generation).

Along these lines, there exists strong evidence that sentences with VOST word order (where T stands for Tense) involve VO phrasal movement to the left periphery. Had temporal adjuncts been adjoined to VP, they would have been preposed along with vP rather than being stranded, contrary to fact.

On the other hand, the situation in (8b,c) appears not to be the case with respect to the locative adjunct *ʔibdaarna* 'at our house'. The situation is actually reversed, as demonstrated in the following examples:

(12) a. ʔibin ʕamm-i   kaan   jiʕmal   buʃaar ʔib-daar-na
    son   uncle-my was.3SG.M make.3SG.M popcorn at-house-our
   'My cousin was making popcorn at house our.'

   b. *jiʕmal   buʃaar   ʔibin ʕamm-i   kaan   ʔib-daar-na
   make.3SG.M popcorn son uncle-my   was.3SG.M at-house-our
   'Making popcorn at our house is what my cousin did.'

   c. jiʕmal   buʃaar   ʔib-daar-na ʔibin ʕamm-i   kaan
    make.3SG.M popcorn at-house-our son uncle-my was.3SG.M
   'Making popcorn at our house is what my cousin did.'

Sentence (12b) is ill-formed because the locative adjunct *ʔibdaarna* appears to the right of the past tense copula *kaan*, while sentence (12b) is grammatical with dislocation of the locative along with verb and the accompanying object. The behaviour of the locative adjunct *ʔibdaarna* in the aforesaid examples in (12) is strongly indicative of the fact that locatives adjoin to VP and thus should be preposed when the vP is fronted as one unit (to the left periphery).[21] In view of this, we are led to the conclusion that temporal adjuncts adjoin to a projection different than what locative adjuncts adjoin to. I argue that temporal adjuncts adjoin to TP, while locatives adjoin to VP.

In the following subsection, I provide a further line of evidence from coordination in favour of the view that locatives adjoin to VP, whereas temporal adjuncts adjoin to TP.

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[21] It is worth noting that the locative cannot also occur to the left of the fronted verb, the observation that supports my proposal that the locative is a part of the moved material and hence lends credence to Wexler and Culicover's 1980 Freezing Principle.

3.3.2 Coordination

Empirical support to the proposal that temporal adjuncts adjoin to TP can also be offered by facts from coordination in JA. When two constituents (i.e. conjuncts) contain each a temporal adjunct, they must be made up of at least as much structure as TP. This observation becomes appreciably clearer again in the context of the past tense copula *kaan*. Consider the following example:

(13)　　　ʔaboo-i　　　　kaan　　　　　ʔiwaddi　　　　ʔaχoo-i　　　　ʔiz-zaʁiir

　　　　father-my　　　was.3SG.M　　send. 3SG.M　brother-my　　DEF-young

　　　　ʕa-l-midrasih　ʔissaaʕah　　sabʕah ʔisˤubuħ　　w-*(kaan)

　　　　to-DEF-school　hour　　　　seven　morning　　　and-was.3SG.M

　　　　jigraʔ　　　　ʔidʒdʒariidah　ʔissaaʕah　　tisʕah　ʔisˤubuħ

　　　　read. 3SG.M　newspaper　　hour　　　　　nine　　morning

　　'My father was taking my younger brother to the school at 7 AM and was reading the newspaper at 9 AM.

Here the second *kaan* is obligatory as long as the temporal adjunct *ʔissaaʕah tisʕah ʔisˤubuħ* 'at 9 AM' is used in the second conjunct. This observation bears implication for the position of temporal adjuncts in the clause. Suppose that temporal adjuncts are only licensed if they adjoin to TP; their occurrence in the clause thus requires the projection of TP which in turn can house *kaan*.[22] Following Williams's (1978) Law of Coordination of Likes (a constraint that demands the conjuncts be of the same syntactic category),[23] sentence (13) involves two coordinated TPs, each headed by the past tense copula *kaan*. If *kaan* is dropped from the second conjunct, the coordinating conjunction *w-* would conjoin two vP's. Note here that it is a well-established assumption across Arabic dialects that imperfective does not head-move to T^0; the mere presence of this form of the verb in the second conjunct is thus never indicative of TP projection (cf. Benmamoun 1999). The result is ungrammatical because vP cannot support a temporal adjunct, hence the obligatory presence of *kaan* in both conjuncts.

Now. Let's throw light on cases with locatives. Consider the following example:

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[22] This discussion gives rise to Eisele's (1988) old assumption that temporal adverbs/adjuncts are anchored in the sentence by tense. See also Shlonsky (1997: 31) for a similar argument.

[23] See van Koppen and Rooryck 2008 for a feature-based reinterpretation of Williams's (1978) Law of Coordination of Likes.

(14) ʔaboo-i   kaan   jitfarradʒ   ʔal-l-mubraha   bi-l-beet

    Father-my   was.3SG.M   watch.3SG.M   at-DEF-match   in-DEF-house

    w-(kaan)   yigraʔ   ʔidʒdʒariidah bi-l-maħall

    and-was.3SG.M   read.3SG.M   newspaper   in-DEF-supermarket

    'My father was watching the match at home and (was) reading the newspaper at the

    supermarket.

That *kaan* is optional in (14) is supportive evidence that locatives are not licensed in their clauses by TP. Following the proposal that locatives adjoin to VP, their presence is not tied to TP, and hence whether *kaan* is present or not becomes irrelevant for their licensing, unlike the case of temporal adjuncts.[24]

In the following section, I present further evidence from ellipsis and cross-linguistic data for the low position of locatives but the high position of temporal adjuncts.

3.3.3   Ellipsis and cross-linguistic evidence

Another case in favour of the proposal on locative vs. temporal base-generation has to do with ellipsis. Consider the following two examples where the second conjunct undergoes VP deletion.

(15) a. Balqees   kaan-t   tursum   Sarah ʔimbaarih   w-hashem

       Balqees   was-3SG.F   draw.3SG.F   Sarah yesterday   and-Hashem

       kaan   ʔawal   ʔimbaarih

       was.3SG.M   first   yesterday

    'Balqees was drawing Sarah yesterday, and Hashem was doing so the day before

    yesterday.'

---

[24] This discussion provides us with an answer of why some verbs, e.g. *put*, sub-categorize for locatives, while there are no verbs, to the best of my knowledge, subcategorizing for temporal adjuncts. A verb does not subcategorize for an element which it does not license.

b. *Balqees   kaan-t   tursum   Sarah   bi-l-beet

     Balqees   was-3SG.F   draw.3SG.F   Sarah   at-DEF-house

     w-hashem   kaan   bi-l-ħadiigah

     and-Hashem   was. 3SG.M   at-DEF-garden

Intended: 'Balqees was drawing Sarah at our house, and Hashem was doing so in the garden.'

As the temporal adjunct *ʔawal ʔimbaarih* 'the day before yesterday' adjoins to TP, its occurrence is not affected by deletion of VP, as illustrated in (15a). On the other hand, sentence (15b) is ill-formed because of the presence of the locative adjunct *bilħadiigah* 'in the garden', which is expected not to appear when VP deletes.

A similar observation is reported in Moroccan Arabic (MA). Kortobi (2002) shows that when the adverb in MA is a TP-adverb, it is adjoined to TP which is higher than Aspect Phrase (AspP). If AspP is ellipted, time adverbials can stay, as it is unaffected by deletion (see, 16a below). On the other hand, manner adverbs are affected by deletion, given that they are anchored by AspP (see, 16b) (The two examples are adapted from Kortobi 2002: 233-234):

(16) a.#Yasin kan   ka-yᶜum   lbarəħ   w-Yousre kan   əwwel lbarəħ.

    Yasin   was   PROG-swim   yesterday and-Yousre was __ day before

  'Yousef was swimming yesterday, and Yousre was doing so the day before.'

   b. *Yasin   kan   ka-yakul   bəzzərba   w-Yousre   kan __ bʃswiya.

     Yasin   was   PROG-eat   fast   and-Yousre   was __ slowly

  Intended: 'Yasin was eating fast and Yousre was doing so slowly.'

It is therefore reasonable to come to the conclusion that temporal adjuncts adjoin to TP, whereas locative adjuncts adjoin a lower position, i.e. VP.

From a cross-linguistic point of view, one finds a plethora of examples from a variety of languages (unrelated to Arabic) advocating this view. A case in point here is Modern Greek. Rivero (1992: 291) rightfully notes that a clear dichotomy between adverbs that function as VP-modifiers internal to the VP and those that are external to the VP can be established in Modern Greek. She argues that the former includes locatives and adverbs that are related to

the modification of the action expressed by the verb or *Aktionsart*,[25] whereas the latter includes time adverbs. Rivero hinges on the observation that the former class of adverbs may incorporate into the verb (i.e. the adverb occurring strictly before the verb forming a grammatical morphological unit), whilst the latter class of adverbs fails to incorporate, as evidenced by the contrast in the following examples from Modern Greek:

(17) a. I   Maria tha   to   girisi anapoda

        the   Mary will   it   turn   upside + down

      'Mary will turn it upside down.'

      b. I   Maria tha   to   anapodo-girisi

        The   Mary will   it   upside + down -turn

      'Mary will turn it upside down.' (the two examples from Rivero 1992: 289)

      c. I   ginekes   den   kapnizun   tora

        the   women   not   smoke   now

      'women do not smoke now.'

      d. *I   ginekes   den   tora-kapnizun

        the   women   not   now-smoke

      'women do not smoke now.'   (The two examples from Rivero 1992: 314)

In (17b), the adverb *anapoda* 'upside-down' incorporates with the verb *girisi* 'turn', both forming one morphological unit. On the other hand, (17d) is suggestive of the impossibility of incorporation of time adverb into the verb. The time adverb *tora* 'now' is prohibited to occur strictly before the verb *kapnizun* 'smoke', failing to incorporate, i.e. to form one grammatical morphological unit with the verb. The same observation extends to other time adverbs that refer to deictic points in time, including *xthes* 'yesterday' and *avrio* 'tomorrow'. For Rivero, the examples in (17) are strong evidence that time adverbs are base-generated VP-externally, and they modify inflectional layers that encode Tense (p. 296).[26, 27]

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[25] Traditional European structuralist studies of languages establish a semantic division between *Aspect* and *Aktionsart* or 'kind of action (see, Bache 1982). Rivero (1992: 304) states that *Aspect* refers to the dichotomy often labelled Perfective/Imperfective. On the other hand, *Aktionsart* refers to the characteristics of the inherent meaning of verbs and the internal properties of States of Affairs as expressed by predicates. Distinction between states (e.g. *know*), achievements (e.g. *reach the summit*), activities (e.g. *run*) are under *Actionsart* (see, Vendler 1967, Comrie 1972, Grimshaw 1990)

[26] See Koster (1986) and Ojea Lopez (1994) for similar arguments in Italian and Spanish, respectively. See also Stroik (1990) from English for further evidence that locatives are VP-internal entities.

With this being the case, we are led to the conclusion that deictic temporal adjuncts occupy a high position in the clause, whereas locative adjuncts adjoin their clause in a lower position. This said, we can account for the restriction against locatives to occupy Spec,SubjP in transitive clauses. Chomsky (2000, 2001, and 2008) argues that clause derivation proceeds by phases (see § 2.4.3 for details). Typical phases are the propositional categories: CP and v*P (i.e. vP of active transitive clauses). Consider the following representation:

(18)

```
        CP
       /  \
      C    TP
          /  \
         T    vP
             /  \
            v    VP
                /  \
               V   .....
```
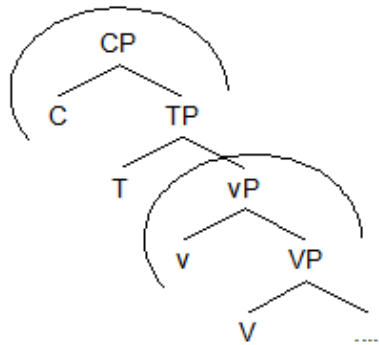
The most relevant point here is the Phase Impenetrability Condition (PIC), which is a constraint that contributes to efficient computation (see, Müller 2011). This condition constrains accessibility of phase materials to higher probes; only the head and the edge of the phase are accessible to a higher probe. The PIC is repeated below:

(19)   The domain of a head X of a phase XP is not accessible to operations outside XP; only X and its edge are accessible to such operations. (Chomsky 2001, 13).

Due to the PIC, the edge of v*P and the head v are accessible to $Subj^0$, as schematically presented in (20):

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[27] Cinque (1999) does not postulate a specific 'fixed' position for temporal adjuncts. He just assumes that deictic temporal adverbs such as 'now' and 'then' are base-generated in a position different from that of other temporal adverbs' (p. 87). See though Frey (2000: 113) and Ernst (2001. CH 7) for counterarguments of Cinque's (1999) proposal. These two authors argue that temporal adjuncts are base-generated in positions high in the clause structure.

(20)

```
                    CP
                   /  \
                  C    SubjP
                      /    \
                   Subj     TP
                           /  \
                          T    vP
                              /  \
                            XP    v'
                                 /  \
                                v    VP
                                    /  \
                                   V    ....
```
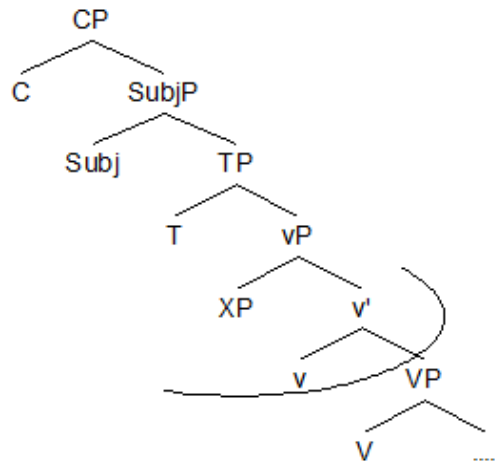
Note here that Chomsky (2001) argues that XP becomes a phase once the next phase head is introduced. Following this, the whole spectrum of attractors located between v and C (including Subj°) would be allowed to reach VP-adjoined adjuncts before C enters the derivation. My answer to this problem is that the [EPP] feature on Subj° is passed down from C°, being a phase head. See Chomsky 2007 for the hypothesis that EPP, agreement and Tense features (among others) are not a property of T or other heads but C°. Following this assumption, Subj° can only attract adjuncts which are adjoined to the v*P edge, i.e. Subj° is an attractor only when C° appears in the derivation.

Let's explore how this line of analysis accounts for locative/temporal inversion while the subject is extracted. In case of deictic temporal adjuncts, they are adjoined to TP, and, hence, they are always accessible to $Subj^0$ to fill Spec,SubjP, following the demands of the Subject Criterion. In other words, the high position of temporal adjuncts being adjoined to TP makes them impervious to the type of the verb (transitive vs. unaccusative). On the other hand, locatives being adjoined to VP are subject to the effects of the PIC. $Subj^0$ cannot penetrate down to attract them in the presence of v*P unless they are at the edge of v*P. This amounts to saying that locatives must vacate their base-generation position and raise to the edge of v*P to be within the accessible domain of $Subj^0$. Having said that, what we have to explain now is why locatives do not raise to the edge of v*P, so they can be an accessible strategy to fill Spec,SubjP. The answer to this question lies in the lack of motivation to do so. Filling Spec,SubjP does not demand a matching feature on the category that occupies it, i.e. there is no [SUBJ] feature, unlike [TOP] or [FOC] that must be part of the featural bundle of the element that fills Spec,Topic Phrase or Spec,Focus Phrase, respectively. For instance, wh-movement does require feature valuation, and therefore triggers movement to the edge of v*P,

while the element that occupies Spec,SubjP does not require such valuation and hence there is no motivation for its movement to the edge of v*P. This line of analysis, if correct, accounts for why locative/temporal inversion yields no discernible effect on the meaning of the question at issue, i.e. having no LF import. By contrast, when there is no phrase boundary between Subj^0 and the locative, a state of affairs we find with unaccusative predicates, nothing can prevent the former from attracting the latter, a matter that leads to locative inversion.

One issue that remains to be explained in this analysis is the evidence that there is no v*P in unaccusative sentences in JA. I have taken this for granted above, but below I bring in some empirical evidence for the appropriateness of this line of analysis.

3.3.4   Unaccusative predicates are not phases

The above discussion would be supported if we are able to prove that unaccusative predicates are not phases in JA, hence stylistic locative inversion is systematically captured with respect to phases. I appeal here to the so-called floating quantifiers, which as Legate (2003) shows are true diagnostics of the existence of phases or not. As demonstrated in studies of several languages, floating quantifiers can be a diagnostic of movement because a quantifier may be stranded in a position that the quantified DP moves through (Sportiche 1988, Speas and Yazzie 1996, Costantini 2010). Consider the following examples, which include the quantifier *kull* 'all' which appears in two different positions within the same question:

(21)   a. eeʃ   ʔil-wadʒbih   ʔilli   ʔakal-ha   ʔil-walad   **kull-ha**
            what   DEF -meal   D-PRT   ate.3SG.M-3SG.F   DEF-boy   all-3SG.F
         'Which meal did the boy eat all of it?'

         b. eeʃ   ʔil-wadʒbih   ʔilli   ʔakal-ha   **kull-ha**   ʔil-walad
            what   DEF -meal   D-PRT   ate.3SG.M-it   all-3SG.F   DEF-boy
         'Which meal did the boy eat all of it?'

 The quantifier *kull* in (21a) surfaces in the canonical position of the object, as a complement of VP. In (21b), *kull* appears in the intermediate position where the object lands by hypothesis en route to the left periphery. This position is the outer Spec of v*P which is positioned to the left of the thematic subject and to the right of the tensed verb once it adjoins to T^0. The object

is forced to move to Spec,vP due to the effects of the PIC which prevents movement from the non-edge of a phase.[28] One piece of evidence that this position is the outer Spec of v*P comes from questions with the overt T^0 filler, *kaan* 'was'. In cases where T^0 is lexicalized by *kaan*, the main verb surfaces to the right of the universal quantifier *kull*, indicting lack of verb raising to T^0. Consider the following examples:

(22) eeʃ ʔil-wadʒbih ʔilli kaan **kull-ha** ʔil-walad yookil-ha

      what DEF-meal D-PRT was all-3SG.F DEF -boy ate.3SG.M-it

      'Which meal did the boy eat all of it?

In contrast, in sentences with unaccusative predicates, a quantifier does not appear between the tense filler *kaan* and the main verb, the position where the phase boundary is expected to project under the phase theory:

(23) miin ʔiz-zulum ʔilli kaan-u (*kull-hum)

      what DEF-men D-PRT was-3PL.M all-3PL.M

      ʔimuut-u (kull-hum) min ʔil-ʕatˤaʃ

      die.IMP-3PL.M. all-them from DEF-dehydration

      'Which men were all dying from dehydration?'

In this light, it can be suggested that there is no v*P in questions with unaccusative predicates in JA.[29] The asymmetry between the behaviour of deictic adjuncts in questions with subject extraction is of key importance being on its own empirical evidence of existence of phases in JA transitive clauses.

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[28] Bošković (2007) argues that a constituent which has an unvalued feature not valued within its minimal phase will move to the edge of that phase.

[29] Legate (2003) provides arguments for the assumption that there is v*P phase in passive, unaccusative, or raising constructions. Legate (2003) draws on reconstruction effects, quantifier stranding, and parasitic gaps to argue that unaccusative and passive VPs are phases. However, Legate herself (2012) argues that the reconstruction data do not demonstrate the existence of passive, unaccusative, and raising vP phases. As for quantifier raising, JA data indicates the opposite in that there is no evidence of unaccusative vP phases. I leave parasitic gaps aside, given that such gaps seem not to be allowed in JA grammar, as shown in the following example:

     i.   eeʃ ʔil-ktaab ʔilli ʔil-walad giriih

          which DEF-book D-Prt DEF-boy read.3SG.M

          gabul-maa jiʃtaari-*(h)

          before-that bought.3SG.M- it

          Intended: 'Which book did the boy read before he bought?'

3.3.5 Summary

The previous section has provided empirical evidence supporting the view that temporal adjuncts adjoin their clause in a position different than that of locative adjuncts. All facts from left-dislocation, coordination and ellipsis point to the conclusion that temporal adjuncts adjoin to TP, whereas locatives adjoin to VP. Such a mismatch between these two types of adjuncts with respect to base-generation accounts for their nuanced behaviour concerning filling Spec,SubjP. Given their high position, temporal adjuncts can be employed to fill Spec,SubjP, regardless of the type of the verb. On the contrary, locatives adjuncts are limited to filling Spec,SubjP when the verb is unaccusative as there is no phase boundary that prevents $Subj^0$ from attracting it, given the effects of the PIC.

Having investigated the main facts of subject extraction from root clauses in JA, let's explore the instances where *ʔilli* is used in questions with object extraction. This exploration is important, given that following my assumptions about *ʔilli* in the previous sections, it is not expected to have this particle in questions with object extraction, given that the subject is, theoretically speaking, still available to fill Spec,SubjP.

3.4 *ʔilli* and object extraction

In the previous sections, I have argued that *ʔilli* is an XP element that fills Spec,SubjP in compliance with the effects of the D-linking condition of subject extraction. Following this argument, it is unexpected that *ʔilli* occurs in questions with object extraction, which looks like a prima facie complication against my analysis of *ʔilli* as a filler of Spec,SubjP. That is because there is no Object Criterion and, most importantly, the subject could fill Spec,SubjP; so there is no likely need for *ʔilli*. However, JA data indicates that *ʔilli* might appear in questions with object extraction. Examine the following question:

(24)   miin   ʔilli   ʃaaf-ha   ʔil-walad
          who   D-PRT   saw.3SG.M-3SG.F   DEF-boy
          'Who did the boy see?'

Question (24) might look a counterargument against my analysis of *ʔilli* being a D-linking element that fills Spec,SubjP. However, on a closer inspection of questions such as (24), the use of *ʔilli* fits in well with my previous analysis of *ʔilli* and even gives further credence to it. Before showing how question (24) is consistent with my analysis of *ʔilli*, let's first explore the

categorical status of the clitic (which shows the Φ-content of the extracted object) on the verb. This clitic appears obligatory when *ʔilli* is used. Questions with object extraction can be formed without *ʔilli* under one condition, namely there is no clitic appearing on the verb. The following example illustrates this point:

(25)   miin   (*ʔilli)   ʔil-walad   ʃaaf(*-ha)?

            who   D-PRT   DEF-boy   saw.3SG.M-3SG.F

            'Who did the boy see?'

So, there should be some connection between the object clitic appearing on the verb and the use of *ʔilli*. For this connection, I argue that the object clitic appears on the verb when the extracted object wh-word is D-linked (see also Aoun and Choueiri 1998).[30] Evidence for this assumption comes from the observation that object questions with *ʔilli* (and a clitic) should be used when the object wh-word is a wh+DP expression or a modified wh-phrase (e.g. *which tall x*) which are D-linked (see, §2.5 above), as shown below:

(26)   a. miin ʔil-binit   *(ʔilli)   ʃaaf*(-ha)   ʔil-walad

          who   DEF-girl   D-PRT   saw.3SG.M-3SG.F   DEF-boy

           'Which girl did the boy see?'

      b. miin ʔitˤ- tˤawiilih *(ʔilli)   ʃaaf*(-ha)   ʔil-walad

          who   DEF-tall   D-PRT   saw.3SG.M-3SG.F   DEF-boy

           'Which tall (girl) did the boy see?'

On the basis of the observation that D-linked object wh-words demand the use of a clitic on the verb, I suggest that such a clitic is a copy of the D-linked object wh-word with reduced PF content. It has been argued elsewhere that a moved wh-word may leave a resumptive pronoun in its base position (see, Engdahl 1985 and Dermirdache 1991). As for the use of *ʔilli* in questions with a D-linked object wh-word, I assume that *ʔilli* is used to fill Spec,SubjP because the subject is forced to remain in situ due to the intervention effect invoked by the richly featured object wh-word. Given the effects of the PIC, the object wh-word first moves to the outer Spec of v*P and then moves to Spec,Focus Phrase. Following the Copy Theory

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[30] Aoun *et al.* (2010: 143) argue that only wh-phrases that are composed of a wh-element and a full 'referential' DP can be related to a resumptive element. I interpret this statement as that such wh-operators have a [wh] and [D-Link] features making them as interveners for movement of other elements with less features, as I argue below.

(Chomsky 1995), the object leaves a copy in outer Spec,v*P. I propose that this copy blocks the movement of the subject to Spec,SubjP.[31]

To illustrate, when the object wh-word carries, among others, [wh] and [D-link] features, it blocks the movement of the subject to Spec,SubjP. One might ask here why the subject does not block the movement of the object wh-word to Spec,v*P in the first place. I appeal here to Starke's (2001) proposal that intervention effects induced by α can be overcome if the moved constituent has an additional feature (see, Landau 2008 for a similar argument). The intervention effects are here computed on feature sets, where an entity with a richer feature set can cross one that has an impoverished feature set, but not vice versa. This restriction on movement is schematically represented as follows:

(27)   a. $[\ X_\alpha \ldots [\ldots Y_{\alpha, \beta} \ldots]]$
         b. $[\ Y_{\alpha, \beta} \ldots [\ X_\alpha \ldots [\ t_Y \ldots \ ] \ ]$

(28)   a. $[\ Y_{\alpha, \beta} \ldots [X_\alpha \ldots]]$
         b. $*[\ X_\alpha \ldots [Y_{\alpha, \beta} \ldots [\ t_X \ldots \ ] \ ] \ ]$

Relativized minimality is here restrictively redefined as an anti-identity condition on feature classes, not on features themselves (cf. Endo 2007: 23) (see also Rizzi 2004, Haegeman and Ürögdi 2010a,b, Haegeman 2010, 2012). The extracted object has [D-link] feature which the subject may lack and which makes the featural content of the extracted object heavier in combination with the [WH] feature that the object wh-word also bears. As a result, the object wh-word overcomes any intervention effect caused by the (D-linked) subject. In turn, due to the intervention effect of the object wh-word, the thematic subject is forced to remain in situ.

Given verb movement to T^0 in JA, the subject is expected to surface in a postverbal position, when the object extracted is D-linked, an expectation bolstered by JA data (see the example in (26), above). Consider the following schematic representation that shows the intervention effect caused by the object wh-word, blocking the subject from moving to Spec,SubjP (All irrelevant details are ignored):

---

[31] The question that arises here is why this effect isn't seen in all languages, for instance not in English. Actually, this has always been a problem for the theory of locality and movement. Locality principles would seem to require it. Chomsky (1993) discussed one solution, in terms of Equidistance. I leave this open pending further research.

(29)
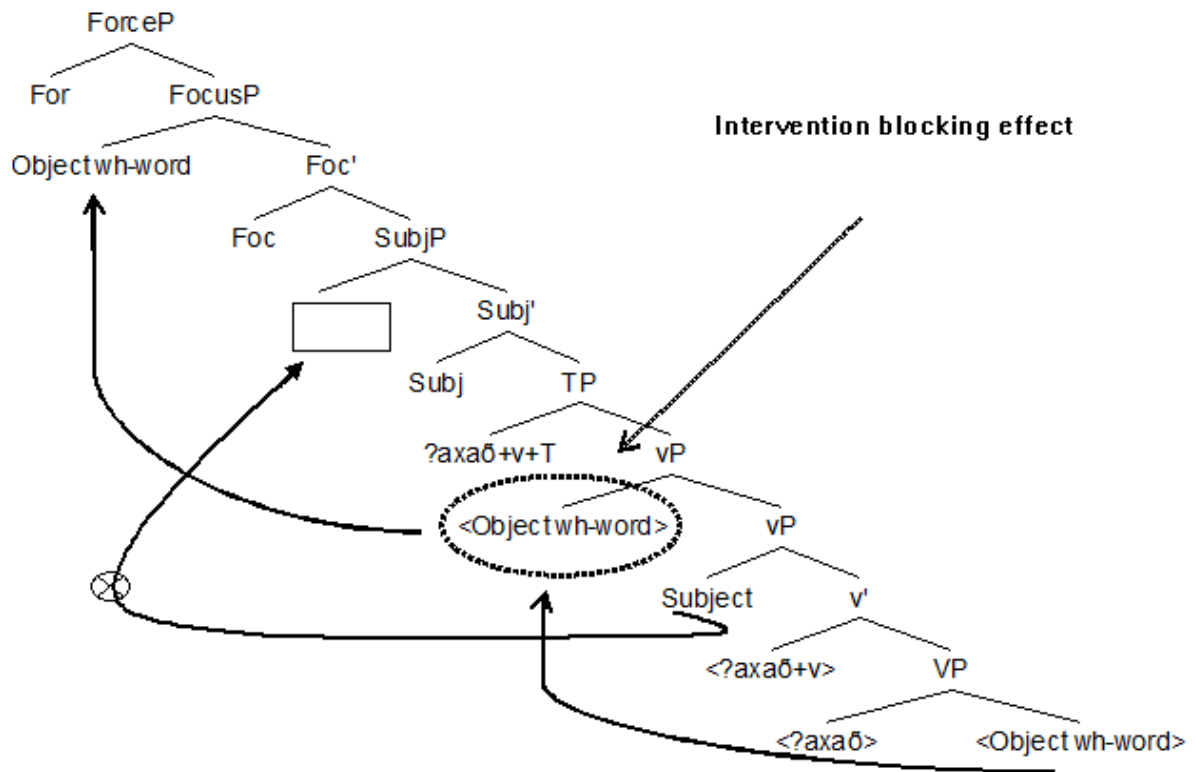
The subject cannot move to Spec,SubjP which is instead filled with the D-linking element *ʔilli* to secure sentence derivation. Under this proposal, *ʔilli* is used to fill Spec,SubjP when the subject fails to do so.

On the other hand, when the object wh-word is not D-linked, the object can no longer invoke any intervention effect against the subject, which is now able to move to Spec,SubjP, militating against merger of *ʔilli*. Accordingly, the subject surfaces to the left of the tensed verb which adjoins to T^0 (see (25)). One might wonder here why the subject does not block object movement to the left periphery when the latter is not D-linked. I suggest here that the subject does not block object wh-word movement because the latter has a [wh] feature, so they are different in their featural make-up, and the subject has no more features that can block the extraction of the object.

Summarizing, when the object wh-word is D-linked, it creates an intervention effect against the movement of the thematic subject to Spec,SubjP, requiring as such the use of *ʔilli* in Spec,SubjP. When the object wh-word is not D-linked, it appears incapable of creating such an effect, hence allowing the thematic subject to move to Spec,SubjP. As it stands, the

existence of [WH] feature alone on the object is not enough to invoking an intervention effect against the subject. (I provide further evidence in Chapter 6 in favour of this assumption).

Everything else being equal, the main strategies used in JA to satisfy the Subject Criterion can be summarized in Table 2 (uninterpretable features of $T^0 = uT^0$).

The outcome of T^0's uΦ-features	Subject wh-word	ʔilli	A deictic adjunct	pro
[3SG.M] agreement	D-linked	+	+	-
	Non-D-linked	-	-	+
agreement other than [3SG.M]	D-linked	+	+	-

Table 2: Strategies used in JA to satisfy the Subject Criterion

In view of the JA subject extraction facts, it is clear that this Arabic dialect belongs to the categories of languages which dispose of certain skipping strategies in order to escape the Subject Criterion effects. What is special about JA is its language-specific sensitivity to the D-linking status of the subject wh-word. Spec,SubjP must be filled with an element whose D-linking status is identical to that of the wh-word. When the latter is D-linked, Spec,SubjP should be filled with a D-linked element, including the D-linking particle *ʔilli* or a deictic adjunct whose inner structure contains a nominal TIME/PLACE category which makes such adjuncts D-linked. On the other hand, if the subject wh-word is not D-linked, an expletive *pro* is used to escape the Subject Criterion effects.

3.5 Conclusion

This chapter argues that locative/temporal inversion can be instrumental for the satisfaction of the Subject Criterion. Spec,SubjP in JA can be filled with a preposed deictic adjunct instead of *ʔilli* in transitive questions. I follow the assumption that these two types of adjuncts contain a nominal referential category qualifying them as D-linked elements (Kayne 2005, Stanton 2016). The study also examines why deictic temporal adjuncts, unlike deictic locative adjuncts, can replace *ʔilli* in (in)transitive questions with D-linked subject wh-word. I assume that this boils down to the effects of the PIC which turns locative adjuncts, buried down in the lower phase v*P, opaque to Subj°. I offer evidence from left-dislocation, coordination, and ellipsis in favour of the high position of temporal adjuncts and the low position of locatives in

the clause whereby they merge. Additionally, this chapter examines the use of *ʔilli* in questions with object extraction, supposing that *ʔilli* is used in such questions because the thematic subject fails to move to Spec,SubjP due to the effects of the richly featured object wh-word.

Chapter FOUR: Derivation of various word orders of embedded clauses in JA

4.1   Introduction

Having analysed subject extraction from root clauses, let's now turn to subject extraction from embedded contexts. On surveying the related data, it is quite clear that there are two issues pertaining to subject extraction from embedded clauses in JA, namely word orders and the morphological form of the suffix attached to the complementizer ʔinn 'that' which introduces such clauses. In what follows, I put off the syntactic investigation of subject extraction out of embedded clauses to Chapter 6 in favour of description and syntactic analysis of these two issues in the current chapter and the following chapter, respectively. Once these two issues are settled, analysis of subject extraction out of embedded clauses will become motivated.

In this chapter, I investigate the syntactic derivations of the various word orders possible in embedded clauses introduced by the complementizer ʔinn. The key hypothesis I defend here is that any movement to a preverbal position in embedded clauses in JA is a species of A-bar movement, including, but not limited to, the movement of the thematic subject. Additionally, as opposed to root clauses, Spec,SubjP of embedded clauses is argued to be always filled with the expletive *pro*. With this being the case, there is no need to fill Spec,SubjP with the thematic subject or with any other element such as ʔilli when the subject is extracted. Support for this hypothesis comes principally from the various word orders allowed in embedded clauses and their syntactic derivation, an issue I explore below.

I start with analysis of the unmarked sentential word order SVO in embedded clauses (§ 4.2). I argue that what appears as a preverbal subject is actually a topic, drawing, among others, on the observation that an indefinite subject is not allowed to appear pre-verbally unless it bears contrastive stress. Afterwards, I analyse the marked words OVS (§ 4.3) and VSO (§ 4.5). Then, I introduce Frascarelli and Hinterhölzl's (2007) Topics Typology (§ 4.4) to identify the structural positions of the subject and object in OSV and SOV word orders, a task I take up in section 4.6. Section 4.7 discusses the derivation of the word order VOS. The whole discussion ultimately provides us with an insight into the architectural design of the JA embedded clause structure, the hierarchy of functional projections, the position of subjects and the scope of verb movement.

4.2 SVO

On the basis of my intuition and all JA informants I consulted, the unmarked word order of embedded clauses in JA is SVO, being the natural and preferred word order in discourse-neutral sentences. This means that the SVO word order is the unmarked word order in both root and embedded contexts in JA (see § 1.3 for relevant discussion on word orders in root clauses). Consider the examples in (1) below. In (1a), the embedded clause is a complement under different verbs (*fakkar* 'believed', *ʔistaʁrab* 'got surprised', and *ħizin* 'regretted'), in (1b) the embedded clause is a complement of the adjective *muhim* 'important', in (1c) the embedded clause is a nominal complement, whereas it is an adverbial clause in (1d):

(1) a. ʔabuu-i   fakkar/ ʔistaʁrab/ ħizin   ʔinn-uh   ʔil-walad

      father-my   believed/got surprised/regretted.3SG.M that-3SGM   DEF-boy

      sarag   ʔis-sijjaarah

      stole.3SG.M   DEF-car

   'My father believed/got surprised/regretted that the boy stole the car.'

b. min   ʔil-muhim   ʔinn-uh   ʔil-waħad   jilʕab   ʔirjadˤah

   from   DEF-important   that-3SG.M   DEF-one   play. 3SG.M   sport

   'It is important that one (anybody) does exercise.'

c. lageet   ʔid-dalil   ʔinn-uh   ʔil-walad   sarag   ʔis-sijjaarah

   found.1SG.   DEF-evidence   that-3SG.M   DEF-boy   stole. 3SG.M   DEF-car

   'I found the evidence that the boy had stolen the car.'

d. ʔabuu-i   mabsˤuutˤ   bilruʁam   ʔinn-uh   ʔaχuu-i   ma

   father-my   happy   although   that-3SG.M   brother-my   NEG

   dʒaab-iʃ   ʕalaamih   ʕaaljih   ʔib-mawaad-uh

   got.3SG.M -NEG   mark   high   in-courses-his

   'My father is happy although my brother did not get a high grade in his courses.'

Let us analyse (1a) as a working example with the verb *fakkar*.[32] Following the discussion of the previous chapter on subject extraction out of root clauses, the subject *ʔilwalad* 'the boy' is

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[32] It should be noted that the possibility of having a fronted element (or more) is crucially dependent on the type of the matrix verb. For instance, if the matrix verb is *gaal* 'said', the embedded clause is expected to behave like a root clause with respect to fronting. On the other hand, if the matrix verb in such contexts is negated, the

base-generated in Spec,vP where it is assigned (abstract) Nominative Case by T°. This assignment is implemented via the Agree operation through which T°'s uninterpretable Φ-features are lexically valued by the matching interpretable Φ-features of the subject *ʔilwalad* 'the boy' (cf. Chomsky 2000, 2001). Afterwards, the subject *ʔilwalad* would move to Spec,SubjP, forced by the Subject Criterion (see chapter 2). It's also argued that the main verb adjoins to T° via v°, motivated by the richly inflectional paradigms that Arabic verbs display (cf. Fassi Fehri 1993, Bobaljik 2002, Holmberg and Roberts 2013). On the other hand, what appears problematic for this analysis in its present form is the observation that an indefinite subject is not compatible with the SVO word order in embedded clauses unless it is contrastively stressed, as shown in the following pair (contrast is in capitals).[33],[34]

(2) a. ʔabuu-i   fakkar   ʔinn-uh   WALAD

    father-my   believed.3SG.M   that-3SG.M   boy

    (muuʃ   zalameh)   sarag   ʔis-sijaarah.

    (not   man)   stole. 3SG.M   DEF-car

'My father believed that it was a boy (not a man) that stole the car.'

b.……….*ʔinn-uh   walad   sarag   ʔis-sijjaarah.

    that-3SG.M   boy   stole.3SG.M   DEF-car

Intended: 'My father believed that a boy stole the car.'

Unlike root clauses, the subject in the SVO word order in embedded clauses should either be definite (and specific) or bear contrastive stress. A similar observation is made by Mohammad (2000: 28) for Palestinian Arabic, where an indefinite subject in embedded clauses is prohibited clause-initially unless it is preceded by the expletive *fih*:

(3) ʔel-walad   gal   ʔinnu *(fih) zalame   be-d-dar

    the-boy   said.3SG.MASC   that   there   man   in-the-house

    'The boy said that there is a man in the house.'

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possibility of embedded root clause is decreased. However, for clarity, I select matrix verbs as those whose clausal complements count as embedded non-root clauses.

[33] Contrast here denotes a membership in a set, meaning that a set of alternatives can be generated for the constituent bearing contrast, which is often marked by linguistic means, such as particular syntactic and/or phonological form. (Lambrecht 1994, Vallduví and Vilkuna 1998, Molnár 2002, Horvath 2010).

[34] It is already known that contrastive stress can be used in conjunction with elements expressing old, given information, a case known as Contrastive Topic (see sections 4.5 below) or with elements that express exhaustive identification, a case of identification focus or contrastive focus (È Kiss 1998). In this research, we limit the discussion of identification focus to indefinite, nonspecific cases for ease of exposition. See Salem (2010) for the argument that bare nominals which can only interpreted existentially are foci in Arabic.

Th fact that an indefinite, nonspecific subject should be preceded by an expletive *fih* is evidence that the subject does not move to Spec,SubjP/TP. In order to account for this observation, I appeal to Rizzi's (1997) multi-layered CP hypothesis, a cartographic theory of the left periphery. When the subject is definite and specific in the SVO word order as in the sentences in (1) above, the subject is assumed to move to the left periphery, i.e. to Spec,Topic Phrase, a projection dedicated to elements that express old, given information (cf. Rizzi 1997; Shlonsky 2000).[35] On the other hand, when the subject appears indefinite in the SVO word order, accompanied by contrastive stress, it moves to Spec,Focus Phrase, to which contrastively-stressed information moves (Rizzi 1997). See also Fassi Fehri (1993), Ouhalla (1994), Plunkett (1996), and Aoun *et al.* (2010) for relevant discussion of MSA. What also supports my assumption that there are distinct positions for topics and foci in JA embedded clauses is the fact that they can co-cooccur within the same clause, as evidenced in the following example:

(4) ʔabuu-i   fakkar   ʔinn-uh   ruwaajjeh

    father-my   believed.3SG.M   that-3SG.M   novel

    ʔil-binit   gara-t.

    DEF-girl   read-3SG.F

  'My father believed that it was a novel that the girl read.'

I discuss instances with multiple fronted elements in more details in section (4.6).

This analysis runs counter to Omari's (2011) recent proposal on preverbal subjects in JA embedded clauses where a preverbal subject counts as a true subject occupying Spec,TP. Omari depends on three arguments to support his proposal: the presence of quantified DPs in a preverbal position, availability of focus interpretation, and the possibility of long wh-movement across the preverbal subject. However, these three arguments do not constitute evidence for the position of the preverbal subject in Spec,TP (Spec,SubjP). Firstly, Omari does not discuss the option that a fronted quantified DP may be a focus. Omari draws on Rizzi's (1997) observation that a quantified DP cannot be left-dislocated, but Rizzi himself in the same paper argues that 'focus is quantificational' (p. 291). Hence a preverbal quantified

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[35] Additional evidence that the preverbal definite subject in an SVO sentence is a topic is that the subject is introduced by a required intonational break, a defining characteristic of discourse given constituents (see, e.g. Plunkett 1993, Rizzi 1997, Belleti 2004).

DP is most likely to be a focus, an assumption backed by Omari's second argument that a preverbal subject may bear a focus interpretation. As for the third argument (i.e. the possibility of long wh-movement across the preverbal subject), this is wrong because a movement of a wh-phrase is blocked when it moves past an element carrying the same feature, or type of feature, [WH] or [FOC]. If the crossed element has a [TOP] feature, it does not necessarily block wh-movement unless it has heavier featural content (cf. Starke 2004). Additionally, the example that Omari marks as ungrammatical is fine for me and for all informants, with a pause after the DP *iljaaʔizih*:

(5) la-miin   fakkart-u   ʔinn-uh   il-jaaʔiz-ih,   ʔaʕtˤ-aa-ha?
     to-who   thought-2PL.F that-dft.   the-prize   gave-3SG.M-her
     'To who did you think that the prize, he gave (it)?'

This way, the preverbal subject in embedded clauses in JA does not demonstrably have an invariant position but rather may occupy various positions, depending on its informational value. Following the Criterial Freezing approach to movement, the subject expressing old or contrastive/corrective information is attracted by the relevant criterion, i.e., the Topic Criterion if it is definite and specific, but the Focus Criterion when the subject expresses contrastive information (cf. Rizzi 2004, 2015). Along these lines, we are led to the conclusion that JA embedded clauses are analogous to Romance root and embedded clauses in that the preverbal subject in the SVO word order occupies a higher A-bar position (Alexiadou and Anagnostopoulou 1998: 506).

Up to this point, it is less clear whether the subject in the SVO word order moves to the left periphery directly from its thematic position (Spec,vP) or via Spec,SubjP. Due to the Criterial Freezing approach, it should be the former option, given that Spec,SubjP is a criterial 'halting' position where the element that occupies it must get frozen in place (Rizzi and Shlonsky 2007) (see § 2.2.3). Suppose for a moment that Spec,SubjP in embedded clauses is a criterial positon on a par with root clauses, the question therefore arises how the Subject Criterion is satisfied in embedded clauses, given that the subject is not available, being in the left periphery. I claim that Spec,SubjP in embedded clauses is filled with a *pro* whose presence in Spec,SubjP dispenses with the movement of the thematic subject to Spec,SubjP. The key body of evidence for this assumption comes from marked word orders exhibited in embedded contexts. Under adequate dialogical and suitable pragmatic conditions, VSO, OSV, VOS, OVS, and SOV word orders are acceptable (see, below). Analysis of these word orders

as well as the conditions necessary for licensing them will ultimately show that Spec,SubjP of the embedded clauses is projected and filled with a *pro*, despite the observation that Spec,SubjP may remain empty in the surface. Additionally, analysis of these word orders will provide us with insights into first A-bar movement in JA in general and second the strategies JA makes available for subject extraction out of embedded clauses in particular.

In the following subsections, I explore the derivation of the marked word orders.

4.3 OVS

Let's begin our investigation with the word order OVS. I argue that this word order is derived through the movement of the object to the left periphery of the respective clause. Consider the following example:

(6) Ɂabuu-i   fakkar   Ɂinn-uh   Ɂid-daftar

father-my   believed.3SG.M   that-3SG.M   DEF-notebook

sarag-*(uh)   Ɂil-walad.

stole.3SG.M-3SG.M   DEF-boy

Literally: 'My father believed that the notebook the boy stole it.'

In (6), the verb *sarag* 'stole' carries a pronominal clitic *uh* [3SG.M] which refers back to the preposed object *Ɂiddaftar* 'the notebook'. Note that the clitic is obligatory and its Φ-content should be identical to that of the object; otherwise the sentence becomes sharply ungrammatical, as demonstrated in the following example:

(7) *…Ɂinn-uh   Ɂid-daftar   sarag-ha   Ɂil-walad

that-3SG.M   DEF-notebook   stole.3SG.M-3SG.F   DEF-boy

Intended: '……. that the notebook the boy stole.'

Sentence (7) is ill-formed because the clitic on the verb is feminine, while the preposed object is masculine. The clitic attached to the verb while its referent is not in its canonical place is known in the related literature as 'a resumptive clitic' and is predominantly taken as a typical sign of non-quantificational A-bar movement, i.e. topicalization (cf. È Kiss 1995, Rizzi 1997, McCloskey 2002, Grohmann and Haegeman 2004). As such, the object in (6) is a topic. The use of a resumptive object clitic on the verb in such contexts patterns with Rizzi's (1997) observation for Italian that a left periphery object topic requires an obligatory clitic to connect

it to its thematic position in the clause, as well as Givon's (1976) original observation that when something is topicalized, it typically leaves a pronoun in its original position. What bears out my assumption for the object being a topic in (6) is that the object resumptive clitic cannot be co-indexed with a fronted indefinite, nonspecific object. Consider the following ill-formed example:

(8) *………ʔinn-uh   daftar   sarag-uh   ʔil-walad.
           that-3SG.M   notebook   stole.3SG.M–it   DEF-boy
     Intended: '…….that a notebook the boy stole.'

As seen from (8), the indefinite object *daftar* is co-indexed with the resumptive clitic on the verb, whence the ungrammaticality of the sentence.

The question to address here is whether the topicalized object moves to its surface position or is base-generated there as an instance of the so-called Clitic Left Dislocation (CLLD; Cinque 1990). There is positive evidence from floating quantifiers for the former option that the preverbal topcalized object undergoes A-bar movement from its thematic position to the left periphery. Following the movement option, the object *ʔilfatˤoor* 'the breakfast' in (9) below is originated as a complement of the verb *ʔakal*, then moves further to the edge of the lower v*P phase, given the effects of the PIC (see, Chomsky 2001). Afterwards, it raises to the left periphery, as the topic of the embedded clause.

(9) ʔabuu-i   fakkar   ʔinn-uh   ʔil-fatˤoor   ʔakal-u-uh   ʔuwlaad
    father-my   believed.3SG.M that-3SG.M   DEF-breakfast   ate-3PL.M-3SG.M boys
  'My father believed that the breakfast (some) boys ate.'

Evidence for this successively cyclic movement on the part of the object *ʔilfatˤoor* can be supplied from the position of the universal quantifier *kull* when it cross-references the object. Consider the following sentences:

(10)   a. ʔabuu-i   fakkar   ʔinn-uh   ʔil-fatˤoor

         father-my   believed.3SG.M   that-3SG.M   DEF-breakfast

         ʔakal-u-uh   ʔuwlaad   **kull-uh**.

         ate-3PL.M-3SG.M   boys   all-3SG.M

    'My father believed that breakfast, (some) boys ate all of it.'

    b. ....ʔinn-uh   ʔil-fatˤoor   ʔakal-u-uh   **kull-uh**   ʔuwlaad.

       that-3SG.M   DEF-breakfast   ate-3PL.M-3SG.M   all-3SG.M   boys

    'My father believed that the breakfast, (some) boys ate all of it.'

    c. ....ʔinn-uh   **kull**   ʔil-fatˤoor   ʔakal-u-uh   ʔuwlaad.

       that-3SG.M   all   DEF-breakfast   ate-3PL.M-3SG.M   boys

    'My father believed that all breakfast, (some) boys ate.'

The universal quantifier *kull* occurs in the structural positions that the object *ʔilfatˤoor* occupies through its movement to its surface position next to *ʔinn* (cf. Sportiche 1988). In (10a), *kull* appears in the canonical position of the object *ʔilfatˤoor*, while it shows up between the verb *ʔakal* 'ate' and the subject *ʔuwlaad* in the outer Spec of the lower v*P in (10b). In (10c), *kull* appears non-split form the object *ʔilfatˤoor* in its surface position. It can be suggested that the dislocated object is thus an outcome of a process of internal merge rather than external merge (see, also Aoun and Benmamoun 1998 for a similar point in Lebanese Arabic). This means that JA differs from Soltan's (2007) analysis of MSA according to which what appears as a dislocated object is externally merged in the left periphery.[36]

On the other hand, the object in the OVS word order may appear non-specific carrying contrastive stress.

(11)   ʔabuu-i   fakkar   ʔinn-uh

        father-my   believed.3SG.M   that-3SG.M

        (*ʔID-)DAFTAR   sarag   ʔil-walad.

        DEF-notebook   stole.3SG.M   DEF-boy

    'My father believed that it was a notebook that the boy stole.'

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[36] Soltan's (2007) approach of base-generation of dislocated elements comes originally from what is known as the Basran grammarians of Arabic (Sibawayahi 8ᵗʰ century and associates). Soltan (2007) revitalizes and formalizes views of the Basran grammarians of Arabic in Minimalist terms (Al-Balushi 2010: 2).

The object *daftar* in (11) is interpreted as a contrastive focus. Evidence for this assumption is provided by the facts that the object *daftar* is indefinite, non-specific and should be said with contrastive stress. Additionally, there is no resumptive clitic appearing on the verb *sarag* 'stole', co-indexed with the fronted object. It is well-known that resumption cannot hold for foci (Safir 1996, Zimmermann 2008, Frascarelli 2010).

The relevant question to raise at this stage is related to the position of the subject in the OVS word order. Following the fact that the verb in the OVS word order is not accompanied by focal intonation, it is suggested that the verb is not in the left periphery (e.g. adjoining to Foc°), but rather still adjoins to T° if we grant the assumption that verbs in Arabic move to T° unless the latter is lexically supported (cf., Fassi Fehri 1993, 2012, Baker 2003, Benmamoun 2008). This suggests that the subject in this marked word order remains in its canonical position where it receives its structural Case and θ-role, namely Spec,vP. However, I retain this possibility for the indefinite subject but reject it with respect to the definite subject. It is commonly assumed in the related literature that the definite subject does not remain in situ (Bobaljik and Jonas 1996, Hornstein 1999, Belletti 2001, Kayne and Pollock 2001, Alexiadou and Anagnostopoulou 2001, 2007). In order to account for the position of the postverbal definite subject in the OVS word order, I appeal here to Belletti's (2004) IP low area; known also as the low left periphery or the clause-internal periphery. Belletti argues in favour of an area immediately above VP/vP that displays a significant parallelism to the left periphery of the clause. Consider the following structure:

(12)
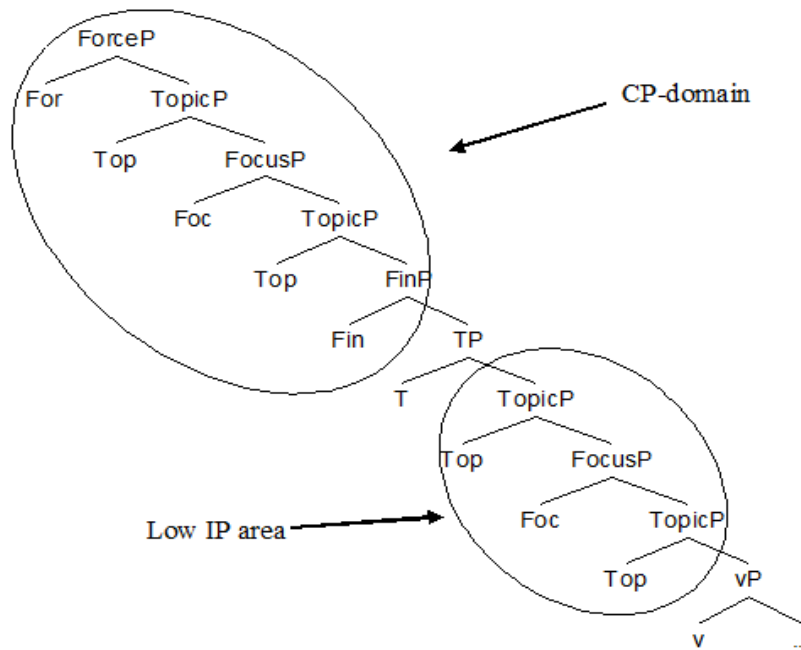
As clearly shown in (12), a clause-internal focus position is surrounded by two topic positions, the same case of the left periphery. Notice in passing that no Finiteness nor Force positions are projected in the low left periphery, though. Belletti (2004) argues that the syntactic positions of the low left periphery are identified through partly different intonations like those associated with the parallel positions in the high left periphery. Evidence for the low left periphery comes from intonation associated with low elements in addition to the position of such elements relative to adverbs. As for intonation, consider the following examples from Italian, taken from Belletti (2004: 38).

(13)　a. Che-cosa ha　　poi　　fatto　Gianni per　　quella questione?

　　　　What　　has　　then　done　Gianni for　　that　　matter

　　　　'What has John done for the matter since then?

　　　b. Si,　　si　　ha　　poi　　parlato,　　　Gianni,　　al　　direttore.

　　　　Yes　yes　has　then　spoken　　　Gianni　　to　　the director

　　　　'OK, John has spoken to the director.'

　　　c. Che　cosa　fara　Gianni?

　　　　What　will　do　Gianni

　　　　'What will John do?

　　　d. Partira,　　Gianni,

will.leave   Gianni

'John will leave.'

Belletti (2004) argues that the post-verbal subject in (13b,d) is a low topic, the observation supported by the downgrading intonation on the post-verbal subject in the two examples. The PP '*al direttore*' in (13b) is a further topic, arguing that iteration of topics is also a possibility of the low IP area which is plausibly rich in the positions which are tightly connected with discourse-related interpretations of foci and topics. Additionally, Belletti (2004) draws on the distributional evidence concerning the respective location of the subject and the adverbs located in a very low position in the clause structure in Italian. The post-verbal subject is assumed to be very low in the clause as it follows low adverbs, as exemplified in the following examples, taken from Belletti (2004: 19):

(14)   a. ?Capira   completamente   Maria.

        Will.understand   completely   Maria

    b. ?Spieghera   completamente   Maria al   direttore.

        Will.explain   completely   Maria to   the.director

    c. ?Capira/spieghera   bene   Maria (al   direttore).

        Will.understand/explain   well   Maria (to   the.director)

    d*Capira/spieghera   Maria completamente   (al   direttore).

    Will.understand/explain   Maria   completely   (to the.director)

    e. *Capira/spieghera   Maria   bene   (al   direttore).

        Will.understand/explain   Maria   well   (to   the.director)

In (14d,e), unlike the case in (14a-c), the low adverb follows the post-verbal subject, whence the ungrammaticality. Belletti (2004) interprets the examples in (14) as evidence for the post-verbal subject being low in the clause. Coupled with the fact that the post-verbal subject should be accompanied with downgrading intonation which is not a hallmark of true subjects, Belletti (2004) proposes that the post-verbal subject is located in a discourse-sensitive domain, namely the low IP area.

In this light, suppose that the definite postverbal subject in JA moves to the topic position of the low left periphery. The subject being definite and specific would express old, given information which licenses it as a topic. What might be taken as evidence for this supposition is the tendency to have the postverbal subject as a pronoun, as seen from the following example:

(15) ʔabuu-i   fakkar   ʔinn-uh   ʔil-fatˤoor   ʔakal-u-uh   hummuh

    father-my   believed.3SG.M that-3SG.M   DEF-breakfast ate-3PL.M-3SG.M   they

   'My father believed that the breakfast the boys ate.'

The potential movement of the definite, specific subject to the low periphery is suggested to be equivalent to its movement to the high left periphery with respect to Criterial Freezing. The subject in both cases is attracted by the Topic Criterion. Consider the following structure which shows the derivation of the OVS word order when both of the verbal arguments (the subject and the object) display old, given information (object movement is dotted, whereas subject movement is lined):

(16)
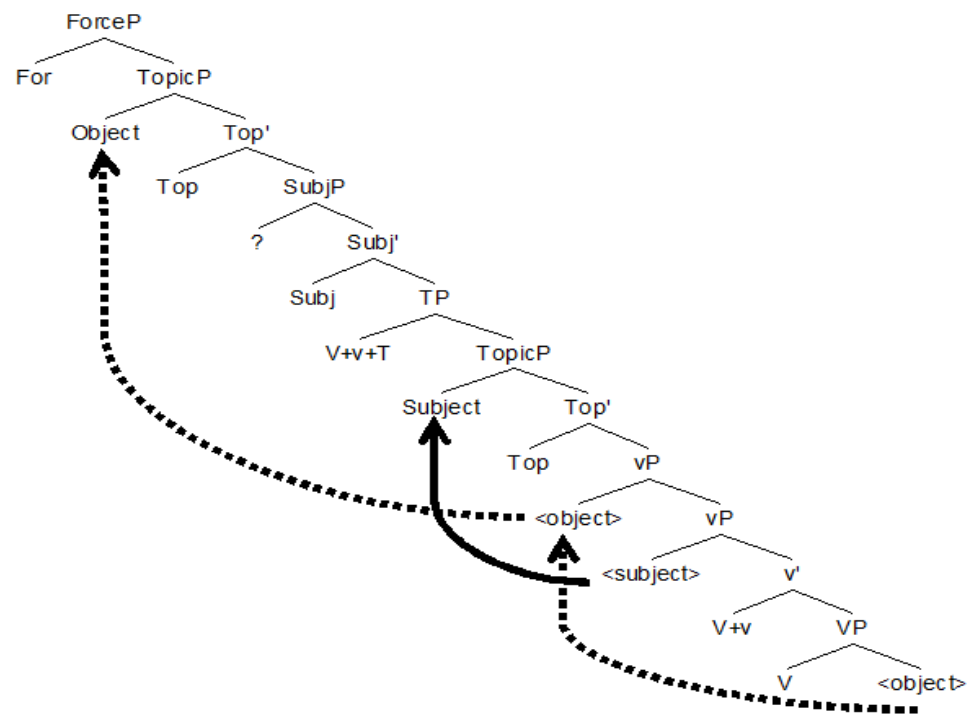
On the other hand, in case of the indefinite postverbal subject, I suggest that it remains in situ because there is no 'special' intonation which should accompany it in most cases. Anyway, the intricacies of the movement of the subject to the low left periphery and the actual status of

the (in)definite postverbal subject cannot be adequately explained within the limits of the present thesis, something I leave open for further research.

The next issue to address here is whether Spec,SubjP remains empty, is filled with some phonologically-null material, or is even left non-projected at all (cf. Kotzoglou 2005). When a wider range of data is examined, some evidence can be adduced that Spec,SubjP is projected and filled with a *pro*. I mention here two pieces of evidence in favour of this assumption, namely the expletive *fiih* and the so-called double subject constructions.

To illustrate, existential constructions can appear in embedded clauses in JA with the expletive *fiih*. Consider the following examples with the expletive *fiih*, embedded under different verbs as in (17a), and included in the clausal complement of the adjective *Ɂalmuhim* 'important' as in (17b), in a clausal complement of the noun *Ɂiddalil* 'the evidence' as in (17c), and in an adverbial clause, as in (17d).

(17)

a. Ɂabuu-i   fakkar/Ɂistaʁrab/ħizin   Ɂinn-uh

   father-my   believed/ got surprised/regretted.3SG.M   that-3SG.M

   fiih   naas   bi-d-daar.

   EXP   people   in-DEF-house

   'My father believed/ got surprised/regretted that there are some people in the house.'

b. min   Ɂal-muhim   Ɂinn-uh   fiih   naas   bi-d-daar.

   from   DEF-important   that-3SG.M   EXP   people   in-DEF-house

   'It is important that there are some people still in the house.'

c. lageet   Ɂid-dalil   Ɂinn-uh   fiih   kaan   naas   bi-d-daar

   Found.1   DEF-evidence   that-3SG.M   EXP   was   people   in-DEF-house .

   'I found the evidence that there were some people in the house.'

d. ʔabuu-i	mabsˤuutˤ	bilruʁam	ʔinn-uh	ma	fiih	ħada
father-my	happy	although	that-3SG.M	NEG	EXP	somebody
dʒaab	ʕalaamih	ʕaalyih	bi-l-mawaad.			
got.3SG.M	grade	high	in-DEF-courses			

'My father is happy although nobody got a high grade in the courses.'

A number of authors (e.g. Alsarayreh 2012, Jarad 2012, Abdel-Ghafer and Jarbou 2015, Al-Momani 2015) have treated the lexical item *fiih* as an expletive non-referential element that fills Spec,TP (Spec,SubjP here) (see also §. 2.4.3 for relevant discussion of *fiih* in JA). It displays a similar syntactic behaviour of the English existential *there*. For instance, the subject should be indefinite; otherwise the sentence is ruled out. The following example illustrates this point:

(18)	ʔabuu-i	fakkar	ʔinn-uh	fiih	(*ʔin)-naas	bi-d-daar.
	Father-my	believed.3SG.M	that-3SG.M	EXP	DEF-people	in-DEF-house

'My father believed that there are some people in the house.'

Further evidence that *fiih* is in Spec,SubjP is that it surfaces to the right of the negative particle *ma* which, following Alqassas's (2015) account of negation in JA, heads the upper Neg(ation) Phrase (NegP) above TP/SubjP when a sentence has single negation (consider sentence (17d)).[37] Additionally, the expletive *fiih* surfaces to the left of the past tense filler *kaan* 'was' which lexicalizes Tº. The relevant position of *fiih* sandwiched between Tº and NegP above TP indicates strongly that *fiih* is in Spec,SubjP, the position fitting the distributional properties of *fiih*. Recall that Rizzi and Shlonksy (2007) count expletives of various kinds are direct evidence for the Subject Criterion, and hence reliable signals of the presence of SubjP.

Further supportive evidence for the projection of Spec,SubjP in embedded clauses is supplied by the so-called double subject constructions, where a subject pronoun occurs to the right of the preposed subject. Consider the following examples:

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[37] Alqassas (2015) argues that single negation in JA is above TP, while bipartite negation is projected between vP and TP.

(19) a. ʔabuu-i   ʔistaʁrab   ʔinn-uh   ʔil-walad

          father-my   surbesd.3SG.M   that-3SG.M   DEF-boy

          huu   sarag   ʔis-sijaarah

          he   stole.3SG.M   DEF-car

          'My father is surprised that the boy, he stole the car.'

b. ….ʔinn-ha   ʔil-binit   **hii**   sarag-t   ʔis-sijjaarah

            that-3SG.F   DEF-girl   she   stole-3SG.F   DEF-car

          '…… that the girl, she stole the car.'

c. ….ʔinn-hum   ʔil-wlaad   **hum**   sarag-u   ʔis-sijjaarah

            that-3PL.M   DEF-boys   they.M   stole-3PL.M   DEF-car

          '…… that the boys, they stole the car.'

In each example in (19), the preverbal subject is followed by a pronoun which I assume is what is known in the literature of Arabic grammar as an H-Form (Fassi Fehri 1993; see also Jlassi 2013). The subject and the pronoun are co-referential. I interpret the H-form as a morphologically overt counterpart of the *pro* that occupies Spec,SubjP. What bears out this assumption in part is the preference to have the subject pronoun after the subject not before it, as demonstrated below (the judgements here are subtle, but I treat the instances where the pronoun appears before the subject as ungrammatical following the general tendency):

(20) a. *ʔabuu-i   ʔistaʁrab   ʔinn-uh   **huu**   ʔil-walad

           Father-my   got surprised.3SG.M   that-3SG.M   he   DEF-boy

           sarag   ʔis-sijjaarah]

           stole.3SG.M   DEF-car

          Intended: 'My father got surprised that the boy, he stole the car.'

b. *……ʔinn-ha   **hii**   ʔil-binit   sarag-t   ʔis-sijjaarah

             that-3SG.F   she   DEF-girl   stole-3SG.F   DEF-car

          Intended: '……..that the girl, she stole the car.'

c. *…..ʔinn-hum   **hum**   li-wlaad   sarag-u   ʔis-sijjaarah

             that-3PL.M   they.M DEF-boys   stole-3PL.M DEF-car

          Intended: '…….that the boys, they stole the car.'

Sentence (20a) is excludable because the H-Form *huu* does not occupy Spec,SubjP, but a different position, say, Spec,Topic Phrase, which does not license an expletive pro; so *huu* is a PF realization of no category. Sentence (20a) is thus ruled out as it involves a superfluous element, violating the ban against superfluous symbols in presentations (cf. Chomsky 1995). The same analysis can be replicated for the examples in (20b,c).

Moreover, support for the hypothesis that Spec,SubjP is projected and filled with a *pro* which is not base-generated in the thematic vP shell comes from sentences with negation where an independent nominative pronoun can be completely identical to the pronoun incorporated into negation, as the following sentences show:[38]

(21) Ɂabuu-i   Ɂistaʁrab   Ɂinn-uh   huu ma-huu-ʃ   bi-d-daar.
       father-my got surprised.3SG.M that.3SG.M he   NEG-he-NEG   in-DEF-house
          'My father_i got surprised that he_j is not at home.'

Following Aoun *at al.*'s (2010: 107) approach to Moroccan Arabic, I suggest that the H-Form *huu* in (21) is a morphologically overt counterpart of the expletive *pro* that occupies Spec,SubjP. The incorporated pronoun into negation could be analysed as a true pronominal subject that enters the derivation in the canonical subject position, where it is assigned its thematic role.

The assumption that the expletive *pro* can be realized has been argued for by numerous studies from different languages. For instances, Cardinaletti (2007) argues that *pro* can be morphologically realized in Spec,SubjP in the regional variety of Italian spoken around Ancona. Witness the following example taken from Cardinaletti (2007: 73).

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[38] Fassi Fehri (1993) proposes that Spec,IP (Spec,SubjP) in Standard Arabic is filled with the expletive *pro* in a VSO sentence where the verb shows impoverished agreement with the subject (the verb agrees with the subject only in gender and person). Fassi Fehri argues that the feature values on the expletive *pro* have to be licensed by the AGR content (p. 42). On the other hand, in cases where the verb agrees fully with the subject, i.e., in gender, person, and number, Fassi Fehri argues that full agreement is an instance of pronoun incorporation. However, Fassi Fehri's proposal is not the proper analysis for JA, as the verb in JA displays full agreement with the subject, irrespective of the word order used in the given clause. Second, a preverbal pronominal overt subject can freely appear while the verb shows full agreement, a case which is unexpected under Fassi Fehri's pronoun incorporation proposal (see Harbert and Bahloul 2002: 61-63 for more critical discussion of Fassi Fehri's pronoun incorporation proposal). Additionally, AGR is eliminated in the minimalist program; hence the feature values on the *pro* should be determined through a different mechanism (see Holmberg 2005 for a proposal).

(22) L' hanno/*ha   fatto   ieri,   il-disegno,   quei   bambini   lì`

       It have/has   done   yesterday   DEF-drawing   those   children   there

       'Those children did the drawing yesterday.'

Cardinaletti argues *Pro* realization is implemented especially in cases with the subject being dislocated, exactly the same case we find in JA (see the examples in (19) above).

Under this approach, I depart from Alexiadou and Anagnostopoulou's assumption that in *pro-drop* languages (of which JA is one) a pronominal head containing rich agreement raises along with the verb to Tº and values the uninterpretable Φ-features of Tº, making it unnecessary to project (Spec,) SubjP. My analysis instead argues that Spec,SubjP in embedded clauses is projected and filled with the expletive *pro* (forced by the Subject Criterion). This discussion raises the question why Spec,SubjP is always filled with an expletive *pro* in embedded clauses, whereas it is filled with the thematic subject (or *ʔilli,* among other options, in questions with a D-linked wh-word). One possibility I suggest is that the aboutness property is restricted to SubjP in root clauses, whereas it is missing in embedded contexts.

Another question to be asked here is how the content of the H-Form (that fills Spec,SubjP) is determined. Note that the H-Form and the subject have the same specification of Φ-features, (consider, ill-formed sentence 23, below where the H-Form displays different Φ-features than the subject). I suggest here that the H-Form is endowed with Φ-features in the sense that it enters the derivation with a bundle of Φ-features, which are inherently unvalued. Following Pesetsky and Torrego's (2007) proposal on the separation between valuation and interpretability, the H-Form acts as a probe. For Pesetsky and Torrego (2007: 270), probes are identified not because they have uninterpretable features but because they have unvalued features.

(23) *ʔabuu-i   ʔistaʁrab   ʔinn-uh   ʔil-walad

      father-my got surprised.3SG.M that-3SG.M   DEF-boy

      hii   sarag   ʔis-sijjaarah

      3SG.F   stole.3SG.M   DEF-car

     Intended: 'My father is surprised that the boy stole the car.'

Upon its merger in the derivation, the H-Form starts searching for an appropriate goal within its c-commanding visible domain. It locates the thematic subject whose Φ-features are valued. A probe-goal relation is established between the pro and the subject, a matter that results in valuing the Φ-features of the pro which are uttered as the H-Form.[39]

Here one might wonder why the H-Form cannot establish an Agree relation with the object. The answer lies in the assumption that the subject is a barrier that intervenes between the H-Form and the object. The present analysis thus predicts that when the subject is not present, *pro* can express the Φ-content with the object. This prediction is upheld as the H-Form agrees with the object in passive sentences, as shown in the following example:

(24)   Ɂabuu-i   Ɂistaʁrab   Ɂinn-ha

        father-my   got surprised.3SG.M that-3SG.F

        Ɂis-sijjaarah   hii   Ɂin-sarag-t

        DEF-car   it   PASS-stole-3SG.F

        'My father is surprised that the car was stolen.'

This analysis offers an account of the old observation made in Osman (1990: 167) that in sentences where pronouns precede their antecedents (i.e. backward anaphora), null but not lexical pronouns can be referential with their antecedents. Null pronouns such as the pro in Spec,SubjP has unvalued Φ-content which is specified by their antecedents, whereas lexical pronouns have their Φ-content already valued from the lexicon.[40]

Let's now discuss the derivation of the marked word order, VSO.

4.4 VSO

VSO is acceptable whether the verb is contrastively stressed or not or whether the verb displays default agreement or not (capitals indicate main prosodic prominence):

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[39] See Fracarelli (2010) for a similar argument that Φ-features of some pronouns are valued through other elements in Somali.

[40] Following my analysis that Spec,SubjP is filled with a pro in embedded clauses, whereas it is filled mainly with the thematic subject in main clauses, JA sets the positive value of Bobaljik and Jonas's (1996: 211) [Spec,TP] parameter.

(25) a. ʔabuu-i   fakkar   ʔinn-uh   sarag   ʔil-walad   ʔis-sijjaarah
         father-my   believed.3SG.M   that-3SG.M   stole.3SG.M   DEF-boy   DEF-car
      'My father believed that the boy stole the car.'

      b. ʔabuu-i   fakkar   ʔinn-uh   SARAG   ʔil-walad   ʔis-sijjaarah.
         father-my   believed.3SG.M   that-3SG.M   stole.3SG.M   DEF-boy   DEF-car
      'My father believed that it was steal the car that the boy did.'

      c. ʔabuu-i   fakkar   ʔinn-hum   sarag-u   l-iwlaad   ʔis-sijjaarah.
         father-my   believed.3SG.M   that-3PL.M   stole-3PL.M   DEF-boys   DEF-car
      'My father believed that the boys stole the car.'

      d. ʔabuu-i   fakkar   ʔinn-hum   SARAG-U   ʔil-wlaad   ʔis-sijjaarah.
         father-my   believed.3SG.M   that-3PL.M   stole-3PL.M   DEF-boys   DEF-car
      'My father believed that it was steal the car that the boys did.'

When the verb is not accompanied by contrastive stress (as in 25a,c), it is assumed to remain adjoined to T°, giving rise to what is called thetic (or all-new) reading, 'a natural statement of an event, without prominence to any individual' (Al-Balushi 2012: 3). See also Soltan (2007: 50) for a similar view on MSA.

In (25b,d), the main verb *sarag* 'stole' denotes contrastive information; the speaker gives information which is in conflict with existing information (cf. Moutaouakil 1989, Ouhalla 1999). I propose here that the verb undergoes an extra movement to adjoin to the null Focus head, Foc°, that projects Focus Phrase (see Aoun *et al*. 2010 for a similar approach to MSA). The question now is whether there is empirical evidence for the movement of the contrastively stressed verb to CP. Evidence for this can be adduced with respect to the position of the 'high' IP adverbs in the sense of Cinque (1999), relative to the position of the verb. For instance, when the verb is contrastively focused, the epistemic high-IP adverbial *ʕan dʒad* 'surely' is placed to the right of the verb in contrast with the cases where the verb does not bear contrastive stress. Consider the following pair.

(26) a. ʔabuu-i   fakkar   ʔinn-uh   SARAG   ʕan dʒad

        father-my   believed.3SG.M   that-3SG.M   stole.3SG.M   surely

        ʔil-walad   ʔis-sijjaarah.

        DEF-boy   DEF-car

   'My father believed that it was surely steal the car that the boy did.'

    b. ……..ʔinn-uh   ʕan dʒad   sarag   ʔil-walad   ʔis-sijjaarah.

        that-3SG.M   surely   stole.3SG.M   DEF-boy   DEF-car

   'My father believed that the boy surely stole the car.'

The sentences in (26) are straightforward evidence for the movement of the contrastive verb to the left periphery.

In the remaining word orders (OSV, SOV, and VOS) more than one element appear to move to the left periphery. Frascarelli and Hinterhölzl's (2007) topics typology makes available a fine-grained mechanism by which the interaction of the elements dislocated to the left periphery can be laid down in a systematic way. In the following subsection, I introduce Frascarelli and Hinterhölzl's (2007) topics typology.

4.5   Frascarelli and Hinterhölzl's (2007) topics typology

Frascarelli and Hinterhölzl (2007) challenges Rizzi's (1997) assumption that topics in the left periphery have free recursion and do not show different interpretative properties between them. Rizzi states:

> ….there can be an indefinite number of topics […] [we] assume an adjunction analysis for topic, under the usual assumption on the reiterability of adjunction […] No interpretative problem arises in the case of a recursion of Top: nothing excludes that a comment […] may be articulated in turn as a topic-comment structure, so that topic phrases can undergo free recursion. (Rizzi 1997: 295)

Frascarelli and Hinterhölzl (2007: 88) argue convincingly against this view, assuming that topics do different things. They propose that there are, at least, three types of topics which should be distinguished, namely Aboutness Topic, Contrastive Topic, and Familiar Topic.

Building on Frascarelli and Hinterhölzl (2007), Jiménez-Fernández and Miyagawa (2014: 284) offer the following definitions of these three types of topics:[41]

(27)

i. Aboutness topic (A-Topic): what the sentence is about'' (Reinhart 1981, Lambrecht 1994); in particular a constituent that is ''newly introduced, newly changed or newly returned to'' (Givón 1983), a constituent which is proposed as ''a matter of standing and current interest or concern'' (Strawson 1964);

ii. Contrastive topic (C-Topic): an element that induces alternatives which have no impact on the focus value and creates oppositional pairs with respect to other topics (Kuno 1976, Büring 1999);[42]

iii. Familiar topic: a given or accessible (Chafe 1987) constituent (F-Topic), which is typically destressed and realized in a pronominal form(Pesetsky 1987); when a familiar topic is textually given and d-linked with a pre-established aboutness topic, it is defined as a continuing topic (Givón 1983).

Frascarelli and Hinterhölzl (2007) maintain that unlike the F-Topic both the A-Topic and the C-Topic are non-recursive, meaning that no more than one A-Topic or C-Topic is permitted per a single clause. Besides the differences between these three topics with respect to the interpretive semantic/pragmatic value they encode, Frascarelli and Hinterhölzl (2007) demonstrate that these topics differ in syntax. The following schematic representation shows the different places that these three types of topics occupy in the left periphery, vis-à-vis Focus Phrase (in minimalist terms, no specifier positions exist before they are created by external or internal Merge. However, I am assuming the X'-schema in (28) for ease of exposition):

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[41] Frascarelli & Hinterhölzl's definitions are regarded as a step forwards with respect to providing clearer definitions of the notion 'topic'. However, it should be submitted that the notion of 'topic' is still not very clearly or consistently defined in the literature, and even some researchers (e.g. Prince 1999) have suggested that there is no coherent notion of "topic". It is obvious that any elaboration here would take the discussion too far afield, so I leave this point pending further research.

[42] Frascarelli and Hinterhölzl's (2007) proposal that topics can be contrastively stressed is consistent with Molnar's (2001:112) assumption that contrast should be established as a further category of information structure, superimposed on topic and focus.

(28)

```
                    ForceP
                   /      \
                 For     A-TopicP
                        /        \
                      XP         Top'
                                /    \
                              Top   C-TopicP
                                   /         \
                                 XP          Top'
                                            /    \
                                          Top   FocusP
                                               /      \
                                             XP       Foc'
                                                     /     \
                                                   Foc    F-TopicP
                                                         /        \
                                                       XP         Top'
                                                                 /    \
                                                               Top   .......
```
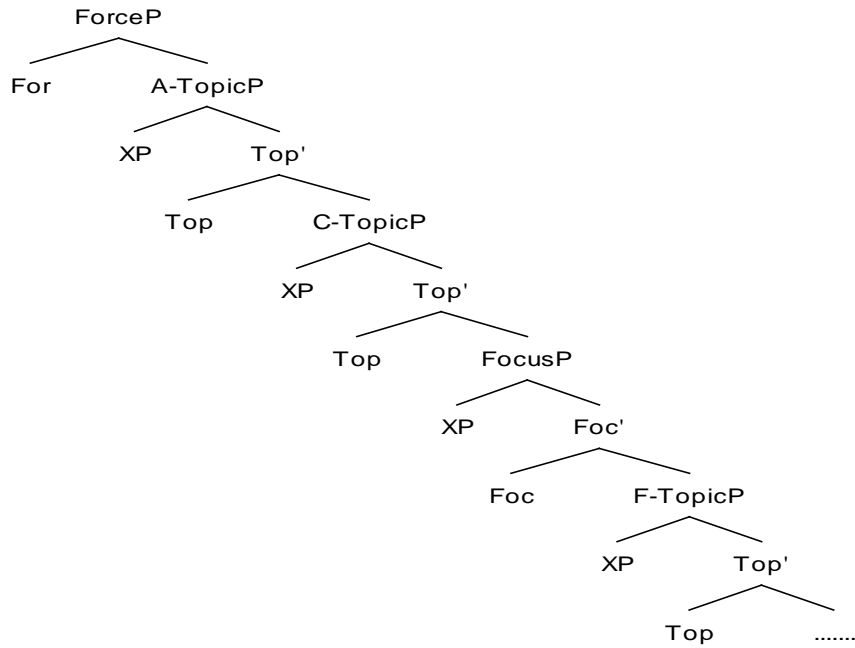
Visibly, the A-Topic c-commands the C-Topic, which in turn c-commands the F-Topic as well as Focus Phrase. It will become clear that JA embedded clauses lack the A-Topic, much in the same way as many languages. Furthermore, because the C-Topic is accompanied by contrastive stress for denoting a membership set, it cannot co-occur with a focalized fronted element which in principle should express contrast, as well (Bocci 2007; Bianchi and Frascarelli 2010).

To illustrate, Bianchi and Frascarelli (2010: 82) and Jiménez-Fernández and Miyagawa (2014: 258) argue that the A-Topic is a root phenomenon in the sense that it is not permitted in embedded clauses. In Krifka (2001: 25-26), the A-Topic is argued to constitute an independent speech act, introduced by a dedicated speech act operator and conjoined to the speech act expressed by the following sentence. Bianchi and Frascarelli (2010: 78), in their turn, interpret the A-Topic as a Shift operator, in the sense that the speaker's conversational move is to signal a shift in the direction of the conversation, and hence the necessity to 'access a different file card' in the propositional common ground (which is defined as the mutually recognized shared information in a situation in which an act of trying to communicate takes place; Stalnaker 2002: 704). They even propose that A-Topics do not belong in the left periphery of the clause, but are a part of speech act conjunction (πP).

In JA grammar, the observation that the A-Topic is not compatible with embedded contexts is respected. Evidence for this assumption can be adduced from the ban against the occurrence of the expression *biχusʕuusʕ* +DP 'as for' in the embedded clauses. Firstly, let's settle the

argument that this expression is a A-Topic marker. Consider the following example, involving the expression *biχusˤuusˤ*.

(29)   biχsˤuusˤ masˤaari   ʔil-maʃruuʕ, ʔil-walad   ʔaʕtˤa-hin   la-ʔabuu-i
             As for   money   DEF-project DEF-boy   gave.3SG.M-them to-father-my
             'As for the money of the project, the boy gave them to my father.'

Building on the definition of the A-Topic (see (27) above), I propose that the expression *biχsˤuusˤ* marks the entity functioning as an A-Topic. Firstly, *masˤaari ʔil-maʃruuʕ* 'the money of the project' is definite and specific. If the DP *masˤaari ʔil-maʃruuʕ* is turned non-specific, the sentence becomes ungrammatical.

(30) *biχsˤuusˤ masˤaari maʃruuʕ,   ʔil-walad   ʔaʕtˤa-hin   la-ʔabuu-i
        As for   money   project   DEF-boy gave.3SG.M-them to-father-my
            Intended: 'As for project money, the boy gave them to my father.'

Second, the DP marked by the expression *biχsˤuusˤ* serves as the current interest or concern of the relevant discussion. For instance, when the conversation goes too far afield, the expression *biχsˤuusˤ* is used to drag the conversation back to the topic that the conversation was originally about. Consider the following dialogue:

(31)

    Speaker A: masˤaari ʔal-maʃruuʕ   ʔabuu-i   ʔaʕtˤaʔ-hin   li-l-ʕaamil
               money   DEF-project Father-my gave.3SG.M-3PL.F to-DEF-worker
          'My father gave the money of the project to the worker.'

    Speaker B: ʔil-ʕaamil   ħaka   ʔinn-uh   badd-uh   wagit
               DEF-worker talk.3SG.M that-3SG.M   need-3SG.M   time
               ħattaʔ   ʔjχalisˤ
               till   finish.3SG.M
          'The worker said that he needs some time to finish.'

    Speaker C: muʃ   muʃkilah,   ma-ħnaa-ʃ   mistaʕdʒiliin
               NEG problem   NEG-we-NEG   busy
          'No problem, we are not busy.'

Speaker D: ha-l-ayyam   ma   fiih   ʕummal ʔikθiir

             SPEC-DEF-days NEG EXP   workers many

             'There are no many workers these days.'

Speaker A: biχusˤuusˤ masˤaari ʔal-maʃruuʕ, kamm   ʔabuu-i   ʔatˤa-ah

             As for   money DEF-project how much father-my gave-3SG.M

             'As for the money of the project, how much did my father gave him?'

In dialogue (31), the conversation was first about the money of the project, the speaker's father gave them to the worker. Then the conversation shifted to the worker and how it is difficult to get an available worker quickly, shifting the conversation away from the primary topic, the money of the project. Using the expression *biχsˤuusˤ*, Speaker A's last utterance aims to shift the ongoing conversation back to the original topic, the money of the project. Accordingly, the DP *masˤaari l-maʃruuʕ* 'the money of the project' serves as an A-Topic.[43]

What is relevant here is the observation that the construction *biχsˤuusˤ*+ DP cannot appear in embedded clauses. Consider the following sentence:

(32)   *ʔummi-i   fakkar-t/ ħizin-t   ʔinn-uh   biχusˤuusˤ   masˤaari

             mother-my   believed/regretted-3SG.F   that-3SG.M   as for   money

             ʔil-maʃruuʕ   ʔil-walad   ʔaʕtˤa-hin   la-ʔabuu-i

             DEF-project DEF-boy   gave.3SG.M-them   to-father-my.

         Intended: 'My mother believed/regretted that as for the money of the project, the boy gave it to my father.'

If the expression *masˤaari l-maʃruuʕ* 'the money of the project' is forced on the sentence in (32), it should appear at the beginning of the main clause, an observation supporting the assumption that the A-Topic is a root phenomenon, and that the embedded clauses introduced by *ʔinn* are not root-like clauses.

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[43] In this light, *biχsˤoosˤ* turns out to be the JA counterpart of *ʔamma:…fa* in Standard Arabic, an expression used to mark the A-Topic (Jlassi 2013: 27).

    i.   ʔamma: ʔa-ṭṭaalib-u   fa-ḍaraba-hu   ʔal-muʕallim-u

         as for   the-student-NOM   then-beat.3SG.M   the-teacher-NOM

         "As for the student, the teacher beat him.'

(33)   biχsˤuusˤ   masˤaari ʔil-maʃruuʕ   ʔummi-i   fakkar-t/ ħizin-t

As for   money   DEF-project   mother-my believed/regretted-3SG.F

ʔinn-uh   ʔil-walad   ʔaʕtˤa-hin   la-ʔabuu-i

that-3SG.M   DEF-boy   gave.3SG.M-them   to-father-my

'As for the money of the project, my mother believed that the boy gave them to my father.'

In this picture, the left-periphery of the JA embedded clauses introduced by *ʔinn* is reduced in the sense that the A-topic is not present, as schematized below:

(34)

```
                    ForceP
                   /      \
                ?inn    C-TopicP
                        /      \
                     Top      FocusP
                             /      \
                          Foc     F-TopicP
                                  /       \
                               Top       FinP
                                        /    \
                                      Fin    .......
```

Now, let's explore how this understanding of embedded clauses left periphery helps us account for the syntactic derivation of other marked word orders and their peculiarities.

4.6   OSV and SOV

As for the marked word order, OSV, the fronted object can either be topicalized or focalized, depending on, among other factors, whether the verb carries a resumptive clitic referring back to the fronted object or not. Consider the following examples (native speakers should remember to pronounce the word in capitals with contrastive stress)

(35)   Speaker A: ʔabuu-i   fakkar   ʔinn-uh   ʔil-walad

father-my   believed.3SG.M   that-3SG.M DEF-boy

sarag   ʔid-daftar   walla   ʔil-galam

stole.3SG.M   DEF-notebook   or   DEF-pen

'What did my father believe that the boy stole: the notebook or the pen?'

Speaker B: ʔabuu-i   fakkar   ʔinn-uh   *(ʔID)-DAFTAR

              father-my   believed.3SG.M that-3SG.M   DEF-notebook

              ʔil-walad   sarag-uh.

              DEF-boy   stole.3SG.M-it

              'My father believed that the notebook the boy stole it.'

(36) Speaker A: eeʃ   ʔabuu-i   fakkar   ʔinn-uh   ʔil-walad   sarag

              what father-my   believed.3SG.M that-3SG.M DEF-boy   stole.3SG.M

              'What did my father believe that the boy stole?'

Speaker B: ʔabuu-i   fakkar   ʔinn-uh   DAFTAR ʔil-walad sarag.

              father-my   believed.3SG.M that-3SG.M   notebook   DEF-boy stole.3SG.M

              'My father believed that it was a notebook that the boy stole.'

In (35), the verb *sarag* 'stole' carries a resumptive clitic *uh* which refers back to (is co-indexed with) the preposed object *ʔiddafar* 'the notebook'; *uh* exhibits the same Φ-content of the object *ʔiddafar*, being [3SG.M]. Furthermore, when the object is co-indexed with a resumptive clitic suffixed to the verb, it should be definite and specific, otherwise the resulting sentence would be ungrammatical, as shown in the following ill-formed example:

(37)   *ʔabuu-i   fakkar   ʔinn-uh   daftar ʔil-walad sarag-uh.

            father-my believed.3SG.M that-3SG.M notebook DEF-boy   stole.3SG.M-it

            Intended: 'My father believed that a notebook the boy stole.'

In view of this, the object in (35) is a topicalized entity, whereas it is a focus in (36) due to there not being a resumptive clitic that appears as an enclitic on the verb *sarag* 'stole'; the object *daftar* is indefinite (and nonspecific) and should be said with contrastive stress.

It should be noted here that unlike the VSO word order, the subject cannot be indefinite in the OSV word order, irrespective of whether the object is a topic or a focus. Consider the following ungrammatical sentence:

(38) *ʔabuu-i   fakkar   ʔinn-uh   (ʔID)-DAFTAR walad   sarag(-uh).

 father-my believed.3SG.M that-3SG.M   DEF-notebook boy   stole.3SG.M-it

 Intended: 'My father believed that the car a boy stole it.'

With the topics typology proposed by Frascarelli and Hinterhölzl (2007) in mind, I claim that the object with linear precedence over the subject is assumed to be higher than the subject (in CP field), and given that there is no A-Topic in embedded clauses, the highest position the object can reside in is Spec,C-Topic Phrase or Focus Phrase. Given the fact that neither Focus Phrase nor C-Topic is recursive (and do not co-occur in the same clause), the preverbal subject should be definite (and specific) to be licensed in Spec,F-Topic Phrase.[44]

This analysis fruitfully extends to the marked word order SOV. Here the object should be definite; otherwise the resulting sentence would be ungrammatical. Consider the following dialogue:

(39)   Speaker A: ʔabuu-i   fakkar   ʔinn-uh   ʔil-walad   walla

 father-my   believed.3SG.M that-3SG.M DEF-boy   or

 ʔil-binit   sarag   ʔis-sijjaarah?
 DEF-girl   stole.3SG.M   DEF-car
'What did my father believe, that the boy stole the car, or the girl?'

 Speaker B: ʔabuu-i   fakkar   ʔinn-uh   L-WALAD

 father-my   believed.3SG.M   that-3SG.M   DEF-boy

 *(ʔis)-sijjaarah   sarag-ha.
 DEF-car   stole.3SG.M-it
'My father believed that the boy, he stole the car.'

Again, because there is no A-Topic Phrase in the embedded clauses introduced by the complementizer *ʔinn*, the highest position the subject (the element that precedes the object here) can reside in is Spec,Focus Phrase or Spec, C-topic, as is the case in (39). When the subject is in Spec, Focus Phrase, the object should be definite to be allowed in either Spec,F-Topic Phrase or Spec,C-Topic Phrase, due to the fact that Focus Phrase is not recursive (Rizzi 1997, 2004, among others). Additionally, when the subject is a C-topic as in (39), the object should be definite to be licensed as an F-Topic, hence the account of the observation that in

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[44] Recall the Spec,SubjPis filled with a pro in embedded clauses in JA; see section 4.3.

the SOV word order the object should be definite, irrespective of the subject being a focus or a topic.

Before bringing this section to a close, there is one issue to be tackled. As almost all informants state, the leftmost element in the OSV or SOV word order should be said with contrastive stress, as shown in the following examples:

(40)   a. ʔabuu-i   fakkar   ʔinn-uh   ʔID-DAFTAR/*ʔid-daftar
          father-my   believed.3SG.M   that-3SG.M   DEF-notebook
          ʔil-walad   sarag-uh.
          DEF-boy   stole.3SG.M-it
             'My father believed that the notebook (not the pen) the boy stole it.'

       b. ….. [ʔinn-uh   DAFTAR/*daftar   ʔil-walad   sarag.
               that-3SG.M   notebook   DEF-boy   stole.3SG.M
          '……. that it was a notebook that the boy stole.'

(41)   a. …..ʔinn-uh   ʔIL-WALAD/*ʔil-walad   ʔid-daftar   sarag.
               that-3SG.M   DEF-boy   DEF-notebook   stole.3SG.M
          '…….. that the boy (not the man), he stole the notebook.'

       b. ……ʔinn-uh   WALAD/*walad   ʔid-daftar   sarag.
               that-3SG.M   boy   DEF-notebook   stole.3SG.M
          '…… that it was a boy who stole the car.'

The case with the first element being indefinite is straightforward. The first element is a focus expressing exhaustive identification. The object in (40b) and the subject in (41b) are indefinite, nonspecific; hence they express contrastive information which is spelled out by the virtue that such elements carry contrastive stress. The two sentences are interpreted as the speaker does not pick the relevant element from a set whose members are all familiar to him/her. The object in (40b) and the subject in (41b) move to Spec,Focus Phrase, forced by the Focus Criterion (cf. Rizzi 2005, and Bocci 2007). Concerning the cases with the first element being definite and specific, I claim that JA embedded clauses allow only one preverbal F-Topic Phrase, which is lower than the C-Topic position. This amounts to proposing that the F-Topic Phrase is not recursive in the embedded clauses of JA. As referred

to above, Frascarelli and Hinterhölzl (2007) argue that the F-Topic is recursive, as opposed to the A-Topic and the C-Topic. Contra Frascarelli and Hinterhölzl (2007), I claim that the F-Topic is also non-recursive in the embedded clauses of JA. Following this line of thought, if the fronted definite object is followed by the topicalized subject, the only possibility for the former is to act as a C-Topic, given that the A-Topic is not available in embedded clauses. Therefore, there is only one possibility available for an F-Topic and C-Topic combination, as represented in the following schemata.

(42)   OK   C-Topic, F-Topic, SubjP….

          * F-Topic, C-Topic, SubjP ….

          * F-Topic, F-Topic,SubjP ….

Additionally, the behaviour of the object and the subject in OSV and SOV word orders demonstrates that in JA embedded clauses, C-Topic Phrase c-commands F-Topic Phrase, as originally predicted by Frascarelli and Hinterhölzl (2007) for German and Italian.

It is natural here to connect that fact that the leftmost element in SOV and OSV word orders should bear contrastive stress in JA with the similar phenomenon in MSA grammar. In MSA the element carrying (contrastive or corrective) focus occurs clause-initially, the pragmatic function known as *l-takhsiis* lit. 'specification", which is correlated with the grammatical process known as *l-taqdiim* lit. 'preposing' (Ouhalla 1997). This discussion also vindicates the common view that there is a one-to-one relationship between information structure roles and functional syntactic categories across Arabic dialects (cf. Moutaouakil 1982, 1989, Ouhalla 1997).

Having analysed the derivation of the unmarked word order SVO, and the marked word orders VSO, OSV, OVS, and SOV, let us now explore the syntactic derivation of the last marked order licensed in JA grammar in embedded clauses, namely VOS.

4.7 VOS

In this section, I explore the syntactic derivation of the word order VOS. I offer evidence that this word order is derived through the movement of VO as one bloc to the left periphery. Consider the following example:

(43) ʔabuu-i   fakkar   ʔinn-uh   SARAG   ʔid-daftar   ʔil-walad
     father-my believed.3SG.M that-3SG.M stole.3SG.M DEF-notebook DEF-boy
     'My father believed that it was steal the notebook the boy did.'

In this marked order, it seems that the verb and the object move as one bloc to the left periphery. Alternatively, one can suggest that this word order would be derived through right dislocation (extraposition) of the subject to TP/CP. There seems to be good evidence in favour of the first possibility, i.e. verb+object movement to the left periphery.

To start with, it is significant to note at the outset that in the VOS word order the subject needs to be specific. Indefinite nonspecific subjects are not acceptable.

(44) a. *ʔabuu-i   fakkar   ʔinn-uh   SARAG   ʔid-daftar   walad
        father-my   believed.3SG.M   that-3SG.M stole.3SG.M DEF-notebook boy
           Intended: 'My father believed that it was steal the notebook that a boy did.'

    b. …….ʔinn-uh   SARAG   ʔid-daftar   walad kabeer.
          that-3SG.M   stole.3SG.M   DEF-notebook   boy   big
       '…..that it was steal the notebook that a big boy did.'

The requirement that the subject expresses discourse given information is a clue for its topicality. Let's suppose here that the postverbal subject is a topic that is situated in Spec,Topic Phrase. The question that arises here is whether the subject is a low IP topic or a CP topic. This also would help us identify whether VOS word order is a case of VP-fronting or TP-fronting.

JA data lends support for the assumption that the VOS word order can be an instance of vP fronting or TP fronting, depending on whether TP moves along with vP or not. In both cases, the subject is a topic in the high left periphery. Support for this assumption comes from

sentences with the past tense copula *kaan* that occupies T° (Baker 2003, Benmamoun 2008). Consider the following sentences:

(45) a. ʔabuu-i   fakkar   ʔinn-uh   KAAN jisarag   ʔid-daftar   ʔil-walad
       father-my   believed.3SG.M that-3SG.M was   steal.3SG.M   DEF-notebook DEF-boy
       'My father believed that it was steal the notebook the boy was doing.'

    b. …..ʔinn-uh   jisarag   ʔid-daftar   ʔil-walad   KAAN.
         that-3SG.M   steal.3SG.M   DEF-notebook   DEF-boy   was
       : '…….. that it was steal the notebook the boy was doing.'

    c. *…ʔinn-uh   yisarag   ʔid-daftar   KAAN   ʔil-walad
         that-3SG.M   steal.3SG.M   DEF-notebook   was   DEF-boy
      Intended: '…… that it was steal the notebook the boy was doing.'

In (45a), the past tense copula *kaan* 'was' precedes all elements of the clause, including the subject that appears clause-finally. I suggest that this sentence is derived this way: the subject which should express discourse given information moves from its base position to Spec,Topic Phrase, forced by the relevant freezing criterion. Then the remnant TP moves to the left periphery in a phrasal movement to Spec,Focus Phrase, forced by the Focus Criterion. These two movements yielding as a result the surface word order where all clause elements precede the thematic subject. This derivation is schematically represented as follows:

(46)
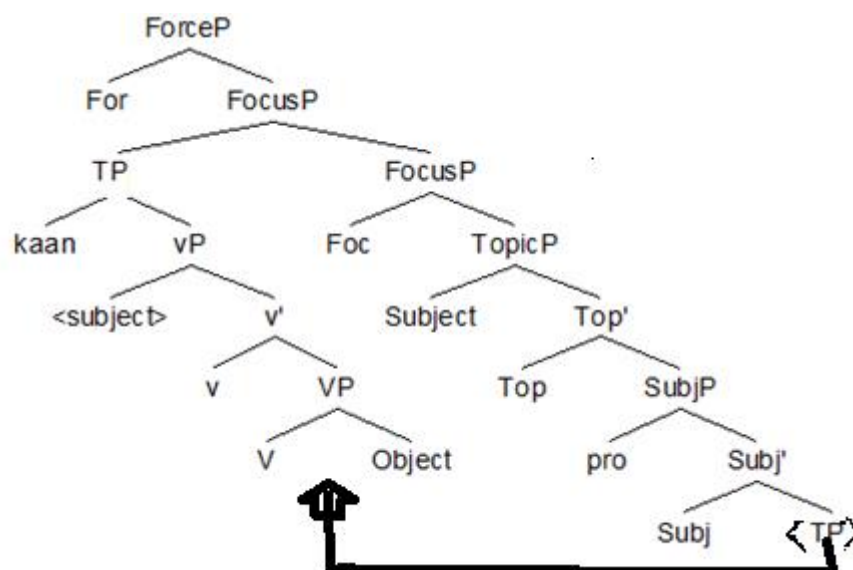
In (45b), I suggest that *kaan* remains in situ, while vP moves to the left periphery. The ungrammaticality of (45c) provides strong support for the thematic subject being in the higher left periphery rather than the low left periphery or in its origin position in VOS clauses, as it is disallowed to appear to the right of the past tense copula which occupies T°.

It is interesting to mention here that the assumption that the VOS word order is derived through the movement of the predicate to a higher phrase is pursued by a number of authors for other languages. For instance, Massam (2000) argues that the VOS word order in the Polynesian language Niuean is derived through movement of the predicate (VO) to what she calls as Predicate Phrase. Also Coon (2010) argues that the VOS word order in Chol (Mayan) is not a result of base-generation but a result of phrasal fronting of the predicate to Spec,TP.

On the other hand, one might entertain the possibility that the VOS word order is a case of subject right-dislocation where the subject is dislocated clause-finally via topicalization, while TP remains in situ, as would be diagrammed in (47):

(47)

```
          ------
       ---/    \
  ------     CP
           /    \
          C    SubjP
              /     \
            pro     Subj'
                   /     \
                 Subj     TP
                        /     \
                      T'      subject
                     /  \        ↑
                    T    vP      |
                        /    \___|
                  <subject>    v'
                              /   \
                             v    ------
```
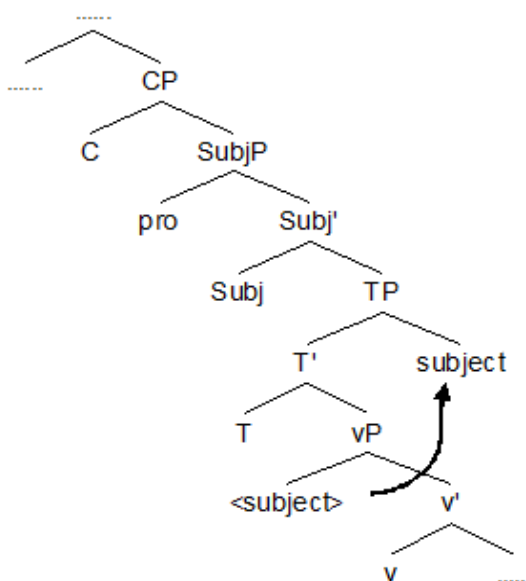
If we adopt the derivation in (47), we are at a loss to explain a number of related observations which are neatly accommodated with the proposal that VO moves to the left periphery as one bloc. Firstly, a number of authors have observed that n-words and negative polarity items cannot be right-dislocated (Calabrese 1992, Samek-Lodovici 2006). Consider the following example from Italian, taken from Samek-Lodovici (2006: 844) (the gloss is slightly modified to be consistent with the convention used in this thesis).

(48)   *Non l'-ha   mangiato GIANNI, alcunche´

       Not it-has eaten   John,   anything

     'JOHN didn't eat anything.'

Samek-Lodovici (2006) interprets example (48) as evidence for his argument that non-final focus is always the side effect of the independent operation of right dislocation applied to the constituents following focus. If this were the case in JA, we would expect the JA equivalent sentences of (48) is ungrammatical, contrary to fact. Consider the following sentence:

(49)   ma   ʕAZAM-ʃ   ʔil-binit   ħada.

      NEG   invited.3SG.M-NEG   DEF-girl   anybody

     'Nobody invited the girl.'

Sentence (49) would be predicted to deteriorate if the subject in the VOS word order would undergo right-dislocation. The well-formedness of (49) lends credence to the TP/vP-fronting approach to the VOS word order. As has been argued for in the related literature, the negative polarity item should be overtly licensed by a c-commanding licenser within or higher than Iº/Tº (Zanuttini 1997). If the right-dislocation approach for the VOS word order is followed, it is hard to account for the negative polarity item *ħada* being left unlicensed in overt syntax, given that the subject, *ħada*, would occupy a position higher than its putative licenser, the discontinuous sentential negation particle *ma……ʃ* (see, Alqassas 2015). On the other hand, TP-fronting provides us with a plausible account of (50) in that the negative polarity item *ħada* is still c-commanded by a higher projection containing the discontinuous sentential negation particle *ma……ʃ* which is obligatory in such cases.[45]

(50)   *ʕAZAM   ʔil-binit   ħada.

      invited.3SG.M-NEG DEF-boy   anybody

     Intended: 'Nobody invited john.'

Additionally, what bears out my proposal for the VOS word order outlined above is the fact that any sentential or verb-anchored adjuncts should show up to the left of the subject when *kaan* is preposed, implying that what moves is the whole phrase containing them, viz., TP.

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[45] Note that the discontinuous sentential negation particle *maʃ* does not itself c-command the negative polarity item. I will not investigate this here but leave it as an observation to be explored in further research.

(51) Ɂabuu-i   fakkar   Ɂinn-uh   (Ɂimbaariħ)   kaan   yisrig

father-my believed.3SG.M that-3SG.M   yesterday   was.3SG.M steal.3SG.M

(Ɂimbaariħ)   Ɂid-daftar   Ɂil-walad   (*Ɂimbaariħ).

yesterday   DEF-notebook   DEF-boy   yesterday

'My father believed that it was steal the notebook the boy did yesterday.'

It is not clear why the adjunct *Ɂimbaariħ* 'yesterday' cannot appear in a post-subject position if the remnant movement analysis is not adopted. Additionally, the position of the object to the right of the verb without incurring any resumptive clitic on the latter demonstrates that the object does not move past the verb in PF. The linear relation between the verb and the object is still intact in the absence of any intervening element. It looks like that they do not move individually. If TP-fronting is pursued for sentence (51), the linear considerations between the verb and object on the one hand and the fact there are no intervening elements between them follow straightforwardly. The verb and the object move as one bloc to the left periphery.

Under this view, the VOS word order is derived through the movement of the subject to Spec,F-Topic Phrase (in the higher left periphery) prior to the movement of TP/vP remnant to Spec,Focus Phrase, forced by the Focus Criterion. The TP-fronting approach works well enough in accounting for the position of the subject at the end of every sentence concerned, the linearity of the verb and the object and, most importantly, the position of tense at the beginning of every sentence concerned.[46]

4.8   Conclusion

To recap, this chapter has introduced a syntactic account of the derivations of all word order permutations possible in JA embedded clauses, introduced by the complementizer *Ɂinn*. It has been clear that the derivation of all these orders is motivated by certain pragmatic factors. This conforms with Suleiman's (1989) proposal that '..all changes in the internal structures of Arabic sentences are motivated by a desire to express additional meanings' (p. 215). In the unmarked SVO word order, the subject is a topic rather than a true subject in Spec,SubjP. I

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[46] A question that arises here is why the tense filler *kaan* or the verb adjoining to T° (when T° is null) employs a pied-piping strategy moving all remnant TP/vP material along to Focus Phrase rather than moving individually. This pied-piping requirement may be attributed to the assumption that Foc° in JA is associated with a movement-triggering diacritic, causing an XP to move into its Spec in this context (cf. Chomsky 2000 and Biberauer *et al.* 2009). However, this obviously still needs investigating, something I leave open for future research.

have relied on the observation that the preverbal subject should be either definite and specific or non-specific but expressing contrastive information, hence bearing contrastive focus. In the OVS word order, the object might be a topic or a focus, resting crucially on its informational value. Here, I have claimed that Spec,SubjP is occupied by an expletive *pro* which enters the derivation endowed with a set of unvalued Φ-features which are valued by the subject in active voice but the object in passive voice through a probe-goal relation. Appeal to the so-called double subject constructions as well as existential expressions was made to substantiate the argument that Spec,SubjP is present in embedded clauses and filled with an expletive *pro* that can be realized in some cases as the H-Form whose inherently unvalued Φ-features valued by the subject in active sentences, but by the object in passive sentences.

Afterwards, I introduced Frascarelli and Hinterhölzl's (2007) Topics Typology to accounting for the exact positions occupied by the dislocated elements in the left periphery. It has been advanced that embedded clauses introduced by the complementizer *ʔinn* allow instantiation of the C-Topic Phrase and F-Topic Phrase, but not A-Topic Phrase, concurring as such with Bianchi and Frascarelli's (2010) observation that the A-Topic is a root phenomenon. Moreover, I have claimed that F-Topic Phrase is not recursive in embedded clauses, hence the account of the observation that the leftmost element in OSV and SOV word orders should be contrastively stressed, regardless of its specifity/definiteness value. It is either a focus or a C-Topic, the two categories demanding the element bearing them to be contrastively stressed. The second element is an F-Topic, hence the observation that it must be (definite and) specific. In the last subsection, I have explored the syntactic derivation of the VOS word order, arguing that this word order is generated through the movement of the subject to F-Topic Phrase, followed directly by the movement of the remnant TP/vP to Spec, Focus Phrase.

This conclusion supports the assumption that topic is not a unique category and not susceptible to a single analysis (Bianchi and Frascarelli 2010). Additionally, this conclusion lends support to the assumption that embedded C-domains are defective in the sense that they lack some projections or some properties of other existing projection of root clauses (Bayer 2001, Haegeman 2002, Frascarlli 2010, among others).

In the next chapter, I explore the morpho-syntactic behaviour of the bound forms attached to the complementizer *ʔinn*. It will be made clear that Chomsky's (2007) feature inheritance approach is not compatible with JA data. I argue that there is no Φ-feature inheritance from

C^0 to T^0 in JA. This follows from the assumption that JA opts for setting the positive value of the postulated *T°-Φ parameter* which distinguishes languages where Tº is endowed with Φ-features from those where it is not. This accounts for the observation that Tº always appears inflected for agreement even in the situations where Cº is not projected. Tº being endowed with Φ-features, the Φ-features of Cº remain in situ, something that turns Cº into an agreeing head whose Φ-features are in turn valued by the closest goal within its c-command visible domain.

Chapter FIVE: Complementizer agreement and T°-Φ parameter

5.1 Introduction

In the previous chapter, I have explored the derivation of various word orders that may appear in embedded clauses introduced by the complementizer *ʔinn*. In this chapter, I shed light on the syntactic account of the suffix that is attached to this complementizer. The main motivation of this investigation is essentially the observation that such a suffix should express the Φ-features of the extracted subject although in non-extraction contexts the suffix may express the Φ-features of the subject or the object, depending on which one appears closer to it. Additionally, this investigation is important as it underlies the true dependency between T° and C° in Arabic grammar, something that is still far from clear.

Several studies maintain that the lexical word *ʔinn* is a complementizer in Arabic varieties (see, e.g. Benmamoun 2000b, Al-Horais 2009, Aoun *et al.* 2010, Soltan 2011, Fassi Fehri 2012). No consensus has been though reached on the categorical status of the bound forms which are attached to this complementizer (and various other heads). Such forms are said to be ambiguous between pronouns and inflections (Fassi Fehri 1993: 121). In this chapter, I zero in on the morpho-syntactic behaviour of the bound forms attached to the complementizer *ʔinn* in JA, putting forward the hypothesis that this clitic is a morphological realization of the Agree relation that is established between Cº and the closest visible element that is located within its c-command. This implies that Cº in JA still retains its Φ-features, contra what is predicted under the so-called feature inheritance (Chomsky 2007), where Cº passes down its Φ-features to Tº. Drawing mainly on the behaviour of ECM verbs, I assume that T° in JA is endowed with a separate set of Φ-features, a direct consequence of the positive setting of the postulated *T°-Φ parameter* (Tº is endowed with Φ-features).

This chapter proceeds as follows. I first provide the descriptive statements regarding the occurrence of bound forms attached to the complementizer *ʔinn* (§5.2). Afterwards, I introduce my account of the bound forms that appear on this complementizer (§ 5.3), arguing that such forms are inflectional suffixes that are a part of the spell-out of the complementizer *ʔinn'*s uninterpretable Φ-features. I thus depart away from proposals that treat such forms as incorporated pronouns (cf. Fassi Fehri 1993, Platzack 2003). This naturally leads to a number of questions that will be also the focus of this section. Then I introduce some relevant data

from other languages, with the ultimate goal that agreeing complementizers are not an idiosyncratic property of JA (§ 5.4). Section 5.5 explores the valuation of C°'s unvalued Φ-features. Lastly, section 5.6 concludes the chapter.

5.2 Setting the scene

In this section, I introduce the basic observations related to the suffix attached to the complementizer *ʔinn* and its distribution relative to other elements.

The complementizer *ʔinn* is used in JA to introduce, for example, clausal complements of verbs as in (1a) or noun complements as in (1b).

(1) a. ʔabuu-i   fakkar   ʔinn-*(uh)   ʔil-walad   sarag   ʔis-sijjaarah.
      Father-my   believed   that-3SG.M   DEF-boy   stole.3SG.M   DEF-car
      'My father believed that the boy stole the car.'

    b. lageet   ʔad-dalil   ʔinn-*(uh)   ʔil-walad   sarag   ʔis-sijjaarah.
      Found.1   DEF-evidence that-3SG.M   DEF-boy   stole.3SG.M   DEF-car
      'I found the evidence that the boy had stolen the car.'

Note here that the suffix attached to the complementizer *ʔinn* is required in JA. Such a requirement is though relaxed in other Arabic varieties, including MSA and Najdi Arabic, where this suffix only appears when the complementizer *ʔinn* is followed by a verb. Witness the following examples.

(2) a. qala   ʔaħmad-u   ʔinna ʕaliyy-an   dʒaʔa
      said.3SG.MASC   Ahmed-NOM that   Ali-ACC   came.3SG.MASC
      'Ahmed said that Ali came.'   (MSA, Mohammad 2000: 19)

    b. ʔiddaʕa   r- rajul.u   ʔanna-**hu**   yabduu   ʔanna
      claimed   the- man- NOM   that-3SG.M   seem3SG.M   that
      l- banat.i   saafar.na
      the- girls- ACC   departed.3FP
     'The man claimed that it seems that the girls departed.' (MSA, Mohammad 2000: 99)

c. a-ʕatiqid   in   Fatima   gara-t   al-kitaab

      1SGG-think.IMPERF   that   Fatima   read.PERF-3SG.FEM the-book

   'I think that Fatima read the book.'   (Najdi Arabic, Lewis 2013: 84)

d. ta-sagd   inna-*(**ha**)   sawwa-t   al-akil

2SG-mean.IMPERF   that-3SG.FEM   made.PERF-3SG.FEM   the-food

'You mean that she made the food.'   (Najdi Arabic, Lewis 2013: 51)

Whatever the analysis provided for the suffix attached to the complementizer *ʔinn* in MSA or Najdi Arabic does not necessarily carry over to JA, given that the restrictions on the occurrence of the clitic on the complementizer in JA are different.[47] Secondly, the suffix is not possible in JA in the absence of the complementizer *ʔinn* (which can be dropped under the so-called non-factive verbs; I return to this point in the following chapter), as demonstrated by the ungrammaticality of the following sentence:

(3) ʔabuu-i   fakkar   (*-uh)   ʔil-walad   sarag   ʔis-sijjaarah.

    Father-my   believed.3SG.M 3SG.M   DEF-boy   stole.3SG.M   DEF-car

    'My father believed that the boy stole the car.'

Note that the example in sentence (3) remains ungrammatical even if the suffix is attached to the verb of the root clause *fakkar* 'believed':

(4) *ʔabuu-i   fakkar-uh   ʔil-walad   sarag   ʔis-sijjaarah.

    Father-my   believed.3SG.M-3SG.M   DEF-boy   stole.3SG.M   DEF-car

     Intended: 'My father believed that the boy stole the car.'

It is obvious that the relation between the suffix and the complementizer *ʔinn* is robust. I assume that such a relation is an outcome of a specific narrow-syntax process, namely the Agree relation (cf. Chomsky 2000, 2001) that is established between *ʔinn* and some XP

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[47] For MSA, Mohammad (2000) claims that the clitic that appears on the complementizer *ʔinn* when the latter is followed by a verb is the PF form of the expletive that is situated in Spec,TP. The expletive is forced to surface because *ʔinna* need assign Accusative case to some entity and the assumption that the *pro* in Arabic does not survive in accusative environment. A similar analysis is replicated in Lewis (2013) following Mohammad (2000) for Najdi Arabic. Neither Mohammad nor Lewis accounts though for why the expletive should appear as a bound form although it was attested in Arabic literature that expletives are free forms when they are realized (see, mainly Fassi Fehri 1993). See also Ahmed (2015) for a recent refutation of Mohammad's (2000) account.

element. Note first that the suffix cross-references the Φ-content of the subject or the object, depending on which is closer, as clearly shown in the following examples:[48]

(5) a. Ɂabuu-i   fakkar   Ɂinn-uh   Ɂil-walad   sarag   Ɂis-sijjaarah.

     father-my   believed.3SG.M that-**3SG.M** DEF-boy   stole.3SG.M   DEF-car

        'My father believed that the boy stole the car.'

b. Ɂabuu-i   fakkar   Ɂinn-ha   Ɂis-sijjaarah sarag-ha   Ɂil-walad.

     father-my   believed.3SG.M that-**3SG.F**   DEF-car   stole.3SG.M-3PL.F DEF-boy

        'My father believed that the car the boy stole.'

In (5a), the suffix shows the same Φ-content of the preverbal subject, whereas it shows the Φ-content of the pre-subject object in (5b). In instances where there are more than one pre-verbal element (the subject and the object are fronted), the suffix expresses the same Φ-content of the leftmost element. Consider the following sentences where the complementizer *Ɂinn* agrees with the subject in (6a) but with the object in (6b) (see § 4.6 for why the element closer to *Ɂinn* should be said with contrastive stress).

(6) a. Ɂabuu-i   fakkar   Ɂinn-uh   ɁIL-WALAD *(Ɂil-)sijjaarah

     Father-my   believed.3SG.M that-3SG.M   DEF-boy   DEF-car

     sarag-ha.

     stole.3SG.M-it

     'My father believed that the boy (not the man), he stole the car.'

b. ....Ɂinn-ha   ɁIS-SIJJAARAH   Ɂil-walad   sarag-ha.

     ...... that-3SG.F   DEF-car   DEF-boy   stole.3SG.M-it

     '........ that the car (not the bus) the boy stole it.'

On the other hand, this condition on 'closeness' no longer holds in clauses with a VOS word order. The suffix agrees with the subject rather than the closer object:

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[48] It bears mentioning that the suffix attached to *Ɂinn* might appear in [3SG.M] form for some speakers. It can be suggested that *Ɂinn* might lose its probing ability for these speakers, hence is always assigned the default form of agreement (see, Weiß 2005 for that in some Germanic dialects an agreeing complementizer is in decline.). Ryding (2005) calls a similar form in MSA as 'a generic buffer pronoun' that is independent of the subject of the embedded clause. In this chapter, I discuss the common pattern in JA where the suffix has variant forms, depending on the syntactic environment.

(7) ʔaboo-i   fakkar   ʔinn-ha   ʃaaf-at   ʔil-wlaad   ʔil-binit.
    Father-my believed.3SG.M that-3SG.F   took-3SG.F   DEF-boys   DEF-girl
    'My father believed that the girl saw the boys.'

I will show later how the impossibility of agreement between the complementizer and the closer object follows smoothly from the analysis that the suffix is a product of the Agree relation the complementizer undergoes with another XP element under two strict conditions, namely locality and accessibility. Moreover, in the VSO word order, the suffix is invariably inflected for the postverbal subject, as exampled in (8).

(8) ʔabuu-i   fakkar   ʔinn-ha   sarag-t   ʔil-binit ʔis-sijjaarah.
    Father-my   believed.3SG.M that-3SG.M stole-3SG.F DEF-girl   DEF-car
    'My father believed that the girl stole the car.'

Against this background, several questions arise:

i.   Why is there a suffix attached to the complementizer *ʔinn* in JA in the first place?
ii.   Why does this suffix cross-reference the first preverbal argument to its right?
iii.   Why does this suffix show the same Φ-content of the subject in VOS clauses although the object appears closer to *ʔinn*?
iv.   Why does this suffix display the Φ-content of the subject in the VSO word order?

The whole discussion in the present chapter is dedicated to providing answers to these questions. I shall claim that these questions are straightforwardly answered when the complementizer *ʔinn* is treated as an agreeing head; so the suffix is a PF reflex of the ensuing valuation relation that is established between *ʔinn* and another XP element.

5.3   Syntactic analysis of the bound forms attached to Cº *ʔinn*

Following the related literature across Arabic varieties (e.g. Benmamoun 2000b, Aoun *et al*. 2010), I assume that *ʔinn* in JA is a complementizer that heads Force Phrase in the sense of Rizzi (1997). This assumption is motivated by the observation that *ʔinn* expresses that the following sentence is declarative and should be selected by a higher selector. *ʔinn* is crucial

for the so-called specification of sentence Force (cf. Rizzi 1997: 283). For instance, *ʔinn* cannot introduce a main clause or a question in JA:

(9) a. *ʔinn ʔil-walad ʔaχað ʔil-mafatiiħ ʔimbaariħ.
   that   DEF-boy took.3SG.M DEF-keys   yesterday
   Intended: 'The boy took the keys yesterday.'

 b. *ʔabuu-i ʔtsaaʔal   ʔinn miin ʔilli ʔaχað   ʔil-mafatiiħ ʔimbaariħ?
   Father-my wondered   that who D-PRT took.3SG.M DEF-keys yesterday
   Intended: 'My father wondered who took the keys yesterday.'

In (9a), *ʔinn* introduces a declarative main clause and an embedded question in (9b), whence the ungrammaticality of the two examples. Under the phase theory (Chomsky 2000, 2001), the complementizer *ʔinn* being the head of Force Phrase (cf. Rizzi 1997) is qualified as a phase head. If we follow Chomsky's (2005) assumption that the Agree (Φ-), Tense and EPP features that are associated with the inflectional system are no longer an inherent property of Tº; instead, they belong to the phase head Cº (see Richards 2007 for a discussion long these lines), then *ʔinn*, being a phase head is endowed with a set of uninterpretable, unvalued Φ-features, among others. Given Full Interpretation, the set of uninterpretable, unvalued Φ-features of the complementizer *ʔinn* should be valued to ensure sentence convergence. What I abstract away from is however Chomsky's (2005, 2007 and 2008) proposal on feature inheritance, a mechanism whereby uninterpretable, unvalued features are passed down from the phase head to its complement (Richards 2007: 563). Following this mechanism, *ʔinn*, as Cº, would pass down its Φ-features to its complement Tº, hence the ability of the latter to operate as a probe. This proposal is seriously challenged by *ʔinn*'s syntactic behaviour in JA. That is because *ʔinn* is still an active probe. The first thread of evidence for this contention comes from the behaviour of the suffix attached to *ʔinn*, which I argue is a morphological realization of valuation of the unvalued Φ-features of *ʔinn*. This treatment is consistent with Shlonsky's (1997) view on Semitic enclitics being instances of agreement or Agrº elements.

In order to explain this view, consider the following sentence:

(10) ʔabuu-i fakkar   ʔinn-ha ʔil-binit ʔaχazˁ-t ʔil-mafatiiħ.
    Father-my believed.3SG.M that-3SG.F DEF-girl took-3SG.F DEF-keys
    'My father believed that the girl took the keys.'

Following Chomsky's (2005) proposal of feature inheritance,[49] there would be no way to account for the presence of the suffix appearing on Cº ʔinn. That is because the complementizer ʔinn would have no longer any Agree (Φ-) (Tense and EPP) features, given that they would be all inherited to T°. On the other hand, if we assume that C° ʔinn acts as a Φ-probe, the presence of the suffix on it can be accounted for. Before I explore this line of analysis, let's first shed light on how such a suffix is accounted for by related literature.

What appears as the standard account of the inflectional suffix attached to ʔinn in Arabic grammar is that it is a bound pronoun that occupies some Spec position in the left periphery of the embedded clause and is incorporated into ʔinn in the post-syntactic derivation at PF (see, mainly Mohammad 1990, Aoun *et al*. 2010 for discussion in MSA). I argue that this possibility is untenable. As referred to above, the suffix expresses the same Φ-content of the preverbal subject as long as the latter is not preceded by the object. If the object appears immediately right to the suffix, the latter agrees with it rather than the subject, as predicted if agreement is subject to locality (see, e.g., Picallo 2002, Soltan 2006, Rezac 2008). Secondly, nothing can intervene between C° ʔinn and the suffix itself, something that implies the suffix needs no lexical host either the host is an XP category or a zero level category, as can be shown in the following examples where the suffix (appearing in boldface) is adjoined to the preposed subject, the preposed object, verb, and an adjunct:

(11) a. *ʔabuu-i   fakkar   ʔinn ʔil-binit   **-ha**   ʔaχazˁ-t   ʔil-mafatiiħ.
     father-my believed.3SG.M that DEF-binit   -3SG.F   took-3SG.F DEF-keys
     Intended: 'My father believed that the girl took the keys.'

    b. *…………ʔinn ʔil-mafatiiħ   **-ha**   ʔil-binit   ʔaχazˁ-t.
             that   DEF-keys-   3SG.F DEF-girl   took-3SG.F
     Intended: 'My father believed that the keys the girl took.'

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[49] Due to Chomsky (2005 and 2007), the Φ-feature inheritance approach is crucial for two issues, namely: A/A-bar distinction and valuation of unvalued features on the phase head (Gallego 2014: 46). He assumes that only the complement of a phase is transferred to the external systems (and becomes inaccessible for further computation) at the point of Transfer. The inheritance feature approach guarantees that the features of the main clause phase head are transferred (see also Richards 2007). On the other hand, the two motivations of the feature inheritance approach have been called into question especially when it comes to instances with overtly inflected complementizers (cf. Carsten 2011 and Diercks 2011). For the first motivation, it has been rejected even by the advocates of the feature inheritance approach. For the second motivation, Ott (2011) and Obata (2010), among others, argue that under certain circumstances, Transfer can also affect the phase head.

c. *.......ʔinn   ʔaχazˤ-t   **-ha** ʔil-binit   ʔil-mafatiiħ.

         that   took-3SG.F   -3SG.F DEF-girl   DEF-keys

Intended: '…… that it was took the keys that the girl did.'

d. *…….ʔinn ʔibsurʕah   **-ha** ʔaχazˤ-t   ʔil-binit   ʔil-mafatiiħ.

         that   quickly   -3SG.F took-3SG.F   DEF-girl   DEF-keys

Intended: 'My father believed that the girl quickly took the keys.'

All the sentences in (11) remain sharply ungrammatical even if the suffix is attached to the end of the word preceding it. Additionally, the possibility that the suffix is an expletive pronoun in Spec,TP (cf. Mohammad 2000) should be ruled out on the grounds that the subject or the object may appear, under suitable pragmatic contexts, immediately to the left of the verb, hence the subject or the object are in a position in the left periphery. This implies that the suffix is not in Spec,TP.

 In order to account for the presence of the clitic attached to C° *ʔinn* in JA, I argue that the Φ-features of *ʔinn* are not passed down to T°, which is in turn endowed independently with a set of uninterpretable, unvalued Φ-features. This is tantamount to the assumption that feature inheritance from C° to T° is restricted to tense features and EPP, while C° keeps its Φ-features, making it an active Φ-probe. This line of research departs away from Chomsky's (2005: 9) assumption that T° lacks Φ-features, and manifests them so long as it is selected by finite C°. Following Ouali's (2011) terminology, I assume that C° KEEPs its Φ-features and does not DONATE them to T°.[50] I also claim that C° does not either SHARE its Φ-features with T° as the latter is already endowed with independent unvalued Φ-features.

Independent empirical evidence that bears out this claim comes from the behaviour of T° in the so-called Exceptional Case Marking (ECM) constructions (where the matrix verb subcategorizes for a TP).[51] In English (and many other languages), the verb in ECM constructions does not show any agreement with the subject because T° in such constructions is not selected by C° (i.e. IP is the maximal projection), hence no Φ-features on T° need be valued, given the feature inheritance approach. Consider the following examples:

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[50] Ouali's (2011) argues that there are three logical possibilities of feature inheritance DONATE whereby C° passes down its features to T° without keeping a copy of them, KEEP whereby C° does not transfer its features to T°, and SHARE whereby C° transfers its features to T° but keeps a copy. It should be noted here that my use to this terminology is only expository and no Φ-feature dependency between C^0 and T^0 is entailed.

[51] ECM constructions refer to the phenomenon in which the thematic subject of an embedded clause is accusative case-marked by the matrix verb as if it were its object (see, Kotzoglou 2002: 40)

(12)   a. My father expects the teacher to teach the boy.

            b. They want her to be prepared for the exam.

Although the subject of the ECM clause is [3SG,M] and [3SG.F] in (12a) and (12b), respectively, the verb does not inflect for agreement with the subject, as opposed to the root clauses. The assumption here is that ECM clauses lack the CP layer, so no Φ-features, EPP, nor tense are inherited to Tº. Now consider the following examples that show the main clause equivalents of the examples in (12):

(13)   a. The teacher teaches the boy.

            b. She is prepared for the exam.

The verbs in (13) inflect for their subjects because Cº passes down its Φ-features to Tº, given feature inheritance. This makes Tº an active probe which should have its Φ-features valued and deleted before sentence convergence at LF. The observation that Tº is not an agreeing head in ECM constructions has also been reported in several other languages, as shown in the following examples whereby the verb (in ECM constructions) does not express any agreement with the subject:

(14)   a. Ég   hafði   talið   [Maríu   vita   svarið].
            I   had   believed   [Mary-ACC   to-know   the answer-ACC]
            'I had believed Mary to know the answer.'
                                    (Icelandic, Jónsson 1996: 166) (cited in Woolford 2006)

            b. Jean   se   voit   laver   Marie.
            Jean   SE   see3.SG   washINF   Marie
            'Jean sees himself washing Marie.'
                                    (French, Reinhart and Siloni (2005):405(34a))

            c. . . . dat   ik   Piet   de   afwas zag   doen
                 that   I-nom Pete   the   dishes see-past.sg   do-inf
            ' . . . that I saw Pete do the dishes.'   (Dutch, Zwart 2005)

Let's examine to what extent this analysis carries over to JA. I argue that Φ-feature inheritance is suspect as far as JA data are concerned. That is because the verb keeps inflected for the subject in ECM constructions.[52] Consider the following examples that show the JA equivalents of the sentences in (13) in addition to other examples (the ECM clause is bracketed):

(15) a. ʔabuu-i   bitwagaʕ   [ʔil-ʔimʕalim **ʔidaris**   ʔil-walad].
         father-my   expect.3SG.M   DEF-teacher   teach.3SG.M   DEF.boy
      'My father expects the teacher to teach the boy.'

      b.badhum   [ʔiyaaha   **ʔitkuun**   mustaʕidah   la-l-ʔimtiħan].
        want.3PL.M   her   be.3SG.F   ready   to-DEF-exam
      'They want her to be ready for the exam.'

      c. badhum   [ʔil-binit   **tindʒaħ**   bi-l-ʔimtiħan].
         want.3PL.M DEF-girl   pass.3SG.F   in-DEF-exam
      'They want the girl to pass the exam.'

      d. ʔabuu-i   bitwagaʕ   [ʔil-walad   **jindʒaħ**   bi-l-ʔimtiħan].
         father-my   expect.3SG.M   DEF-boy   pass.3SG.M   in.DEF.exam
      'My father expects the boy to pass the exam.'

It is clear that the verb in the JA ECM constructions still agrees with the subject, although it does not carry any tense or aspectual information (i.e. appearing in the imperfective form that encodes no aspect nor tense information in Arabic; Benmamoun 1999, 2000b). I interpret this as evidence that T° enters the derivation of the embedded clauses endowed with unvalued, uninterpretable Φ-features.

On the other hand, one might assume that the constructions in (15) have a CP layer and hence not true examples of ECM constructions, given that the complementizer *ʔinn* can be dropped off from the beginning of some embedded clauses. This assumption is though unwarranted following empirical grounds. Firstly, if there is a CP layer, the embedded subject would be

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[52] In Arabic grammar, finiteness is nonetheless a controversial issue whose details and analysis fall outside the bound of this thesis; See Al-Aqarbeh (2011) for general discussion and elaboration.

preceded by some left-dislocated (or base-generated) material, contrary to fact. The following ill-formed example demonstrates that no left-dislocation is allowed in ECM JA clauses:

(16)   *ʔabuu-i   bitwagaʕ   [ʔil-walad   ʔil-ʔimʕalim   ʔijdaris(-uh)].
         father-my   expect.3SG.M DEF.boy   DEF-teacher   teach.3SG.M-him
         Intended 'My father expects him to teach the boy.'

The object *ʔilwalad* is prohibited to occur in a position preceding the subject. In the previous chapter object, I have shown that left dislocation is permissible in the embedded clauses introduced by the complementizer *ʔinn*, as shown in (17):

(17) ʔabuu-i   bitwagaʕ   ʔinn-uh   l-walad   l-ʔimʕalim   ʔijdaris-uh.
     father-my   expect.3SG.M that-3SG.M   DEF.boy   DEF-teacher teach.3SG.M-him
     'My father expects that the boy the teacher teaches him.'

I assume that the difference between sentence (16) and sentence (17) lies in the availability of the CP layer which can accommodate the entire gamut of the permitted left-dislocated material. Sentence (16) is ungrammatical because it contains no CP layer, hence the ban on left dislocation, whilst sentence (17) contains such a layer, allowing for left dislocation. A relevant point here is that the string in (16) would remain ungrammatical even if the complementizer *ʔinn* is used, something that supports my assumption that there is no CP layer in ECM clauses of JA.

This implies that the preverbal subject in ECM in JA is not located in the CP, but in a lower position which I assume to be Spec,SubjP. Note first that the preverbal subject can be indefinite, nonspecific, implying that the preverbal subject does not occupy a position with a specific discourse value, i.e. [FOC] or [TOP].

(18)   ʔabuu-i   bitwagaʕ   ħada   jiidʒi   ʕa-leena.
         Father-my   expect.3SG.M   somebody   come.3SG.M   to-use
         'My father expects somebody to visit us.'

With the fact that SVO is the word order used in ECM constructions, it can be assumed that the preverbal subject is a true subject filling Spec,SubjP. This assumption first runs counter to what Soltan (2007) argues for ECM constructions in MSA whereby the ECM preverbal

subject is assumed to be base-generated in the matrix VP position of the matrix clause, an account known as prolepsis (see Davies 2005). Additionally, this assumption implies that unlike the case with other embedded clauses attested in this thesis, Spec,SubjP is filled by the thematic subject rather an expletive pro. An interesting point here is that if the subject of an ECM verb is extracted, the D-linking particle *ʔilli* may introduce the ECM construction:

(19)   miin   ʔabuu-i   bitwagaʕ   *ʔilli*   jiidʒi   ʕa-leena.
        who   Father-my   expect.3SG.M D-PRT   come.3SG.M   to-use
        'Who does my father expects to visit us.'

Following my analysis to *ʔilli* in Chapter 2, it can be suggested that Spec,SubjP of the ECM construction is a criterial position. *ʔilli* is used to fill this position to facilitate subject extraction.

With this being the case, the Φ-features of T° are not parasitic on the Φ-features on C°. In this respect, Ouali (2014) argues for a similar assumption for MSA and Moroccan Arabic that T°, as he puts it, is lexically specified for Φ-features. Ouali builds his argument on independent evidence i.e. multi agree relations in complex tense clauses, as illustrated in the following example from MSA (Ouali 2014: 122).

(20)   Kan-a   l-walad-u   j-aktub-u   r-risalat-a
        be.perf-3s   the-boy-nom   3s-write.imperf-ind   the-letter-acc
        'the boy was writing the letter'

The tense copula *kan* and the lexical verb *j-aktubuo* both appear to agree with the thematic subject *l-waladu*, representing thus instances of what Ouali calls as multiple agreement. Ouali assumes that a sentence like (20) has two T° projections (i.e. analytic complex tense). For him Φ-feature inheritance is not adequate to capture multiple agreement, given that the unlike upper T°, lower T° is unselected by C°, thus, T° being specified for Φ-features provides a solution of why both T's can agree with the subject (and the pro in VSO sentences) (see, also Wurmbrand and Haddad 2016 for a similar proposal that the presence of C-independent Φ-features on T° in MSA). Apart from other details, Ouali's analysis squares up with my

argument that Φ-features inheritance does not hold of JA. T° is separately endowed with Φ-content, irrespective of the existence of a higher C°.[53]

If we assume that T° is inflected for agreement because of uninterpretable, unvalued Φ-features on T°, the following task is to account for the source of such Φ-features on it. I suggest that the source of Φ-features on T° comes from the lexicon. Put another way, T° is endowed with a set of uninterpretable, unvalued Φ-features, a state of affairs resulted because of the effects of one postulated parameter whose positive value ensures that T° is endowed with Φ-features independently of C°. This parameter is labelled as the *T°-Φ parameter* which I formulate as follows:[54]

(21)   *T°-Φ parameter*:
         T° is endowed with Φ-features.

Given T°'s endowment of Φ-features is formulated as a parameter, cross-linguistic variation is expected. In languages where this parameter is set to its positive value, T° is always inflected for agreement, whereas in languages that set this parameter to negative, T°'s inflecting for agreement depends on C°, as in English or French.[55]

Furthermore, the *T°-Φ parameter* can account for a similar observation in unrelated languages which lack infinitives, including Modern Greek (see, e.g. Philippaki-Warburton 1987, Kotzoglou 2002; Parodi and Tsimpli 2005). Consider the following examples taken from Modern Greek, cited in Kotzoglou 2002: 42) (the embedded verb in the ECM construction appears in boldface).

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[53] Multiple agreement also dispenses with the possibility that T° becomes an agreeing probe only when there is no C°. In other words, T° would be the phase head when C° is not projected (cf. Bošković 2014). Note that when T° is not selected by C° (i.e. ECM constructions), it does not carry discourse-related nor tense features, something that undermines the assumption that T° is a phase head in such situations. The fact that T° has an independent content does not qualify it as a phase since it does not denote a complete expression structure (as CP) nor a complete argument structure (as v*P).

[54] T°'s Φ-features Parameter might count as an updated version of Fassi Fehri's (1993) *I Nominality parameter* which is set to account for the absence of bare verbs, non-finite participles, and infinitives in Arabic.

[55] Note here that the positive setting of this parameter does not necessarily predict that C° should bear a morphological realization of valuation of its uninterpretable Φ-content as such realization is subject to language-internal rules. For instance, although there is presumably C°-to-T° Φ-feature inheritance in English, the verb does not inflect for gender and person of the subject.

(22)

   a. O Θεοδorakis   θeli   ti Faranturi   na   **traγuδai**

    Theodorakis-Nom   want-3rd.sg   Faranturi-Acc SUBJ   sing-3rd.sg

    mono   dika tu   traγuδja.

    only   own-his   songs-Acc

   'Theodorakis wants Faranturi to sing only his songs'.

   b. δen   perimena   ti Marina   na   **γrapsi**   toso

    NEG   expected-1SGt.sg   Marina-Acc SUBJ   write-3rd.sg   that

    asxima sto   djagonisma   tis fisikis.

    badly in   exam   physics-Gen

   'I did not expect Marina to do so badly in the physics exam'.

The two verbs *traγuδai* and *γrapsi* show overt agreement with their subjects. The *T-Φ Parameter* offers us an elegant way to account for the similarity between JA and Modern Greek in that the two languages opt for the positive value of this parameter, hence the observation that the verb shows overt agreement with the subject even in situations where C° is not expected to project. Additionally, the similarity between JA and Modern Greek lends support for the UG status of the *T-Φ Parameter*. See also Turkic as another example of languages with inflected ECM infinitives (Coppock *et al*. 2013).

Note here that my assumption that T° is not parasitic on C° with respect to Φ-features does not imply that there is no dependency between the two heads with respect to other features. For instance, it is clear that there is Tense-feature inheritance in JA as the lexical verb does not inflect for tense in ECM constructions where C° is assumed not to project. The following example demonstrates this point. The verb in ECM constructions is tense-less, given it cannot occur in past/future tense.

(23)   Ɂabuu-i   (raħ) Ɂitwagaʕ   Ɂil-imʕalim

       Father-my will expected.3SG.M   DEF-teacher

     (*raħ)/(*bi)   Ɂidaris   Ɂil-walad.

      will/PRES   teach.3SG.M   DEF-boy

   'My father expected/will expect the teacher to teach the boy.'

The ECM verb *Ɂidaris* resists co-occurring with tense morphemes such as *raħ* that is used for future and the prefix *bi* that is used for present. I interpret (23) as evidence that there is Tense feature inheritance from C° to T° in JA. When C° does not project, T° does not inflect for tense.

It remains to be seen whether there is cross-linguistic evidence supporting the view that C°'s Φ-features can remain at C°.

5.4   Agreeing complementizers as a cross-linguistic phenomenon

Several works have discussed the phenomenon of '*agreeing complementizers*' (cf. Bayer 1984, Haegeman 1992, Zwart 1993, Watanabe 2000, Carstens 2003, among many others). A case in point here is West Flemish where the complementizer *dan* agrees with the subject, as shown in the following examples, a modified version from Carstens (2003:393).

(24)   a. Kpeinzen   [CP dan-**k**   [TP(ik)   morgen   goan]]
        think-1.SG   that-1.SG   I   tomorrow   go-1.SG
        'I think that I will go tomorrow.'

        b. Kpeinzen   da-j   (gie)   morgen   goat.
         I-think   that-you   (you)   tomorrow   go
        'I think that you'll go tomorrow.'

        c. Kvinden   dan   die   boeken   te diere   zyn.
         I-find   that-PL   the   books   too expensive are
         'I find those books too expensive.'

For instance, in (24a) Cº *dan* 'that' agrees with the understood subject (*ik* 'I') through the suffix *–k* which displays the same Φ-content of the subject. For Carstens (2003), the bound forms attached to the complementizer in West Flemish are 'themselves a part of the spell-out of C°'s uninterpretable Φ-features' (p. 394). A similar observation is raised by Haegeman and Van Koppen (2012) on West Flemish External Possessor Agreement. Haegeman and Van Koppen (2012) proposed that Tº and Cº are associated with uninterpretable features each. When the subject is a possessive construction, Cº agrees with the external possessor, which is

the most local goal for Cº, while Tº agrees with the possessum, the subject. Consider the following example, taken from Haegeman and Van Koppen (2012: 4):

(25) … omda-n   die venten tun juste underen computer kapot was.
      because-PL those guys   then just   their   computer broken was.SG
      '..because André and Valère"s computer broke down just then.'

The complementizer *omda* 'because' agrees with the possessor *die venten* 'those guys', resulting in that the suffix attached to *omda* comes out with the plural form. T^0 *was*, in turn, agrees with the possessum *underen computer* 'their computer'. This implies that the agreement on the complementizer and the finite verb are not the result of a unique feature checking relation, as advanced in Chomsky (2005). Haegeman and Van Koppen (2012) argue that C^0 and T^0 in West Flemish are both agreeing heads. For them, Φ-features starts at Cº and are inherited by Tº but that a copy of Φ-features remain at C^0, turning it as an agreeing head which undergoes valuation independently. We have shown above that such assumptions made by Haegeman and Van Koppen (2012) for West Flemish do not carry over to JA. That is because the source of T^0's Φ-features is still C^0 here, something that JA does not advocate for. I take a different tack for JA, arguing that Tº is independently endowed with Φ-features making it an active probe, which is independent of Cº. This is why there are no non-finite forms in JA (and in other Arabic varieties, as originally observed by Eid 1991 and Fassi Fehri 1993).

Another language reported in the literature with agreeing complementizers is Bavarian (Weiß 2005). Consider the following examples, where the gloss is slightly modified to be consistent with the convention used in this thesis.

(26) a.…**ob-st**   noch Minga   kumm-st
      whether.2S to   Munich come.2SG
      '…whether you come to Munich.   (Holmberg and Platzack 1995: 111)

      b.du   frogn d'Leit   warum **dass**   nigs   orbeitst
        you.1 ask the.people why   that.2S   nothing work
       'The people ask why you don't work (and not someone else).'

                                                (Mayr 2010: 126)

Bavarian has agreeing complementizers (in number and person), and like West Flemish, the agreement on Bavarian complementizers is not always identical to the agreement on the verbal inflection (cf. Miyagawa 2010: 58).

Diercks (2011) also argues extensively that in Lubukusu (a Bantu language spoken in the Western province of Kenya) there are agreeing complementizers which run counter to the predictions of the feature inheritance model (Chomsky 2008). Diercks (2010, 2011) observes that complementizers in Lubukusu agree only with the most local superordinate subject, while T° agrees with its subject. Representative evidence illustrating this observation is given below:

(27)   Sammy   ka-bol-el-wa   a-li   ba-keni   b-ola
          Sammy.1 1SG-say-AP-PASS 1-that   2-guests 2S-arrived
          'Sammy was told that the guests arrived.'   (Diercks 2011: 2)

The complementizer *li* agrees with the next higher subject *Sammy*, while the verb agrees with the local subject *bakeni*. Diercks (2011) interprets sentence (27) as evidence to the effect that no feature inheritance between C° and T° takes place. Additionally, Diercks (2011) argues that Richards' (2007: 563) assumption that uninterpretable (unvalued) features can only be a property of phase heads is not tenable for Lubukusu.

Furthermore, it has been argued elsewhere that some other languages, including Irish, do manifest tense on C°, as evidenced in the following example, taken from Cottell (1995: 108) in which case the complementizer *gur* shows tense agreement. This state of affairs vindicates the view that C^0 but not T^0 is the locus of tense feature. It can be proposed that a copy of tense feature remains at C^0 in Irish, whereas all other features pass down to T^0.

(28)   Deir   se   [CP**gur**   thog   se   an   peann]   (Irish)
          say-PRES   he   C-PAST   take-PAST he   the pen
           'He says that he took the pen.'

West Flemish, Bavarian, and Irish buy us more evidence that C° still retains some features expected to be on its complement, T°, under the feature inheritance approach (Chomsky 2001, 2001).

In the next section, I explore the valuation of C°'s Φ-features.

5.5 The valuation of unvalued Φ-features of Cº *ʔinn*

In the previous section, I have argued that there is no Φ-features inheritance from C° to T° in JA. T° is already endowed with an independent set of such features, given the positive setting of the *T°-Φ parameter*. This state of affairs forces C° to retain its Φ-features, a matter that turns it as an agreeing probe. That is because C's Φ-features being unvalued should be valued and deleted before LF.[56] Let's see how this reasoning helps us understand the variant morphological form of the suffix on *ʔinn*. I start with cases with a preverbal subject. Consider the following sentence.

(29)   ʔabuu-i   fakkar   ʔinn-ha   ʔil-binit   ʔaχazˤ-t   ʔil-mafatiiħ.
        Father-my   believed.3SG.M   that-3SG.F   DEF-girl   took-3SG.F   DEF-keys
        'My father believed that the girl took the keys.'

C° *ʔinn* keeping its Φ-features which are unvalued is still an active probe even if the Agree (Φ-) features of T° are valued by the subject, *ʔilbinit* 'the girl'. *ʔinn* looks for an accessible goal within its c-command domain which has matching interpretable Φ-features. *ʔinn* finds the subject, *ʔilbinit*, an eligible probe; a probe-goal relation between *ʔinn* and *ʔilbinit* is then established. Consequently, the unvalued Φ-features of *ʔinn* are lexically valued. As a morphological reflex of this valuation, an agreement marker expressing the same Φ-content of the preverbal subject *ʔilbinit* appears on *ʔinn*.

My assumption that C° agrees with the preverbal subject is inconsistent with Chomsky's claim that the goal should have its structural Case unvalued to enter into a probe-goal relation and once the structural Case value is determined, the goal no longer enters into agreement relations and is 'frozen in place' (Chomsky 2001: 6). Chomsky's proposal has been challenged by several authors. See, for example, Carstens (2003) for an argument that goal's unvalued structural case is not a prerequisite to Agree operation. Furthermore, this analysis

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[56] Omari (2011) explores C°-subject agreement in JA under the so-called provocative syntax model (Branigan 2010). He claims, without discussion, that C° is endowed with a provocative feature, which imposes the creation of an external copy of its internal goal projection which ultimately derives the 'doubling' of an agreeing clitic and the lexical subject in most cases. Under this approach, several questions remain unanswered, though. For example, the author does not discuss the true nature of the provocative feature on C° neither does he account for why such a feature is fulfilled only by the purported external copy of its goal, not by the goal itself. Creating another copy might yield theoretical problems with respect to c-command and binding relations, the issues which have not been explored.

runs counter to Uriagereka's (2008) *Case Freezing Condition* because the subject whose case is already valued is still accessible to further computational operations with higher probes. The subject in (29) is assumed to have its structural Case valued by T°, prior to its movement to the left periphery, but it is still involved in Agree with C°. I will show below further evidence that Case plays no role in rendering the goal active, and hence support in favour of elimination of unvalued structural case as a prerequisite of the Agree relation.[57]

One piece of evidence in favour of the assumption that C° probes elements which are in the left periphery comes from the embedded clauses with the OVS word order. In such clauses, the suffix expresses the Φ-content of the fronted object rather than the postverbal subject. Consider the following sentences.

(30) a. Ɂabuu-i fakkar   Ɂinn-ha Ɂis-sijjaarah
    Father-my believed.3SG.M that-3SG.F DEF-car
    sarag-ha   Ɂil-walad.
    stole.3SG.M-3SG.F DEF-boy
    'My father believed that the car, the boy stole.'

    b. ……..Ɂinn-ha (*S-)SIJAARAH sarag   Ɂil-walad.
      that-3SG.F DEF-car   stole.3SG.M DEF-boy
    'My father believed that it was a car that the boy stole it.'

Ɂinn agrees with the object, regardless of whether the object is a focus or a topic. The JA word for 'a car' is *sijjaarah* which is [3SG.F], the same Φ-content of the suffix appearing on *Ɂinn.*

In cases with more than one element in left periphery (in SOV and OSV word orders), *Ɂinn* agrees with the leftmost element, as shown below:

(31) a. Ɂabuu-i fakkar   Ɂinn-ha ƁIS-SIJJAARAH Ɂil-walad sarag-ha.
   Father-my believed.3SG.M that-3SG.F DEF-car   DEF-boy stole.3SG.M-it
   'My father believed that the car the boy stole it.'

---

[57] Miyagawa (2010: 22) argues that a probe of some type including a probe responsible for topicalization does not require activation of the goal to enter an Agree relation.

b. ……ʔinn-uh   ʔIL-WALAD   ʔil-sijjaarah   sarag-ha.

…….. that-3SG.M   DEF-boy   DEF-car   stole.3SG.M-it

'My father believed that the boy (not the man), he stole the car.'

In (31a), *ʔinn* agrees with the object, while it agrees with the subject in (31b). This agreement is again shown by the morphological form of the suffix attached to *ʔinn*. *ʔinn's* agreeing with the leftmost element conforms with the Principle of Closest c-command (stated below) which forces *ʔinn* C° to search for the closest goal (cf. Epstein and Seely 2006, Ouali 2008).

(32)   Closest c-command (Chomsky 2000: 122):

A Goal G_1 blocks Agree between a Probe P and a Goal G_2 if G_1 and G_2 are both in the c-command domain of P and G_1 c-commands G_2.

This way, we abandon the problem arising with the proposal that treats the bound forms attached to *ʔinn* as pronouns. It is non-debatable that the object in OSV clauses is located in the left periphery, and hence it is bound by the enclitic attached to *ʔinn*, violating as such Principle B of the binding theory. My analysis does not give rise to such a problem as the bound forms attached to *ʔinn* are not categorically pronouns but inflections produced as an outcome of Agree operation. It is also worth mentioning here that JA provides also evidence against Carstens' (2003: 399) conditions on the complementizer agreement in West Flemish that C° can only agree with α if C° closest c-commands α, and α is nominative. As is clear from the examples above, *ʔinn* agrees with the pre-subject accusative object either the latter is topicalized or focalized. C°-object agreement challenges also the view held by a number of authors that complementizer agreement is an instance of subject agreement on T° raising to C° (cf. Watanabe 2000, Zwart 1993; 1997).

On the other hand, what might be taken as a counter-argument for this assumption is the observation that C° *ʔinn* agrees with the subject not the object in VOS clauses, as shown in the following example:

(33)   ʔaboo-i   fakkar   ʔinn-ha/(*hum)   ʃaaf-at

father-my   believed.3SG.M   that-3SG.F/3PL.M   took-3SG.F

li-wlaad   ʔil-binit.

DEF-boys   DEF-girl

'My father believed that the girl saw the boys.'

A closer look at sentence (33) reveals that it is not a drawback against my assumption that Cº *?inn*'s agreement is sensitive to the closest c-command. I assume that the object in (33) is not accessible to Cº, in which case the latter agrees with the subject, instead. The inaccessibility of the object to *?inn* comes from the assumption that the verb and the object move to the Comp domain as a part of the remnant phrasal TP/vP movement where the whole TP/vP moves to Spec,Focus Phrase as one block (see § 4.7). The object remains in situ as a complement of VP which in turn moves to the left periphery as a term of TP. Given the Phase Theory and the Phase Impenetrability Condition (Chomsky 2001, 2008), the object being situated in the complement of v*P is not visible to Cº *?inn*. As a result, uΦ-features of Cº *?inn* being still underspecified are thus valued by the subject, *?ilbinit* 'the girl' which is here located in Spec,Topic Phrase below Focus Phrase. Consider the tree for a VOS clause, where the whole TP moves to the left periphery.

(34)
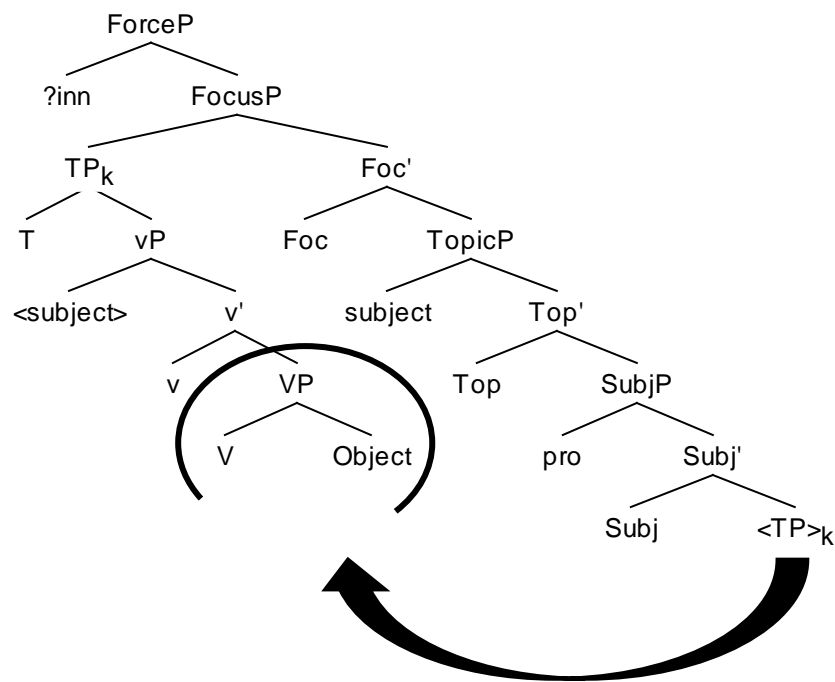
One question to ask here is why the object does not move to Spec, v*P, so it becomes visible to *?inn*. The answer to this question lies in the lack of motivation of the object to do such a movement. The object does not have an unvalued, uninterpretable feature to trigger its movement to the edge of v*P (cf. Bošković 2007).
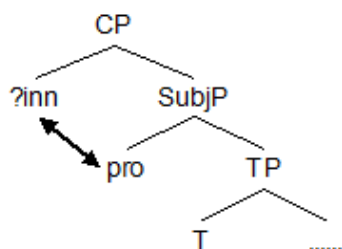
An important point here is that C°-subject agreement in the VOS word order is evidence that that C°'s agreement is not compatible with a post-syntactic approach to agreement, which is based on linearity, not locality.

Let's now consider the cases where there is no preverbal element, where the suffix attached to *ʔinn* displays the same Φ-content of the subject. Following the assumption that there is a pro in Spec,SubjP in the VOS word order, it can be suggested that *ʔinn* here enters a probe-goal relation with the pro which is situated in Spec,SubjP, which itself enters a probe-goal relation with the subject, constituting an instance of the so-called feature-sharing (cf. Pesetsky and Torrego 2007) (see below). The same outcome is obtained, regardless of whether the verb is contrastively stressed or not. Consider the following sentences.

(35) a. ʔabuu-i   fakkar   ʔinn-ha   sarag-t   ʔil-binit   ʔis-sijjaarah.
        father-my   believed.3SG.M   that-3SG.M   stole.3SG.M   DEF-girl   DEF-car
        'My father believed that the girl stole the car.'

      b. ……   ʔinn-ha   SARAG-T   ʔil-binit   ʔis-sijjaarah.
        …..   that-3SG.F   stole.3SG.M   DEF-girl   DEF-car
        'My father believed that it was steal the car that the girl did.'

Let's first begin with the instances where the verb is not contrastively stressed. In (35a), the verb is still adjoining to T°. Spec,SubjP is filled with the *pro* which enters the derivation endowed with a set of unvalued Φ-features which are afterwards valued by the subject in the syntax proper. Hence, *pro*, the verb and the subject all share the same Φ-content because of the feature sharing operation established between T° and *pro* and the subject. C° agrees with *pro*, carving out the form of the suffix that displays the same Φ-content as the subject. This analysis is consistent with my assumption of the presence of *pro* in Spec,SubjP; otherwise it is not clear how C° agrees with the subject moving past the active probe T°. The C°-*pro* probe-goal relation is schematically represented in the following structure (I use CP as a notation for the left periphery instead of an articulated version because there is no Focus Phrase nor Topic Phrase projected; Force Phrase and Finiteness Phrase are syncretized).

130

(36)

```
              CP
          ╱        ╲
       ʔinn        SubjP
         ╲↖      ╱       ╲
          ╲↘  pro         TP
                        ╱    ╲
                       T    ........
```

Turning now to (35b), I argued in the previous section that in the word order VSO with the verb being contrastively stressed, the verb adjoins to Focº. There is no element intervening between the verb and *ʔinn*. So, Cº should in our terms have established a probe-goal relation with pro across the amalgamated head (Focº+Tº+Vº+vº). One theoretical problem that comes up here is why the verb/Tº adjoining to Focº does not block Cº's probing *pro*. I claim that Tº does not block Cº's probing *pro* because Tº discharged all its unvalued features in situ and thereby becomes inactive and unable to intervene (see, Chomsky 2000: 122). The Cº-*pro* probe-goal relation over the verb adjoining to Focº is schematically represented in the following structure:

(37)

```
                  FocusP
               ╱         ╲
            ʔinn         FocusP
           ↗           ╱        ╲
          │       Foc+T+v+V      SubjP
          │                   ╱        ╲
          └──────────────→ pro          TP
                                      ╱     ╲
                                  <T+v+V>  ........
```
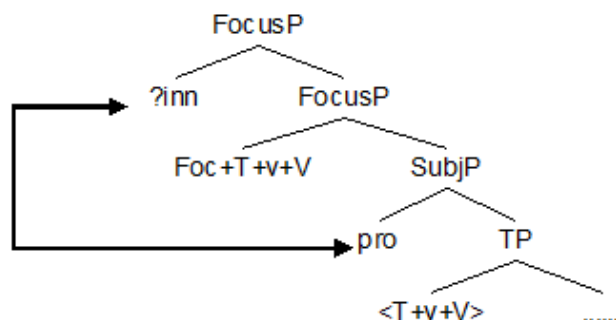
Summarizing, the upshot of the above discussion is that there is no Φ-feature inheritance from Cº to Tº in embedded clauses introduced by the complementizer *ʔinn* in JA. Tº enters the derivation endowed with a set of unvalued Φ-features, irrespective of whether Tº is selected by Cº or not. I formulate Tº's endowment of Φ-features as a parameter, labelled as *Tº-Φ Parameter* (Tº is endowed with Φ-features). In languages with the positive value of this parameter, Tº appears inflected for agreement, even in the situation where Cº is assumed not be projected, including ECM constructions.[58]

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[58] Gallego (2014) argued that feature inheritance should be viewed as a consequence of what he labels as *Feature Inheritance as Copying Thesis* (FIACT), where non-phase heads are copies of phase heads. Following FIACT, Cº and Tº are one unit stored in the lexicon. When this unit undergoes a process of Internal Merge (i.e., Move) during the derivation, it creates a discontinuous object (i.e., a non-trivial chain), giving rise to the distinction between non-phase head / phase head (Gallego 2014: 41). Nevertheless, it is hard to see how FIACT can reconcile with JA data, since it still presupposes some Φ-dependency between Tº and Cº.

5.6   Conclusion

In this chapter, I have argued that there is no Φ-feature inheritance from Cº to Tº in JA due to the positive setting value of the postulated *T°-Φ parameter*. This parameter distinguishes languages where Tº is endowed with Φ-features from those where it is not. In languages with the positive value of this parameter such as Arabic, Modern Greek, and Turkic, Tº appears inflected for agreement even in situations where Cº is not projected, including the ECM constructions. This chapter also assumes that the positive setting of *T°-Φ parameter* gives rise to the situation that Cº and Tº can be inflected for different elements, as the Φ-features of C° remain in situ. This chapter also explores the valuation of C°'s unvalued Φ-features, arguing that this valuation is ruled by locality rather than linearity. One general conclusion of this chapter is that Φ-features are not properties only of phase heads, hence phases ought not to be defined as the locus of unvalued Φ-features (cf. Diercks 2011).

Chapter SIX: Subject extraction out of embedded clauses

6.1 Introduction

In the previous chapter, I have argued that there is no Φ-feature inheritance from Cᵒ to Tᵒ in embedded clauses introduced by the complementizer *ʔinn* in JA. Tᵒ is assumed to enter the derivation endowed with a set of unvalued, uninterpretable Φ-features, irrespective of whether it is selected by a higher Cᵒ or not. I have formulated Tᵒ's endowment of Φ-features as a parameter, labelled 'the *Tᵒ-Φ Parameter*', distinguishing languages where Tᵒ is endowed with Φ-features from those where it is not. In languages with the positive value of this parameter such as Arabic, Modern Greek, and Turkic, Tᵒ appears inflected for agreement even in situations where Cᵒ is not projected. This gives rise to the assumption that unvalued, uninterpretable agreeing Φ-features are not restricted to phase heads (i.e. Cᵒ and v*), as non-phase heads can be endowed with such features. Furthermore, I have shown that Cᵒ's Agree with the subject/object is ruled by locality rather than linearity.

In this chapter, I explore subject extraction out of embedded clauses introduced by the complementizer *ʔinn*. It is obvious that there is an asymmetry within such embedded clauses in this Arabic variety with respect to subject extraction. Some embedded clauses allow it, while others prohibit it. For instance, the subject can be extracted from a clausal complement of verbs like *ʔiffakir* 'to believe', *ʔiʃikk* 'to doubt', *ʔiʃʕur* 'to feel', and *ʔidʰinn* 'to guess'. Consider the example in (1a) and its corresponding question in (1b) where the subject of the embedded clause is extracted.

(1) a. ʔabuu-i   fakkar/ ʃakk/ ʃaʕar/ dʰann   ʔinn-ha   ʔil-binit

         father-my   believed/doubted/felt/guessed   that-3SG.F   DEF-girl

         sarag-t   ʔis-sijjaarah

         stole-3SG.F   DEF-car

     'My father believed/doubted/felt/guessed that the girl stole the car.'

    b. miin   ʔabuu-i   fakkar/ ʃakk/ ʃaʕar/ dʰann   ʔinn-ha

        who   father-my   believed/doubted/felt/guessed   that-3SG.F

        sarag-t   ʔis-sijjaarah

        stole-3SG.F   DEF-car

     'Who did my father believe/doubt/feel/guess stole the car?'

Furthermore, the subject can be extracted from clausal complements of adjectives such as *mumkin* 'possible', as shown in the example in (2b) (example (2a) is its corresponding declarative sentence).

(2) a. min   ʔil-mumkin   ʔinn-uh   ʔil-waħad   yilʕab   ʔiryadˤah hoon

      from   DEF-possible   that-3SG.M   DEF-one   play.3SG.M   sport   here

   'It is possible that one (anybody) does exercise here.'

   b. miin min   ʔil-mumkin   ʔinn-uh   yilʕab   ʔiryadˤah   hoon

     who from   DEF-possible   that-3SG.M   play.3SG.M   sport   here

   'Who is it possible for that he exercises here.'

On the other hand, the subject cannot be extracted from a clausal complement of verbs such as *ʔiħzan* 'to regret', *jinsa* 'to forget', and *jiʕrif* 'to know'. Consider the example in (3a) and its corresponding ill-formed question in (3b) when the subject of the embedded clause is extracted.

(3) a. ʔabuu-i   ħizin / nasa/ ʕirif   ʔinn-ha   ʔil-binit

     father-my   regretted /forgot/knew   that-3SG.F   DEF-girl

     sarag-t   s-sijjaarah

     stole-3SG.F   DEF-car

   'My father regretted /forgot/knew that the girl stole the car.'

   b. *miin   ʔabuu-i   ħizin / nasa/ʕirif   ʔinn-ha

     who   father-my   regretted /forgot/knew   that-3SG.F

     sarag-t   s-sijjaarah

     stole-3SG.F   DEF-car

   Intended: 'Who did my father regret/forget/know stole the car?'

The clausal complements of verbs *ʔiħzan* 'to regret', *jinsa* 'to forget', and *jiʕrif* 'to know' behave like clausal complements of nouns with respect to subject extraction. The following examples include a clausal complement of the noun *ʔiddaliil* 'evidence' and its corresponding ill-formed question when the subject of the embedded clause is extracted:

(4) a. lageet   ʔid-daliil   ʔinn-ha   ʔil-binit   sarag-t   ʔis-sijjaarah

found.1   DEF-evidence   that-3SG.F   DEF-girl   stole.3SG.F   DEF-car

'I found the evidence that the girl had stolen the car.'

b. *miin   lageet   ʔid-daliil   ʔinn-ha   sarag-t   ʔis-sijjaarah

who   found.1   DEF-evidence   that-3SG.F   stole.3SG.F   DEF-car

Intended: 'Against whom you find evidence that he/she stole the car?'

It is the aim of the present chapter to explore such discrepancies of subject extraction from clausal complements of different verbs/predicates in the light of the findings of the previous chapters. The main hypothesis I put forth to account for such discrepancies is that subject extraction is prohibited from the clausal complements of the so-called factive predicates because such clauses are absolute islands, while it is allowed out of the clausal complements of the so-called non-factive predicates which are not islands for extraction. In the following discussion, I firstly introduce the main semantic and syntactic differences between factive and non-factive verbs. Second, I investigate subject extraction out of the complement clauses of non-factive verbs, arguing that the subject of the embedded clauses of such verbs vacates its base position, i.e. Spec,vP moving to Spec,Force Phrase, then to the matrix clause, fulfilling the Question Criterion that operates in the matrix clause. Afterwards, I explore in a greater detail why the embedded subject cannot be extracted from the clausal complements of factive predicates. Along the lines of Kiparsky and Kiparsky (1970), Manahlot (1977) and Ouhalla (2004), and Kayne (2005), among others, I assume that the complements of factive verbs are constituents of NP that is headed by a N^o with the meaning 'fact' or 'news', which subsequently gets deleted at PF. This accounts for the similarity of such clauses with noun complements with respect to the impossibility of the subject extraction from them.

6.2   Factive verbs vs. non-factive verbs

In this section, I investigate the semantic and syntactic differences between the clausal complements of factive vs. non-factive verbs. I first start with the semantic difference, then turn to the syntactic one.

Kiparsky and Kiparsky (1970), Karttunen (1971), Hooper (1976), and Adams (1985), among many others, argue that the verbs which take *that*-complements are divided into two classes, namely factive verbs and non-factive verbs. The former class of verbs carries along the

speaker's presupposition that the complement sentence represents a true proposition (i.e. the truth value of their complements is presupposed). This class of verbs includes *know*, *realize*, and *regret*, to name just a few. As for non-factive verbs, they propose that such verbs are not accompanied by a similar presupposition. This class of verbs includes *believe*, *think*, and *assume*. In order to explain this semantic difference between factive vs. non-factive predicates, consider the pair in (5):

(5) a. John knows that Mary is sick.
    b. John believes that Mary is sick.

Sentence (5a) can be true only if its propositional argument *Mary is sick* is true, whereas the truth-value of sentence (5b) does not rely crucially on the truth-value of the proposition *Mary is sick* (cf. Rooryck 1992, Basse 2008).

It is worth mentioning at this point that the difference between factive and non-factive verbs is not only semantic. The two classes of verbs are also different with respect to syntax. A syntactic difference that has been frequently noted between these two classes of verbs is that complements of factive verbs are weak islands for extraction, whereas complements of non-factive verbs are not (De Cuba 2006: 123). Let's first explain the difference between weak vs. strong islands. For Szabolcsi and Zwarts (1997), weak islands are environments that allow some, but not all, wh-phrases to extract. They argue that the cross-linguistically best known weak islands include infinitival/subjunctive/modal/*whether*-clauses. Consider the following examples, which are cited in Szabolcsi and Zwarts (1997: 220) (the examples in (6c, d) are from Dutch):

(6) a. Which man$_i$ are you wondering [whether to invite -$_i$]
    b. * How$_i$ are you wondering [whether to behave -$_i$]

    c. Welke   man$_i$ heb   jij   je   afgevraagd
       which   man   have   you   self   wonder
       [of   je-$_i$ moet   uitnodigen]?
       if   you   must   invite
       'Which man did you wonder whether you should invite?'

d. *Hoeᵢ	heb	jij	je	afgevraagd
how	have	you	self	wondered

[of	je	je -ᵢ	moet	gedragen]?
if	you	self	must	behave

'How did you wonder whether you should behave?'

Although the wh-phrases, *which man* and *how* in (6) are extracted from the same syntactic environment, i.e. out of *whether/if*-clauses, the extraction of *how* turns the respective sentences ungrammatical, whereas the extraction of *which man* does not. *Whether/if*-clauses are thus said to be weak islands as some (but not all) wh-words can be extracted out of them. In this regard, Szabolcsi and Zwarts (1997) indicate that typically phrases like *which man* can extract, but phrases like *why, how,* and *how many pounds* cannot (p. 220). On the other hand, strong islands are absolute in the sense that they do not allow any wh-phrase to escape. Cinque (1990) argues that subjects, complex NPs, and adjuncts are strong islands for extraction. The following examples, cited in Van De Koot and Mathieu (2003: 277) explain this point. Note that the extraction of the phrase *which book* results in the sentence ungrammaticality.

(7) a. *Which book did you suggest a movie to John [after reading—ᵢ]

b. * Which book is [reading—ᵢ to children] fun.

As for JA, there is strong evidence that clausal complements of factive verbs are strong islands not weak islands. The evidence supporting this contention is that no wh-phrase whatsoever is allowed to escape, as shown in the following illustrative examples.[59]

(8) a. *miin   ʔabuu-i   ħizin/ ʔistaʁrab/ nasa/ ʕirif

who   father-my   regretted/got surprised/forgot/knew

ʔinn-ha   sarag-t   ʔis-sijjaarah

that-3SG.F   stole-3SG.F   DEF-car

Intended: 'Who did my father regret/was surprised/forget/know stole the car?'

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[59] The question in (8b) is grammatical under *how*'s matrix construal.

b.*keef   ʔabuu-i   ħizin/ ʔistaʁrab/ nasa/ ʕirif

   who   father-my   regretted/got surprised/forgot/knew

   ʔinn-ha   l-binit   sarag-t   ʔis-sijjaarah

   that-3SG.F   DEF-girl   stole-3SG.F   DEF-car

Intended: 'How did my father regret/was surprised/forget/know that girl stole the car?'

In (8a), the embedded subject *miin* 'who' is extracted from the clausal complement of the verbs *ħizin/ʔistaʁrab/nasa/ʕirif* 'regretted/got surprised/forgot/knew', resulting in sentence ungrammaticality. The same observation is obtained if the wh-word *keef* 'how' is extracted, something that gives rise to the assumption that factive complements in JA are strong islands. It is worth noting here that the observation that what is counted as a weak island in one language might be a strong island for another language is attested by a number of authors. For instance, Szabolcsi and Zwarts (1997: 220) argue that embedded questions with a wh+DP expression are strong islands in Dutch, whereas these are weak islands in Hungarian, as the following examples demonstrate:

(9)a. *Welke man$_j$,heb   jij   je   afgevraagd   [wie -$_j$ gezien heeft]?
      Which man   have   you   self   wondered   who   seen has
      'Which man did you wonder who saw?'   [Dutch]

   b. Melyik   embert$_j$ tahilgattad,   [hogy ki   latta -$_j$]
      which   man-Ace   guessed-you   that   who   saw
      'Which man were you wondering who saw?'   [Hungarian]

The following discussion is devoted to exploring in more details the driving force behind the syntactic difference between factive complements and non-factive complements in JA. Let's begin our pursuit with instances where the subject of the embedded clauses is extractable, i.e. subject extraction from clausal complements of non-factive verbs.

6.3   Subject extraction out of clausal complements of non-factive predicates

In this section, I examine the syntactic conditions under which the subject can move out of the complements of non-factive predicates. Additionally, I investigate the more relevantly syntactic phenomena, including the restriction against object/adjunct fronting to the left periphery of the embedded clause, while the subject is extracted. I assume that the subject wh-

word incurs a featural intervention effect against focalized/ topicalized elements which it c-commands, preventing them from moving to the left periphery of the embedded clause. I attribute such an intervention effect invoked by the subject to its richly featural content being endowed with [FOCUS], [D-link], and [WH] features.

6.3.1 Subject extraction and intervention effects

In this section, I introduce the observations related to word order and obligatory subject-complementizer agreement when the subject of the clausal complement of non-factive verbs/predicates is extracted. Consider the following example which includes several non-factive verbs with the embedded subject being extracted.[60]

(10)   miin   ?abuu-i   fakkar/ ʃakk/ ʃaʕar/ dʰann
         who   father-my   believed/doubted/felt/guessed

         ?inn-uh   sarag   ?is-sijjaarah
         that-3SG.M   stole.3SG.M   DEF-car

         'Who did my father believe/doubt/feel/guess stole the car?'

The base-generated position of the subject wh-word *miin* 'who' in (10) is Spec,vP of the embedded clause, where it is assigned a theta role by little *vᵒ* and Nominative case by Tᵒ as a result of the probe-goal operation that is established between the subject and Tᵒ (see Chapter 2 for discussion). The subject wh-word *miin* 'who' does not raise to Spec,SubjP of the embedded clause, which is occupied by the expletive *pro* (see Chapter 4). The subject does not either move to any position in the left periphery of the embedded clause but Spec,Force Phrase. That is because if the subject wh-word would move to any other place within the left periphery (i.e. Spec,Focus Phrase, Spec,Familiar Topic Phrase, or Spec,Contrastive Topic Phrase), it would have been attracted by a criterion that forces it to freeze in place. The subject then resists any further movement and thus becomes unable to satisfy the Question Criterion that operates in the matrix clause. For instance, witness the following example, which is ill-formed because the subject wh-word is stuck in the left-periphery of the embedded clause.[61]

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[60] Non-factive predicates include verbs and adjectives; I focus here mainly on verbs in the general description.
[61] The example in (11) is grammatical under a non-interrogative reading. Under such a reading, there is no Question Criterion that operates in the matrix clause, resulting in no demand that the subject wh-word moves to the matrix clause.

(11)   *ʔabuu-i   fakkar/ ʃakk/ ʃaʕar/ dʰann   ʔinn-uh

father-my   believed/doubted/felt/guessed   that-3SG.M

miin   sarag   ʔis-sijjaarah

who   stole.3SG.F   DEF-car

Intended: 'Who did my father believe/doubt/feel/guess stole the car?'

The subject wh-word *miin* is assumed to be in the left periphery of the embedded clause in the ill-formed example in (11) rather than staying in the canonical position of the thematic subject. The example in (11) does not represent cases of wh-in-situ questions, as the subject wh-word does not occur to the right of the tensed verb *sarag* which already moves to Tº under head movement. Following my investigation of word orders of the embedded clauses introduced by the complementizer *ʔinn* in Chapter 4, it can be assumed that the subject acts either as a topic or as a focus when it appears to the left of the tensed verb, depending on its informational value. The 'preverbal' subject wh-word in (11) is hence in the left periphery. With this being the case, the Question Criterion of the matrix clause cannot attract the subject wh-word, due to the criterial freezing effects, something that yields the ungrammaticality of the aforesaid example in (11) (cf. Rizzi 2006).

An important point here to mention is that example (11) improves marginally when the subject wh-word appears to the right of the verb, representing, hence, cases of echo questions.[62] Consider the following example:

(12)   #ʔabuu-i   fakkar/ ʃakk/ ʃaʕar/ dʰann   ʔinn-uh

father-my   believed/doubted/felt/guessed   that-3SG.M

sarag   miin   ʔis-sijjaarah

stole.3SG.F   who   DEF-car

≈'My father believe/doubt/feel/guess who stole the car?'

The marginal acceptability of example (12) gives a value for the claim that the subject wh-word in embedded clauses is base-generated in a post-verbal position and that Spec,SubjP is not filled with the subject (hence, the Subject Criterion of the embedded clauses is not satisfied by the subject, but by a different element, i.e. the expletive *pro*). I extend here the

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[62] It should be noted that example in (12) might not be acceptable for some speakers since JA is not a wh-in-situ language (see, Yassin 2013); so the wh-word should raise to the left periphery of the matrix clause in normal cases. The main point here is that the example in (12) is more acceptable than that in (11), a matter I put down to the assumption that the subject wh-word in (12) remains in situ for rhetorical reasons which need a suitable context to accept.

analysis of echo-questions to (12). The subject wh-word moves stepwise to the matrix clause at LF, satisfying the Question Criterion therein.[63]

The next issue to tackle here is the observation that not all elemnets are allowed to appear preverbally within the embedded clause while the subject is extracted. To provide an illustration, consider the following examples:

(13)   a. miin ʔabuu-i   fakkar/ ʃakk/ ʃaʕar/ dʰann   ʔinn-uh
         who father-my   believed/doubted/felt/guessed   that-3SG.M

         sarag   ʔis-sijjaarah   ʔimbaariħ   bi-l-karaadʒ
         stole.3SG.M   DEF-car   yesterday   in-DEF-garage
         'Who did my father believe/doubt/feel/guess stole the car yesterday in the garage?'

       b. * .....ʔinn-uh   ʔis-sijjaarah   sarag-ha   ʔimbaariħ   bi-l-karaadʒ
            that-3SG.M   DEF-car   stole.3SG.M-it   yesterday   in-DEF-garage
          Intended: '……that stole the car yesterday in the garage?'

       c. .....ʔinn-uh   ʔimbaariħ,   sarag   ʔis-sijjaarah   bi-l-karaadʒ
            that-3SG.M   yesterday   stole.3SG.M   DEF-car   in-DEF-garage
           '…. that yesterday stole the car in the garage?'

       d. *... ʔinn-uh   bi-l-karaadʒ   sarag   ʔis-sijjaarah   ʔimbaariħ
            that-3SG.M   in-DEF-garage   stole.3SG.M   DEF-car   yesterday
           Intended: '…. that in the garage stole the car?'

In (13b), the object *ʔissijjaarah* 'the car' is fronted to a post-verbal position, something that leads to the ungrammaticality of the question. In (13c), what is fronted is the temporal adjunct *ʔimbaariħ* 'yesterday' and the question remains grammatical. In (13d), the locative adjunct *bilkaraadʒ* 'in the garage' is preposed, whence the ungrammaticality of the question.

Drawing on the observation that only temporal adjuncts can occur preverbally, while the subject is extracted from transitive embedded clauses, it can be postulated that the subject wh-

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[63] This amounts to saying that the Question Criterion of the matrix clause can be put off until LF (cf. Huang 1982, Pesetsky 1987, Wahba 1992, Lasnik and Saito 1992, Aoun and Li 1993). A different alternative to the example in (12) is that the subject wh-word moves to Spec,Focus Phrase of the matrix clause in the overt syntax cycle, but what is spelled-out at PF is the foot of the chein. I leave this issue open for further research.

word invokes an intervention effect that blocks all XP elements that it c-commands from moving to the left periphery. This is tantamount to the assumption that the subject wh-word being in situ does not c-command temporal adjuncts which are base-generated adjoining to TP. Such a unique property of temporal adjuncts being able to occur preverbally in such situations is tied to the already discussed observation that they can replace the D-linking element *ʔilli* in main questions with subject extraction (see chapter 3). Recall that locative adjuncts can replace *ʔilli* only in questions with an unaccusative verb, whereas temporal adjuncts can replace *ʔilli,* irrespective of the type of the question (transitive vs. intransitive). I have attributed this disparity between locative adjuncts and temporal adjuncts to the assumption that the former are based-generated adjoining to TP, hence their accessibility to Subjº, regardless of the type of the verb. The locative adjuncts adjoining to VP are only accessible to Subjº in unaccusative clauses where there is no v*P phase.

Note that the culprit here is also the type of the intransitive verb, that is, unergative vs. unaccusative (cf. Perlmutter 1978). It is possible in JA to place a locative adjunct in a postverbal position in which case the intransitive verb is unaccusative as (14b) demonstrates, whereas this possibility no longer holds when the intransitive verb is unergative, as (14d) shows.

(14)   a. miin ʔabuu-i   fakkar/ ʃakk/ ʃaʕar/ dʰann   ʔinn-uh
        who   father-my   believed/doubted/felt/guessed   that-3SG.M
        wisʰil   ʕad-daar   mitʔaχir
        arrived.3SG.M   DEF-house   late
        'Who did my father believe/doubt/feel/guess arrived home late?'

        d. .*....ʔinn-uh   ʕad-daar   wisʰil   mitʔaχir
            that-3SG.M   DEF-house   arrived.3SG.M   late
        '......that arrived home late?'

        c......ʔinn-uh   ʔakal   bi-l-karaadʒ
            that-3SG.M   ate.3SG.M   in-DEF-garage
        '...... that ate in the garage?'

d. *.....ʔinn-uh   bi-l-karaadʒ   ʔakal

        that-3SG.M   in-DEF-garage   ate.3SG.M

Intended: '…. that ate in the garage?'

Table 3 summarises argument/adjunct fronting within the embedded clause, while the subject of the embedded non-factive complement is extracted.

Table 3: Argument/adjunct fronting in embedded clausal complements of non-factive verbs with its subject being extracted

Type of the verb		Object fronting	Temporal adjunct fronting	Locative adjunct fronting
Transitive		X	✓	X
Intransitive	Unergative	N/B	✓	X
	Unaccusative	N/B	✓	✓

The observations in Table (3) are straightforwardly accounted for supposing that the extracted subject wh-word invokes an intervention effect against the entities that it c-commands. I explore this assumption in detail in the following section.

6.3.2 *Feature-based analysis to movement*

To illustrate, as for the ban against the object and locatives fronting in embedded clauses with a transitive verb and with their subject are extracted to the left periphery, it can be postulated that are situated in the c-command domain of the subject wh-word. Consider the following schematic representation that shows the subject's c-command domain in the transitive embedded clauses of the example in (13c), repeated below as (15):

(15)   miin   ʔabuu-i   fakkar/ ʃakk/ ʃaʕar/ dʰann   ʔinn-uh

      who   father-my   believed/doubted/felt/guessed   that-3SG.M

      sarag   s-sijjaarah   ʔimbaariħ   bi-l-karaadʒ

      stole.3SG.M   DEF-car   yesterday   in-DEF-garage

    'Who did my father believe/doubt/feel/guess stole the car yesterday in the garage?'

(16)

CP
?inn   SubjP
pro   Subj'
Subj   TP
TP   ?imbaarih
sarag   vP
miin   v'
sarag   VP
VP   bilkaraadg
<sarag>   ?issijaarah

Subject's c-command domain

As seen from (16), the object *?issijjaarah* 'the car' as well as the locative adjunct *bilkaraadʒ* 'in the garage' are situated within the c-command domain of the subject, whilst the temporal adjunct *?imbaariħ* 'yesterday' is not. The natural question that arises now is why the subject wh-word incurs an intervention effect against the XP elements it c-commands. What is expected though is that the subject wh-word does not block argument/adjunct fronting to the left periphery of the embedded clause as is the case when the subject is not a wh-word (see the chapter 4 on the word orders in the embedded clauses).

In Chapter 4, I have made it clear that a fronted element to the left periphery of the embedded clauses such as the fronted object can be a focus, a contrastive topic or a familiar topic. When the fronted element is a focus, it can be suggested that the subject wh-word incurs a relativized-minimality intervention effect against the focused element, given that the subject wh-word and the focalised element bears the [FOCUS] feature (cf. Rizzi 1990, 2004). The feature α blocks extraction of a constituent with the same feature (see also Haegeman 2010: 639). The Focus criterion cannot consequently attract the focused element to the left periphery, something that leads the relevant sentence to crash.

The next issue to address pertains to the cases where the fronted element would be a topic. The assumption that the subject wh-word incurs a relativised minimality-based intervention effect agianst familiar topics cannot be pursued here, as the wh-word cannot be a topic. In order to account for the intervention effect caused by the subject wh-word agaisnt topicalized

entities, I exploit here the feature-based approach to locality as originally advanced by Starke (2001). The intervention effects are here computed on feature sets, where an entity with a richer feature set can cross one that has an impoverished feature set, but not vice versa. Recall that an element with an impoverished feature set cannot cross an element with a richer feature set (see § 3.4 for a related discussion). This implies again that relativized minimality is restrictively redefined here as an anti-identity condition on feature classes, not on features themselves (cf. Endo 2007: 23) (see also Rizzi 2004, Haegeman and Ürögdi 2010a,b, Haegeman 2010, 2012). I claim that the subject wh-word is featurally rich having a [D-link] feature which turns it as a barrier against the movement of other elements with a relatively impoverished content. This implies that even the landing site of the fronted object is different from that of the extracted subject wh-word (through its journey to the matrix clause), the latter may invoke an intervention blocking effect against the former due to its relatively rich featural content.

The evidence that the embedded subject wh-word bears the [D-link] feature comes from the possible answers to the questions with subject wh-words being extracted to the matrix clause. Consider the following example in (17), followed by two felicitous answers for it in (18), as suggested by JA informants:

(17) miin   ʔabuu-i   fakkar   ʔinn-uh   sarag   ʔis-sijjaarah
      who   father-my   believed.3SG.M   that-3SG.M   stole.3SG.M   DEF-car
     'Who did my father believe stole the car?'

(18)   a- ʔiz-zalamih ʔilli   laabis   ʔaħmar
            DEF-man   REL   wearing.3SG.M   red
         'The man wearing red (clothes)'

         b- ʔiz-zalamih   ʔitˤ-tˤawiil
            DEF-man   DEF-tall
         'The tall man'

The interesting point here is that when the JA informants are asked whether the answer in (19) is a possible answer for the question in (17). They agree that it is infelicitous.

(19)   #zalamih   laabis   ʔaħmar

        man   wearing.3SG.M   red

        'A man wearing red (clothes)'

The felicitous answer must include information related to the common ground of the question. In other words, the range of the felicitous answers to questions such as (17) is restricted to a contextually salient set of alternatives that have been evoked earlier in the discourse (see Pesetsky 1987 who call wh-words in such contexts as D-linked wh-words and Cinque 1989 who dubs them as referential wh-phrases). The subject wh-word is contrasted, given it is related to a set already established in discourse. The copy of the subject extracted being heavily featured thus invokes an intervention effect against elements with relatively impoverished featural content, including the contrastive topic. Consider the following schematic representation of the ill-formed sentence in (20):

(20)   *miin ʔabuu-i   fakkar   ʔinn-uh   ʔimbaarih

        who   father-my   believed.3SG.M   that-3SG.M   yesterday

        ʔis-sijjaarah   sarag-ha   bi-l-karaadʒ

        DEF-car   stole.3SG.M-it   in-DEF-garage

        Intended: 'Who did my father believe stole the car (not the bus) yesterday in
                the garage?'

(21)
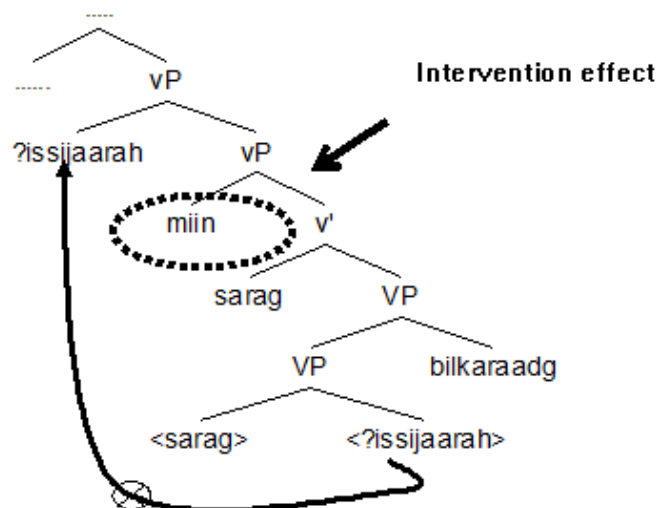
The subject wh-word *miin* invokes an intervention effect agaisnt the movement of the topicalized object *ssijjaarah* 'the car'.

Following this approach, the topicalized entities that lie within the c-command domain of the subject wh-word cannot cross the latter because of their impoverished content relevant to the subject wh-word. Topicalized elements are endowed with [TOPIC], whereas the subject wh-word is featurally richer, being endowed with [FOCUS], [D-link], and [WH] features (see, Landau (2008) and Belletti and Rizzi (2010) for similar arguments). Additionally, this feature-based account provides us with an elegant account of why the subject wh-word can circumvent any intervention effect which might be invoked by the temporal adjuncts. We have seen earlier that temporal adjuncts are allowed to appear preverbally since they are base-generated in a position c-commanding the subject wh-word. The expectation is that temporal adjuncts can be (contrastively) topicalized in the embedded clause, while the subject is a wh-word extracted to the left periphery. This expectation is valid, as shown by the intonational break that is sometimes imposed after the temporal adjuncts when they occur preverbally, as the following example demonstrates:

(22) miin   ʔabuu-i   fakkar/ ʃakk/ ʃaʕar/ dʰann   ʔinn-uh

who   father-my   believed/doubted/felt/guessed   that-3SG.M

ʔimbaariħ (muuʃ   ʔawal   ʔimbaariħ), sarag   s-sijjaarah   bi-l-karaadʒ

yesterday   not   first   yesterday   stole.3SG.M   DEF-car   in-DEF-garage

'Who did my father believe/doubt/feel/guess that yesterday (not the day before) stole the car in the garage?'

In (22), the embedded clause revolves around who stole the car yesterday (not the day before). The question arises now why the contrastively topicalized element *ʔimbaariħ* does not block the extraction of the subject wh-word. Following Starke's (2001) proposal that the intervention effect induced by α can be overcome if the moved constituent has an additional feature, the subject wh-word being endowed with a richer featural content, i.e. [FOCUS], [D-link] , and [WH] features can bypass the intervention effect invoked by the contrastively topicalized temporal adjunct.

This line of analysis provides us with also an explanatory account of a predictable consequence that the complementizer *ʔinn* always agrees with the subject wh-word being extracted to the left periphery of the matrix clause. Consider the following example with an eye on the similarity of the Φ-content of the clitic and the verb:

(23)   miin   ʔabuu-i   fakkar/ ʃakk/ ʃaʕar/ dʰann

         who   father-my   believed/doubted/felt/guessed

         ʔinn-uh   sarag   ʔis-sijjaarah

         that-3SG.M   stole.3SG.M   DEF-car

         'Who did my father believe/doubt/feel/guess stole the car?'

If the morphological form of the verb changes to [3SG.F], by adding the [3SG.F] suffix –t to the verb, the suffix attached to the complementizer ʔinn undergoes the same change, i.e. showing the same new Φ-content of the verb, as shown in the following example:

(24)   miin   ʔabuu-i   fakkar/ ʃakk/ ʃaʕar/ dʰann

         who   father-my   believed/doubted/felt/guessed

         ʔinn-ha   sarag-t   s-sijjaarah

         that-3SG.F   stole.3SG.F   DEF-car

         'Who did my father believe/doubt/feel/guess stole the car?'

If the suffix shows different Φ-content than the verb, the resulting question would become ungrammatical, as exemplified by the following ill-formed example where the clitic attached to the complementizer ʔinn is [3PL.M], whereas the verb is [3SG.F]:

(25)   *miin   ʔabuu-i   fakkar/ ʃakk/ ʃaʕar/ dʰann

         who   father-my   believed/doubted/felt/guessed

         ʔinn-hum   sarag-t   s-sijjaarah

         that-3PL.M   stole.3SG.F   DEF-car

         Intended: 'Who did my father believed/doubted/felt/guessed stole the car?'

Given the featural-based intervention effect that the subject incurrs agaisnt the object in such situations, the object is blocked from appearing in a position where it can be the most local element to the complementizer ʔinn. Following my proposal that Spec,SubjP is filled with a *pro*, I assume that the complementizer ʔinn agrees with the *pro* whose unvalued Φ-content is valued through a probe-goal relation with the subject. The *pro* should thus go through an Agree operation with the subject, the most local goal, to value its own features. The *pro* is a closest goal to the complementizer ʔinn, prior to the movement of the subject wh-word to Spec, CP/Spec, Force Phrase (of the embedded clause). Viewed in this way, it comes as no surpirse that the complementizer ʔinn, pro, and T° are all valued by the Φ-features of the

subject wh-word, something that results in the observation that the suffix appearing on the complementizer *Ɂinn* and the morphlogical form of the verb always shows the Φ-content of the subject wh-word which is extracted to the matrix clause.

The following schematic representation shows the derivational history of the extraction of the subject wh-word from its base-position in the embedded clause to the left periphery of the matrix clause in sentence (26).

(26)   miin   Ɂabuu-i   fakkar

             who   father-my   believed.3SG.M

             Ɂinn-uh   sarag   Ɂis-sijjaarah

             that-3SG.M   stole.3SG.M   DEF-car

             'Who did my father believe stole the car?'

(27)

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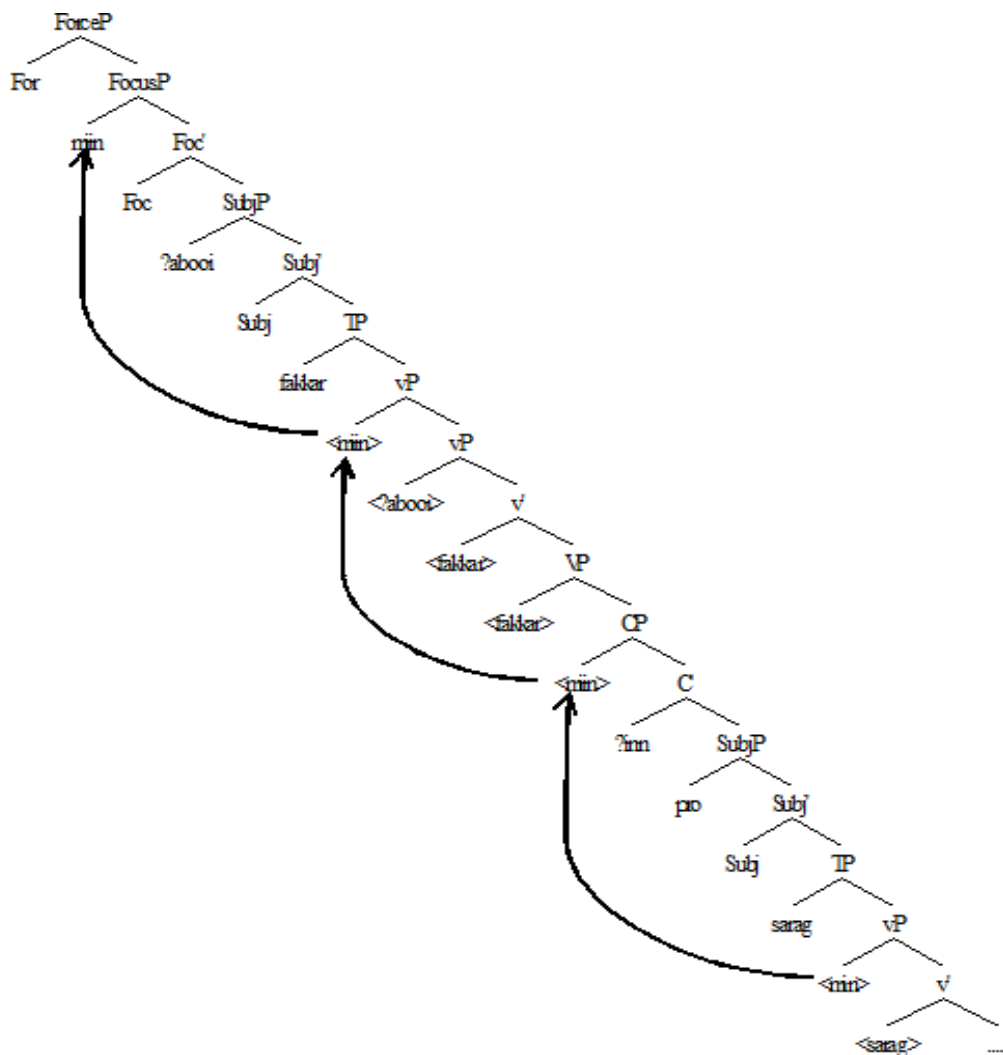
After the subject moves to Spec, Force Phrase, it moves to Spec,v*P, the edge of the next phase, obeying minmality. i.e. obeying the effects of the PIC (cf. Chomsky 2000, 2001), and then to the left periphery of the matrix clause, satisfying as such the Question Criterion that operates in the matrix clause.

Before closing off this section, let's account for the contrasting behaviour of unergative and unaccusative verbs with respect to the possibility of having a preverbal locative when the subject is extracted.

6.3.3   Unaccusatives vs. unergatives

The asymmetry between unaccusatives and unergatives with respect to the possibility of having a preverbal locative receives an explanation in the context of the well-argued assumption that the base-generation position of the subject in sentences with unaccusative verbs is different than that of the subject in sentences with unergative verbs (see Burzio 1986). The subject is base-generated as the verb complement in unaccusatives, whereas it merges in the subject position, i.e. Spec,vP, in sentences with unergative verbs (Kitagawa 1986, Burzio 1986, Levin and Hovav 1995). This so being, the subject does not c-command a locative in unaccusative embedded clauses, a matter that opens the way for a locative to move to a preverbal position. This assumption is consistent with the observation that unaccusatives in JA are not phases (see Chapter 3); hence the subject does not land first in Spec,vP but moves directly from its thematic position to Spec,CP/Spec,Force Phrase (of the embedded clause), forced by effects of the PIC. So, nothing a priori can preclude the movement of a locative to a preverbal position. On the other hand, a locative does not occur preverbally in unergative embedded clauses with the subject extracted becuase of the base-position of the subject being in Spec,vP . A locative must first move past the subject to appear perverbally, which cannot happen, given the rich featural content of the subject wh-word, blocking any XP entity carrying relatively fewer features from crossing Spec,vP .

6.3.4   Conclusion

As should be clear from the foregoing, the complements of non-factive verbs are not islands for extraction. The subject can be extracted to the left periphery of the matrix clause, landing first in Spec,Force Phrase of the embedded clause, then in Spec,vP of the matrix clause, and finally in the left periphery of the matrix clause, satisfying as such the Question Criterion. Depending on the possible felicitous answers of questions where the wh-word used is the

subject of the embedded clause, it turns out that the subject wh-word is endowed with [FOCUS], [D-link], and [WH] features. The subject wh-word hence creates any island for any focalized and topicalized elements which are base-generated in a position it c-commands from moving to the left periphery of the embedded clause, given the richly featured content of the subject. This explains why VO is the only option used in embedded clauses with the subject being extracted to the left periphery in transitive clauses. Additionally, this section shows why temporal but not locative adjuncts can be topicalized while the subject is extracted in transitive and unergative clauses. I have attributed this observation to the assumption that temporal adjuncts are base-generated above the subject wh-word which can in turn overcome any intervention effect invoked by the (contrastively) topicalized temporal adjuncts because of the richness of features of the subject wh-word. Furthermore, I have discussed the asymmetry between unaccusatives and unergatives with respect to the possibility of having a preverbal locative. I have argued that this asymmetry boils down to the base-generation of the subject wh-word being in Spec,vP in unergatives, but in the complement position of VP in accusatives. The subject wh-word in unaccusatives cannot thus incur an interception effect against the locatives insofar as they are base-generated in a higher position.

The discussion so far has centred on subject extraction from non-factive complements. The next section turns to the impossibility of subject extraction out of clausal complements of factive verbs.

6.4   The ban against subject extraction out of complements of factive verbs

In this section, I consider more closely the clausal complements of factive verbs, with a particular focus on the impossibility of subject extraction out of such clauses and the obligatory use of the complementizer *ʔinn* that introduces them.

6.4.1   *No subject extraction out of clausal complements of factive verbs*

In the previous section, I have observed that the thematic subject cannot be extracted from a clausal complement of verbs such as *ʔiħzan* 'to regret', *ʔistaʁrib* 'to get surprised', *jinsa* 'to forget', and *jiʕrif* 'to know'. I repeated below the relevant examples as (28):[64]

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[64] Some authors consider the verb *jiʕrif* 'to know' as a semi-factive which might be treated separately from factive verbs (see, e.g. Diercks' 2013 discussion on Lubukusu). It should be noted here that semi-factive and factive behave similarly with respect to the ban against (subject) extraction and other related observations. So, I leave aside any distinction between factive vs. semi-factive predicates.

(28) a. ʔabuu-i   ħizin/ nasa/ ʕirif   ʔinn-ha

      father-my   regretted /forgot/knew   that-3SG.F

        ʔil-binit   sarag-t   ʔis-sijjaarah

        DEF-girl   stole-3SG.F   DEF-car

      'My father regretted/forgot/knew that the girl stole the car.'

      b. *miin   ʔabuu-i   ħizin / nasa/ʕirif

        who   father-my   regretted /forgot/knew

        ʔinn-ha   sarag-t   ʔis-sijjaarah

        that-3SG.F stole-3SG.F   DEF-car

      Intended: 'Who did my father regret /forget/know stole the car?'[65]

The sentence in (28b) is ill-formed because the subject of the clausal complement of factive verbs *ħizin /nasa/ʕirif* is extracted to the left periphery of the matrix clause. A manifestation of a same phenomenon has been widely reported in related literature, as shown by the following examples which are taken from different languages:

(29) a. *Who do you regret (that) stole the cookies? (Basse 2008: 54).

      b. *Who do you regret/understand/forget likes this book? (Adams 1985: 305)

      c. *Qui   regrettes/comprends/oublies-tu   qui   aime   ce   livre?
         Who   regret/understand/forget   that   likes   this   book
        Who do you regret/understand/forget likes this book? (French. Adams 1985: 305)

      d. *ʔmi ata   makxiš/zoxer   (še -) ___   ganav   et   ha-ugiot?
         who you   deny/remember   COMP-   stole   ACC   the-cookies
        Intended: 'Who do you remember stole the cookies?' (Hebrew. Kastner 2015: 165)

Since this phenomenon was noted by Kiparsky and Kiparsky (1970), it has become the subject of intensive investigation. The pioneering proposals advanced by Kiparsky and Kiparsky (1970), Rouveret (1980), and Zubizarreta (1982) argued that the ban against

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[65] Following the general practice, I provide as literal a translation as possible for the examples in this section to help the reader. However, I do not assign a grammaticality judgement to such translations.

extraction of the subject (and other categories) out of clausal complements of factive verbs follows from the assumption that factive verbs subcategorize for nominal clausal complements (see, Adams 1985: 306). In other words, complements of factive verbs are NPs that is headed by a null (elliptical) N° with the meaning 'fact'.

Kiparsky and Kiparsky also show that factive predicates are different from non-factive predicates in other respects. Only factive verbs freely allow gerund complements, as in (30a) (cited in Adams 1985: 306).

(30)   a. Sally regrets having agreed to the proposal.
        b. *Sally believes having agreed to the proposal.

Additionally, only factive verbs allow the noun *fact* to precede factive complements:[66]

(31)   a. John comprehends the fact that ...
        b. *John assumes the fact that . . .

This difference can be schematically represented as follows (taken from De Cuba 2007: 5).

(32)

```
(a)            VP                    (b)            VP
              /  \                                /  \
      factive-V   NP              non-factive-V    CP
                 /  \                             /____\
             fact    CP
                    /____\
```
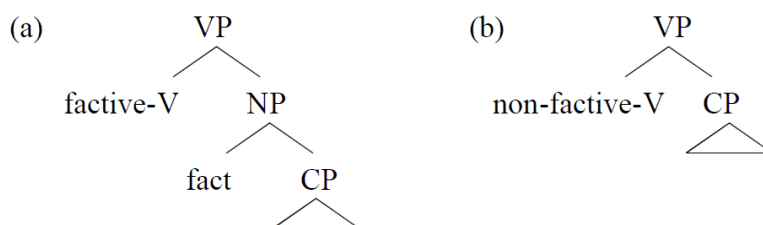
Empirical evidence in favour of this representation was, for example, provided in Zubizaretta (1982) from Spanish whereby complements of factive, but not of nonfactive, verbs may be preceded by a determiner, something that supports the nominal status of factive complements, as exemplified in (33) (cited in Adams 1985: 306)

(33)   Lamento/*creo el   que   Pedro no   haya   pasado el   examen.
        I regret/believe det that   Pedro not   has   passed the   exam

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[66] For other asymmetries noted in the literature between factive and non-factive predicates, see, among others, Emonds (1970), Hooper and Thompson (1973), Andersson (1975), Heycock (2006), and De Cuba (2007).

Also it was reported that in some languages a factive verb can be preceded by a noun. Witness the following example from Amharic where the factive verb is preceded by the noun *wäre* 'news' (cited in Ouhalla 2000: 224).

(34)   Kasa bet yä-mä-gzat-u-n wäre sämma-hu.

Kasa house GM-CM-buy-his-OM news heard

'I heard the news that Kasa bought a house.'

Following Ross's (1967) insight that complex NPs are islands, the fact that the subject (and any other elements) are disallowed to escape from complements of factive verbs to the matrix clause is readily accounted for.

On the other hand, this proposal alone falls short of accounting for the observations that the complementizer *that* cannot be omitted and no argument (subject/object) fronting to the left periphery of the embedded complement clause is permitted in some languages, including English. Consider the following examples:

(35)a. *John regrets that this book Mary read. (Maki *et al*. 1999: 3).

   b.*I resent the fact that each part he had to examine carefully.

                                    (Hooper and Thompson, 1973:479).

   c. John-wa [kono   hon-*wa/o   Mary-ga   yonda no]-o   kookaisiteiru

      John-top   this   book-top/act   Mary-nom   read COMP-act   regret

     'John regrets that this book, Mary read.' (Japanese. Maki *et al*. 1999: 9).

   d. John regrets (*that) Mary is bald. (Zubizaretta 2001: 201)[67]

The examples in (35a,b,c) are ungrammatical because the object of the embedded clause in each example is fronted. The example in (35d) constitutes clear evidence that the complementizer *that* introducing the complement of the factive verb *regret* must be present. According to Haegeman (2012: 264), a number of authors have tried to relate such observations to the assumption that factive predicates contain an operator in the left periphery

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[67] For some American English speakers, *that* can be dropped out of this sentence with no harm to sentence grammaticality. However, I consider this sentence without *that* as ungrammatical following the general tendency reported in the literature (cf. Zubizaretta 2001).

(cf. Melvold 1991, Hegarty 1992, Watanabe 1993a and 1993b, Bianchi 2000, Zubizaretta 2001). In effect, Melvold (1991) argues that complements of factive predicates should be treated as 'event arguments' and are associated with a definite complementizer which licenses an *iota* operator (defined as a contextual abbreviation for the existence and uniqueness condition of the definite description; Von Heusinger 2003: 3) in the left periphery. For Melvold, this operator is responsible for the referential function of such complements (Haegeman 2012: 264). Melvold states:

> We have said that proposition-type arguments assert that some object or state of affairs matching the descriptive content of the statement "exists" in the world. Thus we will assume that the event place in the clausal complement of a nonfactive verb is bound by an existential quantifier. Event-arguments, on the other hand, have a referential function. Therefore, we will argue that the event position in the complement of a factive verb is bound by a different kind of operator. In this case, the definite complementizer licenses an iota operator in the SPEC of COMP, thus making the sentence into a term which identifies a particular "event-object" in the world. (Melvold 1991: 103–104).

A similar approach was proposed by Hegarty (1992). For this author, factivity is not the sole factor which determines extraction possibilities. He argues that (subject) extraction is intimately contingent on the informational status of the clause. Extraction is banned from a clause that has "already been introduced into a discourse", i.e. 'discourse-bound,' (Hegarty 1992: 8). It is obvious that under both approaches, factive complements hold 'definiteness' as a characteristic semantic property that is akin to definite nominals (see, Haegeman 2012: 264). This line of argument leads to the assumption that factive complements are introduced by a complementizer which is marked with [+definite] and which hence can license a null 'definite operator' in Spec,CP that has the effect to block any extraction out of the associated factive complement (cf. Hegarty 1992 : 30).[68] This implies a departure from a Kiparskian stance that the structural difference between factive and non-factive complement lies in subcategorization of the matrix verb. A similar argument is later proposed by Zubizaretta (2001) who mentions:

> It is likely that factive predicates, which presuppose the truth of their propositional complement, contain an Ass(ertion) operator in its CP. This operator is lexicalized by the complementizer, which explains why it must be obligatorily present [cf. *John regrets * (that) Mary is bald*]. Complements of propositional attitude verbs lack an Ass operator, therefore, their complementizer may be absent in some languages [cf. *John thinks (that) Mary is bald*]. (Zubizaretta 2001: 201)

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[68] This discussion leads de Cuba (2007: 60) to classify factive verbs as *Familiar Complement taking Predicates,* whereas non-factive verbs as *Novel Complement taking Predicates.*

Differently, Haegeman (2006) argues that non-factive complement clauses instantiate a full left periphery, whereas factive complements have an impoverished left periphery. For Haegeman, this CP-reduction analysis to factive complements accounts for the restriction against topicalization as well as the speaker-oriented adverb placement in the Comp domain of factive complements. See also Beninca and Poletto 2004, Bentzen *et al.* 2007 and Bentzen 2007 for similar approaches.[69] On the other hand, this proposal proves incapable of accounting for the grammaticality of the sentences in (36) where adjunct topicalization is allowed in factive complements.

(36)   a. John regrets that last week Mary did not turn up for the lecture (Haegeman 2012: 80).

        b. . . . so it's not surprising that throughout history we've taken some bad turns. (Santorini 2001 , citing from *Monks of New Skete* 1999 : 181

                                                        (cited in Haegeman 2012: 80))

As a response to such sentences, Haegeman in later work (Haegeman 2007, 2008, 2012 and Haegeman and Urogdi 2010a, 2010b) revised her (2006) proposal, arguing for an operator-based account, similar in essence to that of Melvold (1991) and Hegarty (1992). She argues that there is a clause-typing operator in the left periphery of factive complements. For Haegeman, this operator is extracted from inside TP, and hence the ban against argument fronting in such clauses is accounted for in terms of an intervention effect (p. 267).[70] Following proposals by Campbell (1996), Van Gelderen (2003, 2004), and Aboh (2005), Haegeman and Urogdi (2010a, b) argue that the 'nominal' or 'referential' nature of factive complements is due to the movement of this operator, rather than being a by-product of an additional DP layer dominating the factive complement. Along the same lines, Haegeman (2012: 267-268) argues that this operator is endowed with the OP feature so that it can block extraction of adjunct operators to the matrix clause as sentence (37) demonstrates:

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[69] de Cuba (2007) and de Cuba and Urogdi (2009) argue that the difference between factive and nonfactive complements lies in their referentiality, whence implicitly reiterating the notion of discourse-boundedness. Under the proposal of the latter researchers, factive complements have a less elaborate left periphery than that of the non-factive predicate.

[70] Haegaman (2012: 268-269) cited some cross-linguistic examples from Gungbe (Aboh 2005), Bulgarian (Krapova 2008) and Modern Greek (Roussou 2010) in favour of the operator movement account of factive complements. The interested reader is referred to her discussion and the relevant references.

(37)   *How did you notice that Mary had fixed the car -----?

In order to account for the grammaticality of sentences like (38) where the D-linked object wh-expression *which car* is extracted to the left periphery, Haegeman (2012: 268) proposes that 'such wh-phrases are featurally richer than the operator in the left periphery of factive complements.'

(38)   Which car did you notice that Mary had fixed -----?

This line of analysis leads Haegeman (2012) to generalize that factive complements are weak islands which disallow adjunct extraction as (37) shows, and argument extraction is degraded (as in 39) unless the moved argument is D-linked as in (38) above.

(39)   #What did you notice that Mary had fixed -----?

Against this background, there are two main approaches defended in the related literature to accounting for the derivation of factive complements and related observations, namely the subcategorization approach and the operator approach. So, the question that arises here concerns which approach can account for the relevant data in JA. Before answering this question, let's address the issue whether JA behaves differently or similarly with respect to the relevant issues, including the obligatoriness of the complementizer *ʔinn,* the impossibility of fronting within the same clause, and the possibility of extraction of D-linked elements, a task I take up in the next subsection.

6.4.2   Factive complements in JA

In this section, I cite syntactic evidence that factive complements in JA are strong islands; no element can be extracted to the left periphery of the matrix clause, irrespective of its featural content. On the other hand, argument and adjunct fronting to the left periphery of the factive complement is allowed, two observations that first strengthen the possibility that no operator exists in the left periphery of such complements and second suggest that the subcategorization approach (first proposed by Kiparsky and Kiparsky 1970) would be the right option to deriving JA facts of factive complements.

To illustrate, no extraction is possible from factive complements in JA. The following ill-formed examples support this view. In (40a), the subject is extracted, in (40b) the subject wh-word is D-linked, and in (40c), the object is extracted. The example in (40d) shows that temporal/locative adjunct extraction is not possible, as well.

(40) a. *miin   ʔabuu-i   ħizin/ nasaʕirif
          who   father-my   regretted/forgot/knew

       ʔinn-uh   sarag   ʔis-sijjaarah
       that-3SG.M   stole.3SG.M   DEF-car
       Intended: 'Who did my father regret/forget/know stole the car?'

      b. *miin   ʔiz-zalameh   ʔabuu-i   ħizin/nasaʕirif
          who   DEF-man   father-my   regretted/forgot/knew

       ʔinn-uh   sarag   ʔis-sijjaarah
       that-3SG.M   stole.3SG.M   DEF-car
       Intended: 'Which man did my father regret /forget/know stole the car?'

      c. * eeʃ   ʔabuu-i   ħizin / nasaʕirif
          what   father-my   regretted /forgot/knew

       ʔinn-uh   ʔiʃ-ʃab   sarag
       that-3SG.M   DEF-young man   stole.3SG.M
       Intended: 'What did my father regret /forget/know that the young man stole?'

      d. * mata/ween   ʔabuu-i   ħizin / nasaʕirif   ʔinn-uh
          when/where   father-my   regretted /forgot/knew   that-3SG.M

       ʔiʃ-ʃab   sarag   ʔis-sijjaarah
       DEF-young man   stole.3SG.M   DEF-car
       Intended: 'When/where did my father regret /forget/know that the young man stole
             the car?'

All examples in (40) reveal the fact that no extraction out of a factive complement is permitted in JA, something that speaks for the strong-island status of this type of clauses. This way, JA does not pattern with languages where complements of factive predicates are weak islands. Additionally, this observation casts doubt on any possibility that the reason behind the ban against extraction is an operator situated in the left periphery of such clauses. As

noted by Haegeman herself (2012), the intervention effect incurred by the operator situated in the left periphery of factive complements can be overcome by an element with a richer featural content, including D-linked wh-words (see, the discussion about sentence (38) above). Haegeman's assumption does not transpose to JA as extraction of D-linked wh-words also gives rise to sentence ungrammaticality as demonstrated by sentence (40b) above. Pursuing the operator approach, we would require a strong stipulation to account for the ubiquitous observation that no element is able to escape from the factive complement. Such a stipulation could be that the operator situated in the left periphery of factive complements has a featural content which is so rich that it cannot be overcome. Additionally, such a potential operator need to be of both argumental and adverbial to block movement of arguemenal wh-words (i.e. subject or object wh-words) and adverbial wh-words (i.e. adjunct wh-words). These stipulations undoubtedly undermine the proposal that the ban against extraction is attributed to an operator located in the left periphery of the factive complement.

It is worth noting here that even the authors who have argued for the existence of an operator in the left periphery of the factive complement have divergent views on the precise nature of this operator. Melvold (1991) argues that such an operator is an *iota* operator, as I have shown earlier. This operator is what provides the complements of factive predicates with the feature [+definite], and assigns them a referential function. For Hegarty (1992), this operator is a null 'definite operator' situated in Spec-CP. Differently, Zubizaretta (2001) and Starke (2004) argue that this operator is an Assertion operator. For these authors, the operator is lexicalized by the complementizer itself. Haegeman (2012: 264) dismisses the latter view, arguing that the assumption that 'the complements of factive predicates are assertions is at odds with the standard assumption in the literature that factive predicates presuppose the truth of their propositional complement'. For Haegeman and Ürögdi (2010a, b), factive complements are derived by the leftward movement of a TP-internal clause-typing operator. Along these lines, it is clear there is no consensus among researchers on the exact nature of this operator, a state of affairs that brings into question the validity of the operator approach itself.

There is further empirical evidence for the inadequacy of the operator approach as far as JA is concerned. Unlike English, object fronting is permitted in factive complements in JA.[71] To provide an illustration, consider the following example:

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[71] Shlonsky (2014b: 5) also shows that factive complements in Hebrew allow topicalization:

i.	John	micta'er	še	et	ha	sefer	ha	ze	Mary	kar'a
	John	regrets	that	DOM	the	book	the	this	Mary	read

(41) Ɂabuu-i   ħizin / nasaʕ/ ʕirif   Ɂinn-ha

     father-my   regretted /forgot/knew   that-3SG.F

     Ɂil-binit   Ɂaχoo-i   sarag-ha

     DEF-girl   brother-my   stole-3SG.F

     'My father regretted /forgot/knew that the girl my brother robbed her.'

Sentence (41) suggests that factive complements have a left periphery and that fronting to this left periphery is not disallowed. One might object here that what seems as a fronted object in (41) is an instance of a clitic left dislocated (CLLD) element in the sense of Cinque (1990). The object *Ɂilbinit* is base-generated in the left periphery and hence (41) is not a suitable ground to examine whether there is an operator in the left periphery or not. Haegeman (2012: 261) makes use of this reasoning accounting for the ungrammaticality of (42a) on the one hand and the grammaticality of (42b,c) on the other.

(42)   a. *Everyone regrets that this statement Mary read out at the last meeting.

         b. Everyone regrets that at the last meeting, Mary read out this statement.

         c. Tout le monde regrette   que,   ce   texte-là,

            everyone   regret-3 sg   that   this   text-there,

             Marie   l'aie   lu   devant l'assemblée.

             Marie   it have- subj-3sg   read- part   in front of the meeting

          'Everyone regrets that Mary should have read this text in front of the meeting.'

                                                                        (French)

Haegeman argues that (42a) is ungrammatical because of the object *this statement* being displaced to the left periphery through topicalization (A-bar movement), a mechanism which is blocked due to the presence of the operator in the left periphery. (42b,c) are grammatical even if they contain dislocated elements as sentence-initial adjuncts in English and CLLD in Romance are directly merged in the left periphery and, hence, do not give rise to intervention

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'John regrets that Mary read this book.'
This observation suggests that Semitic languages more generally permit displacement to the left periphery of factive complements.

(Haegeman 2012: 267). This discussion thus ties in with the general issue of how left periphery materials end up in their surface position, namely through movement or base-generation. As it stands, movement to the left periphery is not permitted in the presence of an operator, whereas CLLD constituents are allowed due to the assumption that there is no interaction between them and the operator. To test whether the grammaticality of sentence (41) can be explained in these terms, we need to examine another instance where the fronted constituent is doubtlessly a by-product of A-bar movement rather than base-generation. If such an instance turns out to be ungrammatical, the possibility of there being an operator in the left periphery is strengthened; otherwise more evidence is accumulated against the operator approach as far as JA is concerned. The suitable testing ground is a factive complement with a fronted contrastive focus. It is well-established that focalization in Arabic undergoes A-bar movement to the left periphery as it leaves behind a gap rather than being paired with a resumptive pronoun (see, Bakir 1980, Moutaouakil, 1989, Ouhalla 1994, 1997, Shlonsky 2000, Aoun *et al.* 2010):

(43) a. ʔabuu-i   ħizin / nasa/ ʕirif   ʔinn-ha   bINIT

      father-my   regretted /forgot/knew   that-3SG.F   girl

      ʔaχoo-i   dʰarab(*-ha)   bi-s-suug

      brother-my   hit.3SG.M-3SG.F   in-DEF-market

      'My father regretted/forgot/knew that it was a girl that my brother hit in the market.'

b. min   ʔal-muʔsif   ʔinn-ha   MUʔASASAAT

      from   DEF-regrettable   that-3SG.F   institutions

      ĦUKUMIYYEH   nahab(*-ha)

      governmental   stole.3SG.M-3SG.F

      'It is regrettable that it was governmental institutions that he stole from.'

The two instances in (43) are grammatical although they include an apparent case of focalization. No resumptive object pronoun is permitted to appear in the base position of the object (as an enclitic onto the verb). This points to the conclusion that there is no operator located in the left periphery of factive clauses in JA to the effect that it blocks A-bar movement.

In view of these two facts (i.e. the movement to the left periphery of the factive clause is possible, but extraction from the factive clause is impossible), I submit that Kiparskian stance that the structural difference between factive and non-factive complement lies in subcategorization of the matrix verb is appropriate for JA. With the assumption that complements of factive verbs are, in updated terminology, DPs with a silent noun and determiner (see Schueler 2016),[72] the two facts of factive complements are straightforwardly accounted for. It has been argued elsewhere that DPs are absolute islands in Arabic grammar (Mohammad 1989, 1999, 2000, Soltan 2007, Musabhien 2009). Following this, the observation that no extraction whatsoever is allowed from factive complements which are embedded under DP follows. Additionally, a DP layer that dominates CP factive complements has no syntactic effects on A-bar movement within these clauses, something that gives rise to the possibility of fronting (and CLLD) inside such complements.

The question that comes up immediately is why the complementizer *ʔinn* is obligatory.

(44) ʔabuu-i   ħizin/ nasa/ ʕirif   *(ʔinn-ha)

     father-my   regretted/ forgot/knew   that-3SG.M

     ʔil-binit   sarag-t   ʔis-sijjaarah

     DEF-girl   stole-3SG.F   DEF-car

     'My father regretted/ forgot/knew that the girl stole the car.'

As I have shown above, the issue that the complementizer may not be dropped under a factive predicate has been linked to the assumption that the complementizer lexicalizes the operator in the left periphery (see, Zubizaretta 2001). On the other hand, under the approach that factive complements are DPs, we would not pursue this assumption. As I have shown above, the operator approach does not yield the correct observations in JA. I claim that the obligatoriness of the complementizer *ʔinn* when it is embedded under a factive predicate should be paired with the general ban against dropping this complementizer after nouns in JA. Consider the following examples:

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[72] Whether the DP layer dominating the CP factive complement contains a noun or not has been a source of debate among researchers. For instance, Davis and Dubinsky (2000) argue that the DP layer that dominates the CP factive complement contains no noun; instead D^0 takes CP directly as complement (see Schueler 2016).

(45)   a. ʕala ʃaan   ʔil-maudˤooʕ   *(ʔinn-uh)   ʔil-walad
         as for   DEF-topic   that.3SG.M   DEF-boy

         sarag   ʔid-daftar …….. '
         stole.3SG.M   DEF-notebook
       'As for the topic that …..'

   b. ʕala ʃaan   ʔil-gisˤah   *(ʔinn-uh)   …..
        as for   DEF-story   that.3SG.M
        As for the story that …..'

   c. ʕala ʃaan   ʔil-ʔiʕtigaad   *(ʔinn-uh)   ……..
        as for   DEF-belief   that.3SG.M
      As for the belief that …..'

It is obvious that the complementizer *ʔinn* resists dropping under a noun. This ban offers compelling evidence that factive complements are embedded under a silent noun whose presence gives rise to the obligatoriness of the complementizer *ʔinn* under a factive verb.

6.4.3   Summary

In this section, I have investigated the syntactic reasons why subject (and other categories) are not permitted to extract to the left periphery of the matrix clause although fronting to the left periphery of the factive complement is allowed. Kiparskian approach to factive complements is favoured over the other approaches. JA factive complements are embedded under a DP layer that creates an absolute island for extraction. I have shown that the left periphery of factive complements is not reduced in the sense of Haegeman (2006). I have also offered evidence from JA against the view that there is an operator situated in the left periphery to the effect that it blocks A-bar movement to CP of same factive clause. The fact that focalization (a clear example of A-bar movement) is permitted in factive complements undermines any operator-based approach to the structure of the left periphery of JA factive complements. Furthermore, I have shown that the obligatoriness of the complementizer *ʔinn* under a factive verb is evidence for the DP-status of factive complements as the complementizer *ʔinn* is not permitted to drop under a noun.

6.5 Conclusion

This chapter examines subject extraction out of embedded clauses. It turns out that subject can be extracted from the so-called nonfactive complements (i.e. clausal complements of non-factive verbs), while it is disallowed from factive complements (clausal complements of factive verbs).

As for non-factive complements, I have shown that they are not islands for extraction. The subject can be extracted to the left periphery of the matrix clause, landing first in Spec,Force Phrase of the embedded clause, then in Spec,v*P of the matrix clause, and finally in the left periphery of the matrix clause. As for the observation that only VO word order is the only possible option used in embedded clauses with the subject being extracted to the left periphery, I appeal once more to Starke's (2001) proposal where relativized minimality is restrictively redefined as an anti-identity condition on feature classes, not on features themselves. Depending on the possible felicitous answers of questions where the wh-word used is the subject of the embedded clause, I have shown that the subject wh-word is endowed with [FOCUS], [D-link], and [WH] features. The subject wh-word hence creates an island for focalized and topicalized elements which are base-generated in a position it c-commands from moving to the left periphery of the embedded clause, given the richly featured content of the subject wh-word. Additionally, this section has shown why temporal but not locative adjuncts can be topicalized while the subject is extracted. I have attributed this observation to the assumption that temporal adjuncts are base-generated above the subject wh-word which can in turn overcome any intervention effect invoked by the topicalized temporal adjuncts because of richness of its features. Furthermore, I have discussed the asymmetry between unaccusatives and unergatives with respect to the possibility of having a preverbal locative. This asymmetry boils down to the base-generation of the subject wh-word being in Spec,vP in unergatives, but in the complement position of VP in accusatives. The subject wh-word in unaccusatives cannot thus incur an interception effect against the locatives becuase the former does not c-command the latter.

In the second part of this chapter, I have investigated the syntactic reasons of why subject (and other categories) are not permitted to extract to the left periphery of the matrix clause although fronting to the left periphery of the factive complement is allowed. I have offered evidence that the Kiparskian approach to factive complements is favoured over the other approaches. JA factive complements are embedded under a DP layer that creates an absolute

island for extraction. Evidence of this assumption comes from the impossibility of extraction of the subject wh-word regardless its featural content and the possibility of having materials moved to the left periphery of the same factive complement. I have also shown that the obligatoriness of the complementizer *ʔinn* under a factive verb is evidence for the DP-status of factive complements as the complementizer *ʔinn* is not permitted to drop under a noun. JA data thus challenges the view that there is an operator situated in the left periphery to the effect that it blocks A-bar movement to CP of same factive clause.

Chapter SEVEN: Conclusions

This thesis has provided a structural explanation for a number of phenomena related to subject extraction in JA. It begins with instances where the subject is extracted (i.e. questioned) from main clauses, arguing that subject extraction is sensitive to the D-linking status of the subject wh-word. Using the Criterial Freezing approach chain formation and A-bar movement (Rizzi 2005, 2006, 2014, Rizzi and Shlonsky 2006, 2007), the study has claimed that *ʔilli* and locative/temporal inversion are strategies deployed to facilitate subject extraction in JA. Spec,SubjP is a criterial position with the interpretive property of aboutness. Following the Criterial Freezing approach where criterial positions are traps, the element occupies Spec,SubjP is frozen therein and cannot move any further. In order to make subject extraction available in this Arabic variety, the study has argued that *ʔilli* may fill Spec,SubjP, while the subject is extracted and when the subject wh-word is D-linked. In questions where the subject wh-word is not D-linked, Spec,SubjP is filled by an expletive pro.

Afterwards, the thesis has explored locative/temporal inversion and its role in facilitating the subject extraction. One of the major assumptions made has been that only deictic temporal/locative adjuncts can fill Spec,SubjP when the subject is extracted. The study has shown that this use follows from the postulated *D-linking condition of the Subject Criterion* (i.e. Spec,SubjP is filled with an element with the same D-linking status as the subject wh-word (D-linked vs. non-D-linked)), hence capturing the systematic alternation between such types of adjuncts and *ʔilli* to fill Spec,SubjP. Furthermore, this thesis investigates the optional use of *ʔilli* in object extraction, an unexpected observation following the postulated use of *ʔilli* as an XP element filling Spec,SubjP (i.e. given that the subject is still available to undertake this task). Here, I have argued that *ʔilli* is only used when the object wh-word is featurally richer than the subject, something that turns the object wh-word as a barrier against movement of the subject to Spec,SubjP following the feature-based approach to locality (Starke 2001).

The thesis also looks at word order variation in embedded clauses introduced by the complementizer *ʔinn*. It provides a cartographic-based analysis (cf. Rizzi 1997, Cinque 1999, and Belletti 2001, 2004) to this variation. It begins with the unmarked word order SVO, assuming the subject here is a topic rather than a true subject, unlike the case in root clauses. This assumption is based on the fact that a preverbal non-contrastive indefinite subject is prohibited. Spec,SubjP is argued to be filled with an expletive pro, and as such the thematic

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subject is exempted from criterial freezing and can undergo extraction to the left periphery. All other word order permutations are assumed to be generated by further movement of the object (OSV), the verb (VSO), the verb and object (OVS), the subject and the object (SOV) or TP/vP (VOS) to the left periphery.

The thesis has also offered an analysis of the bound forms attached to the complementizer ʔinn that introduces embedded clauses. The study provides evidence to the effect that such forms are inflectional suffixes in the sense of Shlonsky (1997). They are PF reflexes of valuation of *ʔinn's* uninterpretable Φ-content. This implies that Chomsky's (2007) feature inheritance is not working for JA as the complementizer *ʔinn* still retains its Φ-content, not passing it down to its complement T°, as predicted by Chomsky's assumption. *ʔinn* in JA keeps its Φ-content, not donates nor copies it to T°, which in turn is assumed to be independently endowed with a separate Φ-content, given its positive setting of the postulated T°-Φ parameter. This assumption accounts for the observation of why verbs in JA and obviously in other Arabic varieties always agree with their subject even in situations where C° is supposed not to project. The study shows that valuation of *ʔinn*'s uninterpretable Φ-content is ruled by locality and other constraints on Agree such as phases (Chomsky 2000).

The thesis also has investigated subject extraction from embedded clauses, arguing for the division between factive vs. non-factive verbs, w.r.t. to (subject) extraction. The thesis shows that non-factive complements are not islands for extraction, and, hence, the subject can undergo movement to the left periphery. Additionally, the study assumes that the ensuing restriction banning the object and locative adjuncts to appear preverbally (while the subject is extracted) is caused due to the richly featured content of the subject wh-word that acts as a barrier against the movement of elements that fall within its c-command. As for factive complements (embedded under factive verbs), the present thesis shows that they are strong islands for extraction. The subject (and any other element) are blocked from moving to the matrix clause. Following Kiparsky and Kiparsky (1970) and related work, I assume that factive complements in JA are DPs which are widely assumed to be absolute islands in Arabic. The current thesis challenges thus a recent line of research (Heageman 2012, among others) that a factive complement has a clause-typing operator in the left periphery. The study provides a number of arguments against going down to this path as far as JA is concerned.

This thesis has made an original contribution to the study of A-bar movement in JA. I hope the current thesis will inspire researchers to undertake further research on other instances of A-bar movement across other Arabic dialects. Additionally, for space limitations several facts of subject extraction and criterial freezing are left untouched, including the derivation of questions with multiple wh-words. In such questions in JA, one wh-word should move to CP, while another remains in situ, in an apparent violation of Criteria, under which wh-words are expected to leave their positions to have a local relation with the heads which carry the relevant interpretive features. Another issue that deserves exploration is the subject extraction out of passive constructions and whether locatives and temporals show the same behaviour they maintain in active counterparts. This is significant because it reveals whether passives are phases or not in JA. This thesis also calls for carving out a new direction of enquiry using the cartographic approach to the Arabic clause structure.

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