Pseudo Wh-Fronting: A Diagnosis of Wh-Constructions in Jordanian Arabic

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Abstract

This thesis provides an in-depth analysis of wh-question formation in Jordanian Arabic (JA) and presents a uniform approach that can accommodate all of its various wh-constructions. JA makes use of five different wh-constructions, four of which involve clause-initial wh-phrases and the fifth is a typical in-situ wh-construction. Although wh-phrases surface clause-initially in four different wh-constructions in JA, I propose that bona fide wh-movement to [Spec, CP] does not occur in any of these constructions, whether overtly in syntax or covertly at LF. I abandon the classification of JA as a wh-movement language (Abdel Razaq 2011) and focus instead on identifying the syntactic role that wh-phrases realize and the underlying structures that feed each wh-construction. I propose that the clause-initial position of the wh-phrase results either from the syntactic function that the wh-phrase serves or from other syntactic operations that are independently attested in JA. There are three clause-initial positions that the wh-phrase can occupy: it surfaces in [Spec, TP] when functioning as the subject of a verbal or verbless structure, in [Spec, TopP] when functioning as a clitic-left-dislocated element (as in CLLD questions and ʔilli-interrogatives involving PRON), or in [Spec, FocP] when undergoing focus fronting. Thus, all instances of clause-initial wh-phrases in JA constitute what I refer to as "pseudo wh-fronting", as the clause-initial position of the wh-phrase arises from mechanisms other than canonical wh-movement to [Spec, CP]. To account for the interpretation of wh-phrases in JA, I adopt a binding approach in which a null interrogative morpheme (Baker 1970; Pesetsky 1987; Chomsky 1995) unselectively binds the wh-phrase regardless of its surface position, whether clause-initial or clause-internal (in-situ). A major implication of this analysis is that JA is a concealed wh-in-situ language of the Chinese type although it looks at a cursory glance as though it were a wh-movement language of the English type. A broader typological implication of my analysis is the convergence of Cheng's (1991) Clausal Typing Hypothesis to which JA previously appeared to constitute a counterexample. The recognition of the null interrogative particle, or its optional overt realization as the Q-particle huwweh, as the locus of interrogative clause typing in all JA wh-questions entails that JA employs just one unique strategy to type a clause as a wh-question, as predicted by Cheng's Clausal Typing Hypothesis, regardless of whether the wh-phrase surfaces clause-initially or clause-internally.

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Abbreviations and Transcription Conventions

List of abbreviations

The following is a list of the abbreviations used in glosses and diagrams throughout the study:

1, 2 and 3	First, Second and Third person, respectively.
??	Marginal
Acc	Accusative case
AdjP	Adjectival Phrase
AdvP	Adverbial Phrase
Comp	Complementizer
CP	Complementizer Phrase
DP	Determiner Phrase
F(em)	Feminine
FocP/FP	Focus Phrase
FRC	Free relative clause
Fut	Future marker
Gen	Genitive case
Imperf	Imperfective verb form
INFL	Inflection Projection
LF	Logical Form
M(asc)	Masculine
NEG	Negative particle
Nom	Nominative case
Op	Operator
P(l)	Plural
Perf	Perfective verb form
PF	Phonetic/Phonological Form
PredP	Predicate Phrase
PRON	Pronominal copula in the traditional sense
Q	Question particle
RC	Relative clause
RP	Resumptive pronoun
S(g)	Singular
t	trace
TopP	Topic Phrase
TP	Tense Phrase
[wh]	A feature borne by all wh-words which marks their natural class

Notes on transcription

The following reading conventions are used in transcribing the Jordanian data. Alternative conventions for some sounds are provided between parentheses to account for the examples cited from other sources.

Phonetic symbol	Phonetic description
ʔ	voiceless glottal stop
h	voiceless glottal fricative
θ	voiceless interdental fricative
ð	voiced interdental fricative
Š (or ʃ)	voiceless alveo-palatal fricative
ǰ (or dʒ)	voiced post-alveolar or alveo-palatal affricate
T	voiceless dento-alveolar emphatic stop
D	voiced dento-alveolar emphatic stop
S	voiceless dento-alveolar emphatic fricative
Ď	voiced interdental emphatic fricative
q	voiceless uvular stop
x	voiceless uvular fricative
G (or ɣ)	voiced uvular fricative
H (or ħ)	voiceless pharyngeal fricative
9 (or ʕ)	voiced pharyngeal fricative

- All other symbols which are not mentioned in the above table are standard IPA symbols.
- CC: geminate consonant.
- V: (or VV): long vowel.
- [ə]: schwa.

Chapter 1
Introduction

1.1 Introduction

This dissertation provides an in-depth examination of the syntax of wh-question formation in Jordanian Arabic (JA, henceforward), a colloquial Arabic dialect spoken natively by almost 6 million people in Jordan (Al-Momani 2010). JA makes use of five different wh-constructions, four of which involve clause-initial wh-phrases and the fifth is a typical in-situ wh-construction. The major goal of the study is to present a thorough investigation of these wh-constructions and provide a uniform analysis for their derivation. The bottom line of the analysis will be that JA, though it looks at first glance as if it were a member of the same typological class as English, is a concealed in-situ language of the Chinese type. All cases of clause-initial wh-phrases attested in JA reflect what I will call pseudo wh-fronting. The nomenclature pseudo wh-fronting is intended to mean that all cases of clause-initial wh-phrases in JA are not the result of bona fide wh-movement to [Spec, CP] (in the sense of Chomsky 1977, 1995). Rather, they are the result of independent grammatical constructions that can feed wh-interrogatives, or the result of mechanisms other than wh-movement.

The approach adopted in the study starts with abandoning the classification of JA as a wh-movement language (Abdel Razaq 2011) and rejecting both wh-movement (Chomsky 1977) and wh-clefting (Cheng 1991) as the mechanisms responsible for clause-initial wh-phrases in JA. The discussion centers on identifying the syntactic role of the wh-phrase and the underlying structures that can feed different interrogative constructions in the language, which can explain both the in-situ as well as the clause-initial occurrences of the wh-phrase. More precisely, I argue that the clause-initial surfacing of wh-phrases has nothing to do with wh-movement to [Spec, CP] or clefting. Rather, it can be the result of the syntactic function

the wh-phrase serves. It will be shown that, in several cases, for example, the wh-phrase can function as a subject in either a verbal or verbless structure, hence surfacing clause-initially in [Spec, TP]. It will also be shown that the clause-initial surfacing of the wh-phrase can be effected by other mechanisms such as (clitic-)left-dislocation (CLLD) or focus fronting whereby it surfaces in [Spec, TopP] or [Spec, FocP] respectively. Thus, I contend that these mechanisms should be acknowledged as part of the inventory of wh-question formation.

I also argue in favour of the unselective binding approach (Pesetsky 1987), demonstrating that, besides successfully accounting for the syntactic properties of the different types of wh-questions in JA, it can provide the uniform analysis needed for a language like JA. Under this analysis, wh-phrases, whether surfacing clause-initially or clause-internally, are unselectively bound by a null interrogative operator in CP. The wh-phrase, thus, does not need to undergo overt or covert movement to [Spec, CP].

This chapter is organized as follows: Section 1.2 is a brief synopsis of existing approaches to wh-question formation. A brief discussion of the phenomenon of islandhood is given in section 1.3. Section 1.4 introduces the different types of wh-questions in JA. The rationale of the whole study is established in section 1.5. Some grammatical aspects of Arabic which are of relevance to the topic of the dissertation are discussed in section 1.6. Such aspects include word order and agreement features. Finally, section 1.7 describes the organization of the dissertation.

1.2   Theoretical synopsis

The seminal work of Chomsky (1977) on wh-questions represents the standard approach to this issue in the field. Under Chomsky's analysis, wh-questions in English, for example, always involve overt syntactic movement of the wh-phrase to [Spec, CP], creating

an operator-variable configuration whereby the wh-phrase takes scope over the rest of the structure. The following example illustrates this analysis.

(1)   a. Who did she marry?

      b. [CP Who$_i$ did [TP she marry t$_i$]].

Chomsky's wh-movement hypothesis has gained wide acceptance and has been embraced in subsequent analyses of wh-questions and other related issues in various languages (e.g. Huang 1982; Wahba 1984 & 1991; Pesetsky 1987 & 1998; Cheng 1991; Watanabe 1992; Simpson 1999 & 2000; Cheng & Rooryck 2000; Bruening & Tran 2006; inter alia).

However, the wh-movement analysis is not the only framework available for analyzing the initial surfacing of wh-phrases in interrogative constructions. Cheng's (1991) "wh-cleft" analysis has been adopted to account for the initial surfacing of wh-constituents in a variety of languages such as Egyptian Arabic, Bahasa Indonesia and Palauan. Covert movement at LF (Huang 1982; Lasnik & Saito 1984 & 1992) is another analysis for wh-questions in in-situ languages such as Chinese and Japanese. Under this analysis, the derivation of in-situ wh-questions parallels that of overtly moved wh-questions in the sense that there is a wh-movement operation involved in both cases, with the difference being reduced to the level at which this movement applies. While overt syntactic movement applies in syntax, covert movement takes place at LF.

Other analyses have suggested that wh-questions in some languages involve a shorter VP-internal movement, which is not a typical wh-movement to [Spec, CP]. Kahnemuyipour (2001), for example, argues that Persian is neither a wh-movement language nor a wh-in-situ language, defending the idea that wh-fronting in Persian is an instance of focus fronting. In Persian, wh-arguments and wh-adjuncts appear in a preverbal position. Kahnemuyipour proposes that the wh-phrase in Persian undergoes syntactic movement from a postverbal

position to a preverbal focus position that is directly above (and no higher than) VP (i.e., [Spec, VP]); this focus position is also the locus of contrastively focussed elements. The movement involved in the derivation of Persian wh-questions is thus different from the typical syntactic wh-movement which targets [Spec, CP] because the Persian movement is a TP-internal movement. Kahnemuyipour adds that there are two focus positions in Persian: the preverbal (TP-internal) focus position (i.e., [Spec, VP]) and the focus position in the left periphery (i.e., [Spec, FocP]). He concludes that Persian wh-phrases obligatorily move to the preverbal focus position (i.e., [Spec, VP]) yielding the unmarked reading. Wh-phrases can then optionally move again to a higher focus position in the left periphery (i.e., [Spec, FocP]), thus receiving a marked reading with extra focus. Indeed, many linguists have proposed that wh-phrases move to a position of (contrastive) focus, which is different from the clause-initial [Spec, CP] position (see, e.g., Horvath (1986) for Hungarian; Rochemont (1986) for Basque; Kiss (1995) for Aghem; Stjepanovic (1995, 1999) and Boskovic (1997) for Serbo-Croatian; Ndayiragije (1999) for Kirundi; among others).

A non-movement/base-generation approach to the derivation of wh-questions also exists in the literature. This analysis is known as "unselective binding" (Baker 1970; Heim 1982; Pesetsky 1987; Chomsky 1995), which is an interpretative mechanism in which the wh-question is interpreted without wh-movement. Pesetsky (1987), for example, argues that in-situ wh-phrases do not necessarily involve movement at LF. Rather, they can be interpreted via binding. This binding relationship holds between a wh-operator in a scope position and the in-situ wh-phrase, hence the latter attaining broad scope over the whole structure. Under this analysis, the generation of wh-interrogatives involves no movement of the wh-phrase itself, whether overtly or covertly. It instead involves a null interrogative operator base-generated in the matrix [+Q] Comp, which in turn unselectively binds the wh-phrase in its sentence-internal original position.

1.3   Islandhood phenomenon

This section briefly introduces the islandhood phenomenon, which will play a decisive role in determining the structure of the JA wh-constructions. The term "island" is typically used to refer to structures that do not allow extraction which normally leaves a gap. English wh-questions, for example, allow a gap in a variety of positions, but there are some syntactic configurations in which a gap cannot occur (Borsley 1999). Such configurations are known as islands (op.cit, p. 206). The discussion of this syntactic phenomenon can be traced back to the 1960s, first by Chomsky (1964) and then in more detail by Ross (1967).

Since the work of Ross (1967), island sensitivity, or the related principle of "Subjacency"[1] of Chomsky (1973, 1977), has served as the conventional criterion for determining whether A-bar movement applies in the derivation of syntactic dependencies. It is argued in the literature that movement is necessarily involved in the derivation of syntactic dependencies that are sensitive to islands, but not in the derivation of those lacking island effects. According to Chomsky (1977), gap constructions obey island conditions in the sense that fronted wh-elements cannot be related to a gap across the various types of islands. Wh-questions that involve a gap in the variable position of the wh-phrase are derived via movement in order to check a [+wh] feature on the head C (Chomsky 1995). Since wh-questions in English, for example, are sensitive to the various types of islands, they are considered to involve overt movement. This point is illustrated by the ungrammaticality of the following wh-question, which is the result of the structure's island sensitivity. Specifically, the wh-phrase cannot be extracted from, or across, a relative clause island.

(2)   *Which book$_i$ do you know [the girl [who took $ø_i$]]?

However, this island sensitivity is not exhibited by English pronominal anaphora, which is thus considered to involve binding rather than movement. This island insensitivity is

illustrated through the grammaticality of the following example despite the fact that the binding relation holds across a relative clause island.

(3)   Every boy$_i$ knows [the girl [who took his$_i$ book]].

In what follows, I briefly illustrate the three types of island constraints that I employ as tests in my study, drawing on the discussion of Borsley (1999, pp. 205-210). These island constraints were first discussed in Ross (1967) and later in Chomsky (1977).

1.3.1   The Wh-Island Condition

A wh-dependency crossing the boundary of a subordinate wh-question is of reduced acceptability. The following example illustrates this constraint.

(4)   a. He wondered [how he should fix the car *t*].

b. *? Which car$_2$ did he wonder [how$_1$ he should fix $t_2\,t_1$]?

The wh-dependency (4b) is not fully acceptable because the initial wh-phrase *which car* is extracted from a clause in which another item has already undergone wh-movement.

1.3.2   Complex NP Constraint

A wh-gap cannot occur in a clause that is contained within an NP. This is illustrated by the following examples.

(5)   a. I know [the man [who saw something]].

b. *What do you know [the man [who saw *t*]]?

c. I believe [the claim [that Hobbs saw something]].

d. *What do you believe [the claim [that Hobbs saw *t*]]?

The unacceptability of (5b) is due to the fact that the wh-phrase is related to a gap that is located within a relative clause; this example represents a relative clause island. Similarly, the wh-question in (5d) is ungrammatical because the gap to which the initial wh-phrase is related occurs within an NP. This example represents a complement clause island; nouns like *claim*, *rumor* and *fact* are usually employed in this subtype of Complex NP islands.

1.3.3   The Adjunct Island Condition

A wh-dependency crossing the boundary of an adjunct is often of reduced acceptability. The following is an illustrative example.

(6)   a. He criticized Chomsky [without reading *Aspects*].

   b. *? Which book did he criticize Chomsky [without reading *t*]?

The wh-dependency in (6b) has a reduced grammaticality because it is crossing a verbal adjunct.

The island conditions above will play a decisive role in determining the derivational operation that underlies each wh-construction in JA. The (in)applicability of island constraints will be used as a diagnostic for the presence vs. absence of wh-movement in the language.

1.4   Wh-constructions in JA

In this section, I briefly introduce the major types of wh-questions in JA, focusing mainly on their structure and how they differ from each other. Wh-elements in JA can surface either initially (at the left-most peripheral position of the sentence) or in-situ (inside the clause). I argue that JA employs five different types of wh-question, four of which involve a clause-initial wh-phrase and a fifth that forms the typical in-situ wh-question (where the wh-phrase surfaces in a TP-internal position). All types of wh-question in JA can be optionally

introduced by the question particle *huwweh*, which is homophonous with the third person masculine subject pronoun in the language. Throughout the study, I label each wh-construction in accordance with the final analysis that I will propose for each type. It is also worth indicating that, throughout the study, I will translate CLLD wh-questions and *ʔilli* wh-questions into English more literally than might normally be done in order to make the actual meaning and grammatical relations involved in these two JA wh-questions more understandable in context. As a result, the English translation may sometimes sound cumbersome, but it is still grammatical, and, I assume, this is the best way to convey the significant grammatical features of the Arabic structure, especially the number and gender features involved in these two wh-questions.

Typical in-situ wh-questions in JA are those questions in which the wh-phrase surfaces TP-internally in any argument or adjunct position. All types of wh-phrase are allowed in this interrogative construction. Consider the following examples.

(7)　**Typical in-situ wh-questions**

    a. (huwweh)　iz-zalameh　šaf　　　**mi:n** ʔimbariH?

       Q　　　　the-man　　saw.3MS　**who** yesterday

       'Who did the man see yesterday?'

    b. (huwweh)　iz-zalameh　šaf　　　**ʔayya binit** ʔimbariH?

       Q　　　　the-man　　saw.3MS　**which girl** yesterday

       'Which girl did the man see yesterday?'

    c. (huwweh)　iz-zalameh　raH　　　9-as-soog　　　**ʔeimta**?

       Q　　　　the-man　　went.3MS　on-the-market　**when**

       'When did the man go to the market?'

The second type of wh-question in JA involves a clause-initial wh-phrase that is related to a TP-internal gap occupying its corresponding position. I refer to this type as **focus fronted wh-questions**. Similar to typical in-situ wh-questions, no restrictions are imposed on the type

of wh-phrase allowed. Both argument and adjunct wh-phrases are used in this wh-construction. Thus, the surface position of the wh-phrase is the only apparent difference between focus fronted and typical in-situ wh-questions. Consider the following examples.

(8) **Focus fronted wh-questions**

a. (huwweh) **mi:n$_i$** iz-zalameh šaf   ø$_i$?imbariH?

   Q   **who** the-man   saw.3MS   yesterday

   'Who did the man see yesterday?'

b. (huwweh) **?ayya binit$_i$**   iz-zalameh šaf   ø$_i$?imbariH?

   Q   **which girl**   the-man   saw.3MS   yesterday

   'Which girl did the man see yesterday?'

c. (huwwweh) **?eimta$_i$** iz-zalameh raH   9-as-soog ø$_i$?

   Q   **when**   the-man   went.3MS on-the-market

   'When did the man go to the market?'

The third wh-construction JA employs will be referred to as **clitic-left-dislocated (CLLD) wh-questions**, which, similar to focus fronted questions, involve a clause-initial wh-element. However, CLLD wh-questions differ from focus fronted ones in two ways: (i) only argument, not adjunct, wh-phrases are permissible in CLLD questions, and (ii) the clause-initial argument wh-phrase in CLLD questions is related to a TP-internal pronominal clitic, not a gap. Consider the following examples in which (9c) is ungrammatical because it involves an adjunct wh-phrase.

(9) **CLLD wh-questions**

a. (huwweh) **mi:n$_i$**   iz-zalameh šaf-**ha$_i$**   ?imbariH?

   Q   **who**   the-man   saw.3MS-**her** yesterday

   'Who is the female person (x) such that the man saw (x) yesterday?'

b. (huwweh) **ʔayya binit$_i$** iz-zalameh šaf-**ha**$_i$ ʔimbariH?

   Q   **which girl** the-man   saw.3MS-**her** yesterday

   'Which girl (x) is it such that the man saw (x) yesterday?'

c. *[(huwweh)   **ʔeimta$_i$** iz-zalameh raH-**uh**$_i$ 9-as-soog?]^2

   Q   **when**   the-man   went.3MS-**it** on-the-market

   'When did the man go to the market?'

Subject wh-questions are the fourth wh-construction used in JA. In this type, the wh-phrase occupies a clause-initial position and is employed to seek information about the doer of a particular action (10a) or the subject of a particular non-verbal predication (10b, c).

(10)   **Subject wh-questions**

a. (huwweh)   mi:n   kasar   iš-šubbak?

   Q   who   broke.3MS   the-window

   'Who broke the window?'

b. (huwweh)   mi:n momaθileh/ʔil-momaθileh?

   Q   who   actress/the-actress

   'Who is an actress/the actress?'

c. (huwweh)   mi:n bi-l-mostašfa?

   Q   who   in-the-hospital

   'Who is in the hospital?'

The last, and perhaps the most complex, type of wh-question in JA is what I will call *ʔilli-interrogatives*.^{3} This wh-construction consists of a clause-initial wh-phrase followed by a free relative clause headed by the relative complementizer *ʔilli* 'that'. There is also a resumptive pronoun inside the free relative clause when the wh-phrase represents an object (11a), but there is no such pronominal resumptive pronoun when the wh-phrase represents a subject (11b). This resumptive pronoun is normally a weak pronoun of the type used in non-subject argument positions; it appears as a clitic attached to its preceding head (i.e., Noun, Verb or Preposition). A "pronominal copula" or "PRON" (in the sense of Eid 1983, 1991 &

1992; Doron 1983 & 1986; Ouhalla 1999; Shlonsky 2002; Edwards 2006; Abdel Razaq 2011) can be optionally inserted between the wh-element and the relative complementizer *ʔilli* 'that' in such wh-constructions. This pronominal copula (or PRON), which is typically a third person strong subject pronoun, agrees in number and gender with the resumptive clitic inside the free relative clause in the case of having an object wh-phrase; it matches the agreement features on the verb when subject wh-phrases are employed. Only argument wh-phrases, but not adjunct ones, can appear in this wh-construction. The following examples illustrate these structural properties.

(11) *ʔilli*-**interrogatives**

    a. (huwweh) **mi:n$_i$** (**hiyyeh**)*ʔilli* iz-zalameh šaf-**ha$_i$** ʔimbariH?

       Q   **who** (**PRON.she**) **that** the-man saw.3MS-**her** yesterday

       'Who is she such that she is the one that the man saw her yesterday?'

    b. (huwweh) **mi:n** (**hiyyeh**)*ʔilli* kasarat iš-šubbak ʔimbariH?

       Q   **who** (**PRON.she**) **that** broke.3FS the-window yesterday

       'Who is she such that she is the one that broke the window yesterday?'

    c. *[(huwwweh) **ʔeimta$_I$** (**huwweh**) *ʔilli* iz-zalameh raH-**uh$_i$** 9-as-soog?]

       Q   **when**   (**PRON.it**) **that** the-man went.3MS-**it** on-the-market

       'When did the man go to the market?'

1.5   Rationale of the study

The above set of data shows that wh-phrases in JA can appear either in-situ (i.e., in a clause-internal position) or at the leftmost position of the clause. This observation gives the impression that JA is an optional wh-movement language in the sense that it allows wh-phrases to either move to [Spec, CP] or stay in-situ.

A first possible account for this apparent optionality in JA is the adoption of Huang's (1982) covert/LF movement analysis for in-situ wh-questions and Chomsky's (1977, 1995)

overt movement analysis for wh-questions with clause-initial wh-phrases. Although this approach incorporates the assumption that the derivation of different types of wh-question should be subsumed under the wh-movement schema, it forces us to posit that wh-movement takes place at different levels, not only across languages but even within the same language: JA would have to apply wh-movement at LF for in-situ wh-questions and in the narrow syntax for wh-questions with clause-initial wh-phrases. This problem, together with various other theoretical and empirical issues, will lead me to conclude that a split analysis that adopts both LF movement and overt wh-movement for the derivation of JA wh-questions is not viable.

Another possible account for the apparent optionality at hand is the adoption of feature strength. It is assumed in the minimalist program (Chomsky 1995) that overt movement of a wh-phrase to [Spec, CP] is motivated by the presence of a strong [+wh] feature on C that needs to be checked; the movement of the wh-phrase takes care of this checking operation (as is the case of English wh-questions). If this [wh] feature, on the other hand, is weak, wh-movement does not take place, giving rise to in-situ wh-questions (as is the case of Chinese wh-questions). While feature strength is plausible as a parameter for distinguishing uniform wh-movement languages such as English from uniform wh-in-situ languages such as Chinese, it cannot provide a uniform account for a language like JA that allows both clause-initial and in-situ wh-phrases. The adoption of feature strength entails the postulation that JA has both strong and weak versions of the [wh] feature, a stipulation that brings little insight.

Equally important, if we analyze JA as having both in-situ and moved wh-questions, then it will form a serious challenge to Cheng's (1991) Clausal Typing Hypothesis (CTH) which assumes that a given clause is typed as a wh-question either by movement to [Spec, CP] or by a question particle. Under economy considerations, no single language should make use of both options. In other words, optionality in clause typing should not exist.

Adopting a split analysis whereby JA is taken to be both an in-situ and wh-movement language leaves the question of how JA types its wh-questions as interrogation unexplained. This is because both the in-situ form and clause-initial option are both available.

With all this in mind, the following questions arise as to the basic assumptions on the formation, structure and derivation of wh-questions in JA:

(i) How can the clause-initial surfacing of wh-phrases in JA be explained in light of the presence of the in-situ strategy?

(ii) Is the clause-initial surfacing of wh-phrases in different wh-constructions a result of overt syntactic movement to [Spec, CP]? If yes, what triggers this movement? If no, what is responsible for the clause-initial surfacing of the wh-phrase, and how is the whole construction interpreted as interrogation?

(iii) If there is movement of the wh-phrase to [Spec, CP], how can we explain the optionality manifested by JA, as the in-situ form is also fully acceptable? Do all types of wh-questions in JA have the same derivation and interpretation?

(iv) Is it possible to extend the LF movement analysis (Huang 1982) to in-situ wh-questions in JA? Does LF movement really mimic overt syntactic movement as is widely assumed in the field?

(v) How can we account for the island (in)sensitivity of different wh-questions with clause-initial wh-phrases?

Addressing all these questions, as well as other related issues, is the task I set for myself in this dissertation. I argue that the apparent optionality attested in the derivation of JA wh-questions is not genuine optionality in the outcome of the derivation—rather, each wh-construction in JA has a distinct numeration, derivation and interpretation. Support for this view comes from a closer examination of the properties of each wh-construction. For example, the data in (7)-(11) above shows that the five wh-constructions behave

asymmetrically with respect to the type of wh-phrase they allow. Focus fronted and in-situ wh-questions impose no restriction upon the wh-elements they use; both argument and adjunct wh-phrases are permissible. By contrast, the last three wh-constructions have in common the fact that only argument wh-phrases, but not adjunct ones, are permissible. This can be taken as evidence that the sentence-initial position of the last three wh-constructions is not derived in the same way as that of focus fronted wh-questions.

Many additional differences can be identified with respect to the syntactic and distributional properties of wh-questions with clause-initial wh-phrases. For example, clause-initial argument wh-phrases can be related either to a gap in focus fronted wh-questions or to a pronominal resumptive element in both CLLD and *ʔilli*-interrogatives. The relation between the clause-initial wh-element and its corresponding sentence-internal gap and/or resumptive pronoun in these interrogative constructions is also different in terms of island sensitivity. I take such observations as evidence that the sentence-initial position occupied by the wh-phrase in each wh-construction is not the same.

I will show that the underlying structure of each wh-construction involves a distinct syntactic configuration. Three such configurations will be identified: wh-questions in JA involve either CLLD, focus fronting or typical subject-predicate structures. In CLLD constructions, the CLLD'ed element always appears clause-initially and is resumed by a pronominal clitic (Aoun & Benmamoun 1998; Aoun et al 2010). In focus fronted constructions, different grammatical elements can appear clause-initially with the clause-internal position of the fronted element being marked by a gap (op.cit). In subject-predicate constructions, whether in the context of verbal or verbless structures, the subject surfaces in the leftmost edge position in the sentence (but see section 1.6 below). I argue that such structures can feed wh-constructions, hence the clause-initial surfacing of the wh-phrase without the need to apply wh-movement.

Based on island facts and other syntactic properties, I argue that only one of the four wh-constructions with initial wh-phrases involves movement, namely, focus fronted wh-questions. However, this movement will be shown to be a species of focus fronting rather than wh-fronting. The other three constructions with initial wh-phrases will be shown to form concealed in-situ wh-questions in the sense that the clause initial surfacing of wh-phrases transpires to be their canonical/first-merge positions, not the result of overt wh-movement as might be thought at first glance. In such cases, the initial wh-phrase can be regarded as an in-situ element in the sense that the sentence-initial position is its canonical location in such constructions. Otherwise put, the clause-initial surfacing of the wh-phrase arises by virtue of the syntactic function it serves or by mechanisms other than wh-movement to [Spec, CP], hence my characterization of such structures as concealed in-situ wh-constructions. As for the interpretation of the different wh-constructions, a binding approach is adopted whereby a null interrogative morpheme (Baker 1970; Pesetsky 1987; Chomsky 1995) unselectively binds the wh-phrase regardless of its surface position, whether clause-initial or clause-internal (in-situ).

A major corollary of this analysis is that JA is a concealed version of the in-situ Chinese-type languages, though it looks as if it were a member of the English type family. The initial surfacing of the wh-phrase is just an epiphenomenon of being part of a particular syntactic construction independent from any wh-movement to [Spec, CP], hence my term "pseudo wh-fronting." In sum, the following proposals are central to my analysis of the different wh-constructions in JA:

(i) Eliminating the apparent optionality exhibited by JA in wh-question formation;

(ii) highlighting the idea of pseudo wh-fronting, i.e., sentence-initial wh-expressions do not necessarily get there by wh-movement to [Spec, CP]. The clause-initial position of the wh-phrase can be the canonical position of the wh-phrase due to the syntactic role it realizes in the structure (when it functions as the subject for example), or the result of

other mechanisms that independently exist in the language such as (clitic-)left-dislocation and focus fronting; and

(iii) highlighting the 'constructional' approach, i.e., the idea that the wh-constructions available in JA are special cases of constructions that exist more generally in the language.

The approach adopted in this study can be characterized as a 'what you see is what you get' approach. This approach is merited by the fact that it involves fewer movements and null elements than in many analyses, and that the need for multiple levels at which syntactic and semantic operations are executed is minimized. This approach also helps to eliminate the apparent optionality in wh-question formation in JA as the different wh-questions are brought in line with related constructions that exist more generally in the language.

1.6   Word orders in SA and JA

It is well-known in the field of Arabic syntax that both VSO and SVO word orders are fully acceptable (Mohammad 1990; Fassi-Fehri 1993; Aoun et al 1994; Aoun & Benmamoun 1999; Benmamoun 2000; Shlonsky 2000; Harbert & Bahloul 2002; Soltan 2007; Aoun et al 2010; Alotaibi 2013; among others). However, in Standard Arabic (SA) the two word orders exhibit an agreement asymmetry. In the SVO word order, the verb agrees fully with the subject (in person, number and gender), whereas in the VSO word order it agrees partially with the subject (only in gender). Though the postverbal subject 'the girls' in (12a) is plural feminine, the verb carries only the feminine feature; the plural feature does not appear on the verb. By contrast, when the subject occurs preverbally (12b), the verb bears the plural and feminine features.

(12) **Agreement asymmetry conditioned by word order**

    a. **VSO in SA: gender only**

      kasarat   l-banat-u   n-nafiðat-a.

      broke.3FS   the-girls-Nom   the-window-Acc

      'The girls broke the window.'

    b. **SVO in SA: person, number and gender**

      al-banat-u   kasarna   n-nafiðat-a.

      The-girls-Nom   broke.3FP   the-window-Acc

      'The girls broke the window.'

This "full" versus "partial" subject-verb agreement asymmetry in SVO versus VSO word orders respectively is a long-running issue in the field of Arabic syntax and has been addressed under various approaches. Aoun et al (1994), for example, account for the partial agreement in VSO sentences using an agreement loss approach in which the number feature is lost after the verb raises past the subject (to a position higher than TP, designated as FP under their analysis). Benmamoun (2000) attributes the partial agreement in the VSO order to a post-syntactic merger (in PF) between the verb and the postverbal subject. This merger contributes the subject's number features to the verb, making the spell-out of these features as an agreement affix redundant. The full agreement in SVO, on the other hand, is the result of the absence of this merger. The preverbal subject in SVO cannot be merged into the verb in the same manner as in VSO sentences, hence the obligatoriness of a number affix on the verb in SVO order.

    Sahawneh (forthcoming) counters Aoun et al's (1994) and Benmamoun's (2000) accounts on both theoretical and empirical grounds. Building primarily on cross-dialectal variation in subject-verb agreement features in Arabic, she adopts a clitic doubling approach together with Chomsky's Probe-Goal theory of agreement (2000, 2001). Specifically, she attributes the variation in subject-verb agreement to the featural specification of the probe on

T: While T probes for a full set of φ-features in SVO order, it probes only for the gender feature in VSO order in SA.

Similar to SA, JA makes use of both SVO and VSO word orders, with a tendency towards SVO order (El-Yasin 1985). Nevertheless, the agreement asymmetry exhibited by SA in subject-verb agreement relative to word order vanishes in JA. The number feature is obligatory irrespective of the word order. Notice that the verb bears both the plural and feminine features whether the subject occurs postverbally (13a) or preverbally (13b).

(13) **No agreement asymmetry in JA**

    a. **VSO in JA: number and gender are obligatory**

       kasarin   Ɂil-banat   iš-šubbak.

       broke.3FP   the-girls   the-window

      'The girls broke the window.'

    b. **SVO in JA: number and gender are obligatory**

       Ɂil-banat   kasarin   iš-šubbak.

       The-girls   broke.3FP   the-window

      'The girls broke the window.'

Following the steps of most Arab linguists (e.g., Fassi-Fehri 1993; Aoun et al 1994; Benmamoun 2000; Aoun et al 2010; among others), I will assume that the VSO word order is derived via raising the verb from V to T leaving the subject in [Spec, VP], which is its first merge position (Koopman & Sportiche 1991). The following simplified structure represents the derivation of VSO word order in JA.[4]

(14) VSO

```
                    TP
                 /      \
              Spec       T'
                      /      \
                    T          VP
                 kasarin_i   /    \
                 broke.3FP  NP       V´
                          ʔil-banat  /   \
                          the-girls V      NP
                                    t_i   iš-šubbak
                                          the-window
```
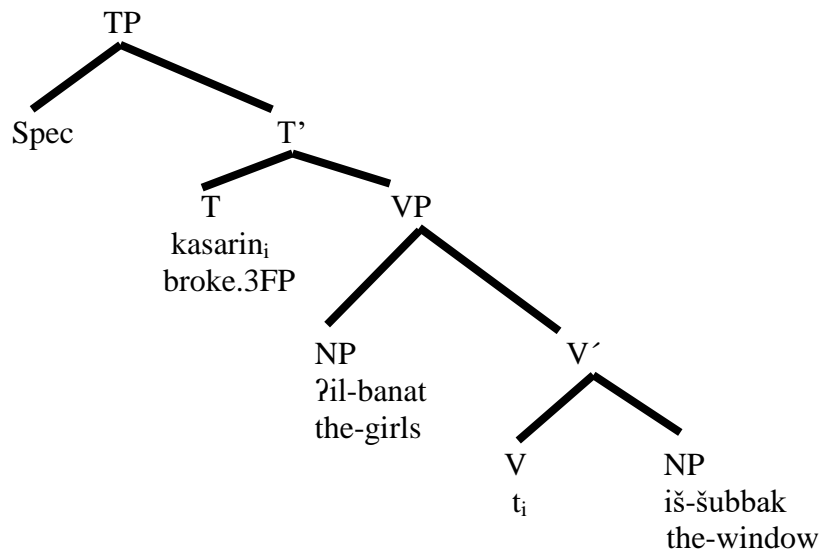
The satisfaction of the EPP and the licensing of nominative case on the postverbal subject in Arabic VSO sentences are controversial issues. Several approaches have been entertained in the literature. The first approach is represented by Aoun et al. (1994) who argue that the subject cannot stay in [Spec, VP] even in VSO sentences. It must move to [Spec, TP] to satisfy the EPP requirement on T and receive nominative case. Thus they propose that in the VSO order, the verb must be in a projection higher than TP, which they designate as FP (see also Aoun & Benmamoun 1999). The second approach takes verbs inflected for agreement to be able to check the EPP feature of T without the need to have an NP subject in [Spec, TP]. In other words, agreement on the verb takes care of fulfilling the EPP (see Alexiadou & Anagnostopoulou 1998, 1999 for full discussion). The rich morphology of a pro-drop language such as Standard Arabic and other spoken varieties allows the verb to check the EPP feature (see e.g. Benmamoun 2000; Mahfoudhi 2002; Lassadi 2005). A third approach assumes that T has no EPP feature in VSO order. According to Chomsky (2000), the subject remains in situ (i.e., in [Spec, VP]) when T does not carry this feature. By contrast, T carries the EPP feature in the SVO order, hence the subject is attracted to [Spec, TP]. This approach was adopted by Soltan (2007) for VSO sentences in

SA. According to Soltan (2007), the postverbal subject remains in situ and does not undergo raising to [Spec, TP] because there is no [EPP] feature on T in the VSO sentences in SA; the post-verbal subject gets nominative case by virtue of agreeing with T. Finally, under the "null expletive" analysis of Mohammad (1990), there is a null expletive pronominal in [Spec, TP] in VSO sentences, which takes care of satisfying the EPP feature on T. Sahawneh (forthcoming) advances a modified version of Mohammad's (1990) null expletive analysis in which the EPP feature in VSO sentences is satisfied by a null pronominal subject clitic. Under Sahawneh's analysis, which is built on the Probe-Goal theory of agreement (Chomsky 2000, 2001), the postverbal subject gets nominative case by virtue of agreeing with the functional head T. I consider Sahawneh's analysis the most convincing analysis for VSO sentences as it can straightforwardly capture several cross-dialectal facts.[5] However, VSO sentences will not trigger much discussion in the current study as will be shown shortly.

As for SVO word order, by contrast, I will assume that it is derived via raising the subject from [Spec, VP] to [Spec, TP] to satisfy the EPP feature on T (see Chomsky 2000). It is also argued that the subject moves to [Spec, TP] in SVO order to receive nominative case under Spec-Head agreement with T (cf. Ouhalla 1991; Plunkett 1993). The following simplified structure represents the derivation of SVO word orders in JA.

(15) SVO
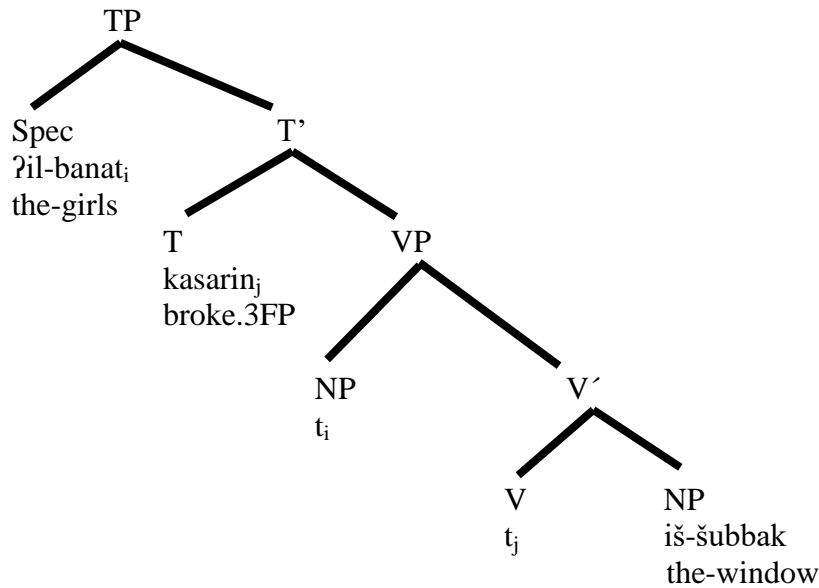
```
                    TP
         ╱───────────────╲
      Spec                 T'
     ?il-banatᵢ      ╱──────────╲
     the-girls      T            VP
                 kasarinⱼ    ╱────────╲
                 broke.3FP  NP         V´
                            tᵢ      ╱──────╲
                                   V         NP
                                   tⱼ      iš-šubbak
                                           the-window
```

The above structures show that the verb undergoes raising to T regardless of the word order. The distinction reduces to the raising of the subject. While it raises to [Spec, TP] in the SVO word order, it remains in-situ in VSO word order.

Worth mentioning here is that the absence of this agreement asymmetry in JA is not the only difference from SA. Notice in the examples given in (12) that the case marking is realized morphologically (as suffixes) in SA. The case marking in JA, however, similar to other spoken varieties, has vanished completely. The word order per se, thus, is the only way for determining subject and object constituents in JA, unlike SA whereby case marking is the key factor used for this end.

The case marking in SA eliminates any potential ambiguity in the interpretation of wh-questions. The nominative case marking on the NP 'the man' in (16a) below clearly shows that it is the subject of the structure, hence the wh-phrase is interpreted as the object. By contrast, when the NP 'the man' bears accusative case as in (16b) below, the wh-phrase cannot be interpreted but as the subject of the structure. In a nutshell, no ambiguity is possible in SA due to the overtness of case marking.

(16) **Questioning in SA using VSO**

    a. man   raʔaa   ar-raǰul-u?

       who   saw.3MS   the-man-Nom

       'Who did the man see?'

    b. man   raʔaa   ar-raǰul-a?

       who   saw.3MS   the-man-Acc

       'Who saw the man?'

The absence of case marking in JA, however, can lead to ambiguity in certain cases when forming wh-questions using the VSO word order. Consider the following examples.

(17) a. **Questioning in JA using VSO**

      (huwweh) **mi:n**   šaf   iz-zalameh ʔimbariH?

      Q   **who**   saw.3MS the-man   yesterday

      'Who saw the man yesterday?/ Who did the man see yesterday?'

    b. **Questioning in JA using SVO**

      (huwweh) **mi:n$_i$**   iz-zalameh šaf   ø$_i$ ʔimbariH?

      Q   **who**   the-man   saw.3MS   yesterday

      'Who did the man see yesterday?'

The example given in (17a) shows that in the VSO order in JA, the question is ambiguous between two readings: (i) The wh-phrase 'who' can be interpreted as a subject wh-phrase in an SVO sentence and the NP 'the man' as the object of the structure. (ii) The wh-phrase can be understood as a focus fronted object wh-phrase in a VSO sentence and the NP 'the man' in this case would be the postverbal subject of the sentence. This potential ambiguity is a direct consequence of the absence of case marking in JA. Nonetheless, this ambiguity does not appear in SVO sentences (17b) as there is only one possible reading: focus fronted object wh-question.

The rich morphological system and overt case marking of SA can explain the ease of switching between word orders without any ambiguity. The grammatical relations are well-established and easily identifiable in SA regardless of the word order. The different spoken Arabic dialects, by contrast, depend primarily on a fixed word order to determine grammatical relations. Throughout the current study, I will employ examples that only use the SVO word order to avoid any potential ambiguity such as the one just highlighted above. Moreover, SVO is the prevailing word order in JA for deriving wh-questions. However, it should be made clear that employing only SVO sentences in this study has no implications for the analysis I will propose. The proposed analysis works the same regardless of whether the question is VSO or SVO. As was shown above, the difference between the two word orders in the language reduces to the raising of the subject to [Spec, TP] and to the way in which the EPP feature is checked. Sahawneh (forthcoming) argues that there is another difference between the two word orders in JA in respect to the richness of the featural specification of the Probe on T: the Probe carries person, number and gender features in the SVO word order, while it bears only number and gender features in the VSO word order. Nevertheless, unlike lexical NPs, wh-phrases in JA do not carry agreement features, which makes the subject-verb agreement asymmetry of the type discussed by Sahawneh in different word orders in the language irrelevant as far as wh-questionn formation is concerned. My proposal thus works the same in both word orders. Sticking to the SVO word order is only intended for the purpose of clarity.

1.7   Organization of the dissertation

The dissertation is divided into six chapters. Following the current introductory chapter, chapters 2-5 give a thorough characterization of each of the JA wh-constructions: typical in-situ wh-questions, CLLD wh-questions, focus fronted wh-questions, subject wh-questions

and *ʔilli* wh-questions. The different syntactic properties of each wh-construction are provided in these chapters. The focus will be on the structure, distribution and the nature of the relationship between the wh-phrase and its variable position in the structure (i.e., long-distance dependency and island (in)sensitivity).

In chapter 2, I introduce the typical in-situ strategy in JA alongside the standard analysis available in the field, namely, the LF movement analysis (Huang 1982). Under this analysis, the [+wh] feature on C is checked at LF by moving the wh-phrase covertly to [Spec, CP]. Following the steps of several linguists (e.g., Aoun & Li 1993; Ouhalla 1996; Simpson 2000; among others), I abandon the LF movement approach based on several observations from JA. For example, I will show that the parallelism between overt and covert movements Huang (1982) introduces is not fully tenable for wh-in-situ in JA. The two types of movement are subject to different constraints and have different interpretative properties. Showing that covert movement is not symmetrical with overt wh-movement in JA, I conclude that the LF movement analysis of in-situ wh-questions in JA is not tenable and should be abandoned. Instead, I adopt the unselective binding approach (Baker 1970; Pesetsky 1987; Chomsky 1995) and argue that it can successfully account for the different syntactic characteristics of in-situ wh-questions in JA.

Chapter 3 explores two types of wh-questions with clause-initial wh-elements, one with a clause-internal clitic and one without. I show that these wh-constructions parallel CLLD and focus fronting respectively. I show how these two mechanisms relate to wh-question formation in general and how they can account for the different syntactic properties of the questions under investigation. The unselective binding analysis is extended to these wh-questions as well.

Chapters 4 and 5 present other types of wh-question with clause-initial wh-phrases: subject wh-questions and *ʔilli* wh-questions respectively. In these two chapters, I further

demonstrate that there is no overt wh-movement triggered by a [+wh] feature. Instead, I propose that wh-question formation is closely connected to the syntactic function of the wh-phrase as a subject either in a verbal or verbless construction.

Chapter 6 summarizes the findings of the dissertation and discusses some implications of my proposal for wh-question formation in general.

Endnotes

1. Subjacency (Chomsky 1973 & 1986) is a principle that requires that no more than one cyclic node can be crossed at a time.

2. As will be shown in this study, all wh-questions in JA are introduced by the optional question particle *huwweh*, which is enclosed in parentheses following the common practice to mark optional elements. In ungrammatical sentences involving *huwweh*, the asterisk that is conventionally used to mark ungrammatical structures will appear directly before the round brackets that contain the optional question particle: *(*huwweh*). This notation, however, gives rise to an unintended reading in which the asterisk is associated with the parentheses around *huwweh*. Under this unintended reading, it is the parentheses which are understood to be ungrammatical, which in turn means that the question particle in brackets is obligatory. However, this is not the intended reading: the asterisk is meant to indicate that the entire wh-question is ungrammatical regardless of whether the question particle *huwweh* is there or not. To eliminate this potential ambiguity, I will use the following notation for ungrammatical examples throughout the thesis: the entire ungrammatical sentence together with the parentheses containing the optional question particle will be enclosed in square brackets and the asterisk will be placed outside these square brackets.

3. The term *ʔilli*-interrogatives primarily reflects the invariable manifestation of the relative complementizer *ʔilli* 'that' in this interrogative construction.

4. In pre-minimalist accounts, the head T was referred to as I. Likewise, [Spec, IP] is now taken to be [Spec, TP].

5. Under the Probe-Goal theory of agreement (Chomsky 2000, 2001), case is considered a by-product of φ-agreement in the sense that nominative case is assigned to the goal (i.e., the subject in [Spec, VP]) as a result of Agree with T. This means that case is not a probing feature and, therefore, is not valued under match with a given goal. The implementation of this analysis proceeds as follows: T has unvalued φ-features ([uφ]) and valued case features, while arguments (such as subjects and objects) carry valued φ-features and unvalued case features ([uCase]). A relation between the valued and unvalued φ-features and case of the probe and the goal is then established via match and valuation (cf. Sahawneh, forthcoming).

Chapter 2
In-situ wh-questions in Jordanian Arabic

2.1   Introduction

A major goal of syntactic research during the 1970s was to find a universal explanation that can uniformly account for the derivation of wh-questions in all languages (see notably e.g., Baker 1970; Chomsky 1977; Wachowicz 1978; among many others). Chomsky (1977), for instance, proposes that wh-questions are formed via movement of the wh-phrase to a clause-initial position. Under later developments of the theory, this movement is proposed to result from feature checking: the wh-phrase moves to [Spec, CP] to check a [+wh] feature on the functional head C (Chomsky 1995).

The wh-movement analysis is widely accepted and has been considered as a principle of Universal Grammar (cf. Farghal 1994; Lassadi 2005). In many languages, however, the formation of wh-questions does not dovetail nicely with this analysis. Mandarin Chinese (simply Chinese hereafter), for example, does not conform to Chomsky's characterization as its wh-phrases invariably remain in-situ and do not transparently move to [Spec, CP] (Huang 1982; Cheng 1991; Aoun & Li 1993; Tsai 1994a & b; Simpson 2000; Hsu 2010; inter alia). The Chinese situation has given rise to the LF movement approach, originally initiated by Huang (1982), which is intended to address the interpretation of in-situ wh-elements while maintaining the essence of the wh-movement analysis.

The introduction of the LF interface as a level of semantic interpretation (Chomsky 1981) played a crucial role in developing Huang's (1982) LF movement analysis. LF movement was embraced in subsequent works on other languages such as Japanese (Lasnik & Saito 1992), Egyptian Arabic (Kenstowicz & Wahba 1983; Wahba 1984) and Iraqi Arabic (Wahba 1991) (see also Cheng 2003a & b, 2009; Bayer 2005; Bayer & Cheng 2015). The major assumption in analyses that adopt LF movement is that languages that do not overtly

raise their wh-phrases to [Spec, CP] such as Chinese still have a [+wh] feature on Comp. As a result, the in-situ wh-phrases in such languages, though not overtly moved in syntax, move covertly to [Spec, CP] at LF. This has become a widely-adopted explanation for in-situ wh-questions cross-linguistically (Cole and Hermon 1994).

However, many linguists did not accept the LF movement analysis for in-situ wh-questions in different languages (see, notably, Aoun & Li 1993; Ouhalla 1996; and Simpson 2000; among many others). A central motivation of the LF movement approach is the apparent parallelism between both overt and covert wh-movement, but a range of cross-linguistic evidence indicates that this parallelism is only apparent and hides a non-trivial distinction between the two movements (see section 2.3 below). The LF movement approach also relies crucially on the proposal that some restrictions on overt syntactic wh-movement may not apply to covert LF movement (Huang 1982), an assumption that has been criticized (see, e.g., Pesetsky 1987, 2000; Tsai 1994a & b; Reinhart 1998; Simpson 2000; Cheng 2009; Bayer & Cheng 2015).

Jordanian Arabic (JA) makes use of a wh-construction similar to that found in Chinese, in which the wh-phrase remains in its first-Merge position inside the clause and does not undergo overt movement to the left edge of the clause. The current chapter examines the syntactic properties of in-situ wh-questions in JA in order to determine whether an LF movement analysis is applicable. I will argue on both theoretical and empirical grounds that the LF movement analysis a la Huang (1982) cannot account for in-situ wh-questions in JA. I show that the behavior of in-situ wh-phrases in JA differs from that of moved wh-phrases with respect to diagnostics such as island effects and intervention effects. The absence of such effects in JA in-situ wh-questions indicates that a non-movement analysis is preferable.

The analysis I propose for in-situ wh-questions in JA makes use of unselective binding as espoused by Pesetsky (1987) and adopted by Chomsky (1995), whereby the wh-phrase is

interpreted without the need to undergo movement at LF. Under this analysis, there is an interrogative operator in the matrix Comp that unselectively binds the wh-phrase in its first-Merge position in the lexical domain. Section 2.5 below offers a syntactic implementation of the unselective binding proposal of Pesetsky (1987). My analysis dispenses with covert LF wh-movement as the mechanism for interpreting in-situ wh-questions in JA in favor of a non-movement approach.

This chapter makes three major contributions. First, it helps to establish that the parallelism between overt syntactic movement and LF movement is not always a crisp one. Rather, there is plenty of evidence for a distinction between the two. I contend that almost three decades of research on in-situ wh-questions subsequent to Huang's (1982) influential paper now demonstrate the limited utility of several assumptions available in the field (see also Simpson 2000), and that wh-movement, whether overt or covert, is not a deus ex machina that can accommodate all wh-constructions across all languages. Second, the discussion in this chapter further supports Pesetsky's (1987) proposal that the mechanism of unselective binding is needed alongside the operation of wh-movement, both in its overt and covert versions, to account for different types of wh-constructions across languages (see also Cole & Hermon 1998; Bruening & Tran 2006). Third, the analysis advanced for JA in-situ wh-questions in this chapter will have important implications for the overall analysis of wh-questions in the language. The identification and characterization of the syntactic properties of JA in-situ wh-questions will set the stage for analyzing other wh-constructions in the language which, I will claim, are simply additional manifestations of the in-situ strategy discussed in this chapter. These other wh-constructions include what I will be referring to as clitic-left-dislocated (CLLD) wh-questions, subject wh-questions and *ʔilli* wh-questions.

In terms of presentation, the chapter is organized as follows. Section 2.2 presents the basic properties of in-situ in JA, focusing mainly on the distribution of wh-phrases, long-

distance dependencies, and certain other syntactic properties. Sections 2.3 and 2.4 outline the two major approaches to the analysis of in-situ wh-questions: the LF movement analysis (Huang 1982; Lasnik & Saito 1984, 1992) and the unselective binding analysis (Baker 1970; Heim 1982; Pesetsky 1987; Chomsky 1995). It will be shown that the unselective binding analysis best accounts for the syntactic properties of in-situ wh-questions in JA. A full analysis of in-situ wh-questions in JA is then spelled out in section 2.5. Section 2.6 considers additional facts from the phenomenon of intervention in order both to support the proposed binding analysis and to further weaken the adequacy of LF movement as the analysis for JA in-situ wh-questions. Section 2.7 highlights some typological implications for the formation of wh-in-situ in light of the discussion made throughout the chapter. Section 2.8 sums up the whole chapter.

2.2 In-situ wh-questions in JA

JA makes use of in-situ wh-questions similar to other Arabic varieties (see e.g., Wahba 1984, Lassadi 2005, Gad 2011 and Soltan 2012 for Egyptian Arabic; Wahba 1991 and Ouhalla 1996 for Iraqi Arabic; Aoun & Choueiri 1999 and Aoun et al 2010 for Lebanese Arabic; Abu-Jarad 2008 for Palestinian Arabic). This section introduces the canonical version of in-situ wh-questions in JA, focusing mainly on the type of wh-phrase allowed, the positions wh-phrases occupy and the properties of the structure in connection to long-distance dependency.[1] In brief, JA in-situ wh-questions have the following three key properties, each of which will be exemplified as the section proceeds. First, JA in-situ questions allow both nominal and adverbial wh-phrases, and thus the wh-word may be found in any sentence-internal argument or adjunct position. Second, the whole wh-construction may optionally be introduced by the question particle *huwweh*, which occurs sentence-initially and is homophonous with the third person singular masculine subject pronoun in the language.

Third, the wh-construction exhibits unbounded dependency in the sense that the sentence-internal wh-element can be construed with the matrix Comp, thus having wide scope over the entire sentence, regardless of the number of non-island intervening embedded clauses separating the wh-phrase and Comp.

The following set of examples illustrates that JA in-situ wh-questions allow both nominal and adverbial wh-phrases and that these phrases surface in the same argument or adjunct position as the corresponding NP, AdjP, AdvP or PP in a non-interrogative construction. To make this parallelism fully clear, each in-situ wh-question in these examples is followed by its declarative counterpart. It is worth mentioning here that the discussion in this chapter will be limited to non-subject wh-questions. Subject wh-questions will also be shown to instantiate another manifestation of the in-situ strategy under discussion here, but they will be investigated separately in chapter 4. This split is intended for ease of reference and due to the correlation between subject wh-questions, which involve a clause-initial wh-phrase, to another type of wh-question to be discussed in chapter 5, namely, *ʔilli* wh-questions. (See the introduction to chapter 4 for more on this issue.)

(1) **Wh-phrase as animate direct object**

    a. (huwweh)   iz-zalameh šaf   **mi:n** ʔimbariH?
      Q   the-man   saw.3MS   **who** yesterday
    'Who did the man see yesterday?'

    b. iz-zalameh šaf   **maha**   ʔimbariH.
      The-man   saw.3MS   **Maha**   yesterday
    'The man saw Maha yesterday.'

(2) **Wh-word as determiner**

a. (huwweh) iz-zalameh šaf **ʔayya** **binit** ʔimbariH?
    Q the-man saw.3MS **which** **girl** yesterday
    'Which girl did the man see yesterday?'

b. iz-zalameh šaf **hai** **ʔil-binit** ʔimbariH.
    The-man saw.3MS **this.FS** **the-girl** yesterday
    'The man saw this girl yesterday.'

(3) **Wh-phrase as inanimate direct object**

a. (huwweh) iz-zalameh ištara **eiš** ʔimbariH?
    Q the-man bought.3MS **what** yesterday
    'What did the man buy yesterday?'

b. iz-zalameh ištara **xobiz** ʔimbariH.
    The-man bought.3MS **bread** yesterday
    'The man bought bread yesterday.'

(4) **Wh-phrase as locative adjunct**

a. (huwweh) iz-zalameh šaf maha **wein**?
    Q the-man saw.3MS Maha **where**
    'Where did the man see Maha?'

b. iz-zalameh šaf maha **bi-9amman**.
    The-man saw.3MS Maha**in-Amman**
    'The man saw Maha in Amman.'

(5)   **Wh-phrase as temporal adjunct**

a. (huwweh) iz-zalameh šaf   maha **ʔeimta**?

   Q   the-man   saw.3MS   Maha **when**

   'When did the man see Maha?'

b. iz-zalameh šaf   maha   **gabil   sa9a**.

   The-man   saw.3MS   Maha   **before   hour**

   'The man saw Maha an hour ago.'

(6)   **Wh-phrase as purpose adjunct**

a. (huwweh) iz-zalameh raH   9-as-soog   **leiš**?

   Q   the-man   went.3MS on-the-market   **why**

   'Why did the man go to the market?'

b. iz-zalameh raH   9-as-soog   **9a-šan   yištari   xobiz**.

   The-man   went.3MS on-the-market   **on-sake   buy.3MS   bread**

   'The man went to the market (in order) to buy bread.'

(7)   **Wh-phrase as manner adjunct**

a. (huwweh) iz-zalameh riǰi9   min is-soog   **keif**?

   Q   the-man   returned.3MS from the-market **how**

   'How did the man come back from the market?'

b. iz-zalameh   riǰi9   min is-soog   **b-il-baS**.

   The-man   returned.3MS   from the-market **in-the-bus**

   'The man came back from the market by bus.'

(8) **Wh-phrase as object of preposition**

    a. (huwweh) iz-zalameh ?a9Ta   ?il-maSari **la-mi:n**?

      Q   the-man   gave.3MS the-money **to-who**

      'To whom did the man give the money?'

    b. iz-zalameh ?a9Ta   ?il-maSari **la-maha**.

      The-man   gave.3MS the-money **to-Maha**

      'The man gave the money to Maha.'

In terms of interpretive values, in-situ wh-questions in JA carry a presupposition that the proposition of the question is true (see Aoun et al 2010 for a similar observation in Lebanese). The question in (1a), for example, presupposes that the man in question did indeed see someone yesterday. The speaker is seeking a specific piece of information with such a question, i.e., the name of the person(s) presumed or presupposed to have been seen by the man in question. Put in different terms, in-situ wh-questions presuppose the truth of the assertion A = "the man saw someone yesterday." Thus, it can be generalized that in-situ wh-questions in JA are questions about the identity of the constituent being questioned.

Although all wh-questions are said to carry a presupposition of the type mentioned above, the presupposition of an in-situ wh-question in JA is stronger than an 'ordinary' presupposition (cf. the presuppositional values of focus fronted wh-questions in the next chapter). The stronger presuppositional values of in-situ wh-questions are common across different languages. French in-situ wh-questions, for example, are associated with a specific discourse context in the sense that they are strongly presuppositional (Chang 1997); accordingly, the answer of *rien* 'nothing' to in-situ questions is taken to be inappropriate. Roussou et al (2014) also show that in-situ wh-questions in Moderrn Greek depend on a "micro-discourse" and cannot be used in a context out of the blue. Pires & Taylor (2009) connect in-situ wh-questions in English and (Brazilian) Portuguese with discourse-related factors, such as the case when an extra-linguistic context is required and when specifications

are required. According to Pires and Taylor (2009), the set of possible answers to such in-situ wh-questions is part of the common ground.

Besides the matrix/direct questions in (1a)–(8a) above, in-situ wh-words can also be found in indirect/embedded wh-questions. The following examples show that in-situ wh-phrases can occur in-situ despite the presence of non-island embedded clauses separating them from the matrix Comp. In other words, the in-situ wh-expression can be construed with, or bound by, the matrix Comp across embedded clauses generating the necessary Operator-variable chain for interpreting the construction as a question. The embedded clauses in the following examples are enclosed in square brackets.

(9)　**In-situ wh-expressions in embedded clauses**

　　a. **Wh-phrase as animate direct object**

(huwweh) enta golit　　[ʔinno iz-zalameh šaf　**mi:n** ʔimbariH]?
Q　　　　you said.2MS [that the-man saw.3MS　**who** yesterday]
'Who did you say that the man saw yesterday?'

　　b. **Wh-word as determiner**

(huwweh) enta golit　　[ʔinno iz-zalameh šaf　　**ʔayya binit**
Q　　　　you said.2MS [that　the-man　saw.3MS　**which girl**
ʔimbariH]?
Yesterday]
'Which girl did you say that the man saw yesterday?'

　　c. **Wh-phrase as inanimate direct object**

(huwweh) enta golit　　[ʔinno iz-zalameh ištara　　**eiš** ʔimbariH]?
Q　　　　you said.2MS [that　the-man　bought.3MS **what** yesterday]
'What did you say that the man bought yesterday?'

d. **Wh-phrase as locative adjunct**

(huwweh) enta golit [ʔinno iz-zalameh šaf maha **wein]**?

Q you said.2MS [that the-man saw.3MS Maha **where]**

'You said that the man saw Maha where?'

e. **Wh-phrase as temporal adjunct**

(huwweh) enta golit [ʔinno iz-zalameh šaf maha **ʔeimta]**?

Q you said.2MS [that the-man saw.3MS Maha **when]**

'You said that the man saw Maha when?'

f. **Wh-phrase as purpose adjunct**

(huwweh) enta golit [ʔinno iz-zalameh raH 9-as-soog

Q you said.2MS [that the-man went.3MS on-the-market

leiš]?

why]

'You said that the man went to the market why?'

g. **Wh-phrase as manner adjunct**

(huwweh) enta golit [ʔinno iz-zalameh riǰi9 min is-soog

Q you said.2MS [that the-man returned.3MS from the-market

keif]?

how]

'You said that the man came back from the market how?'

The above examples show that in-situ wh-phrases in JA exhibit unbounded/long-distance dependency across non-island clauses. This unbounded dependency is infinite in the sense that it is not subject to any finite number of non-island embedded clauses. The following examples illustrate this syntactic property. In each example, the dependency crosses two clause boundaries.

(10) **Long-distance dependency crossing two clause boundaries**

a. **Wh-phrase as animate direct object**

(huwweh) enta golit [ʔinno maha fakkarat [ʔinno iz-zalameh
Q you said.2MS [that Maha thought.3FS [that the-man
šaf **mi:n** ʔimbariH]]?
saw.3MS **who** yesterday]]
'Who did you say that Maha thought that the man saw yesterday?'

b. **Wh-word as determiner**

(huwweh) enta golit [ʔinno maha fakkarat [ʔinno iz-zalameh
Q you said.2MS [that Maha thought.3FS [that the-man
šaf **ʔayya binit** ʔimbariH]]?
saw.3MS **which girl** yesterday]]
'Which girl did you say that Maha thought that the man saw yesterday?'

c. **Wh-word as inanimate direct object**

(huwweh) enta golit [ʔinno maha fakkarat [ʔinno iz-zalameh
Q you said.2MS [that Maha thought.3FS [that the-man
ištara **eiš** ʔimbariH]]?
bought.3MS **what** yesterday]]
'What did you say that Maha thought that the man bought yesterday?'

d. **Wh-phrase as locative adjunct**

(huwweh) enta golit [ʔinno maha fakkarat [ʔinno iz-zalameh
Q you said.2MS [that Maha thought.3FS [that the-man
šaf ʔil-binit **wein]]**?
saw.3MS the-girl **where]]**
'You said that Maha thought that the man saw the girl where?'

e. **Wh-phrase as temporal adjunct**

(huwweh)	enta	golit	[ʔinno	maha	fakkarat	[ʔinno	iz-zalameh
Q	you	said.2MS	[that	Maha	thought.3FS	[that	the-man

šaf	ʔil-binit **ʔeimta]]**?
saw.3MS	the-girl **when]]**

'You said that Maha thought that the man saw the girl when?'

f. **Wh-phrase as purpose adjunct**

(huwweh)	enta	golit	[ʔinno	maha	fakkarat	[ʔinno	iz-zalameh
Q	you	said.2MS	[that	Maha	thought.3FS	[that	the-man

raH	9-as-soog	**leiš]]**?
went.3MS	on-the-market	**why]]**

'You said that Maha thought that the man went to the market why?'

g. **Wh-phrase as manner adjunct**

(huwweh)	enta	golit	[ʔinno	maha	fakkarat	[ʔinno	iz-zalameh
Q	you	said.2MS	[that	Maha	thought.3FS	[that	the-man

riǰi9	min	is-soog	**keif**]]?
returned.3MS	from	the-market	**how**]]

'You said that Maha thought that the man came back from the market how?'

A final important property of in-situ wh-questions in JA is that they violate island conditions. This is illustrated through the full acceptability of in-situ wh-expressions when occurring within wh-islands (11), complex NP (or relative clause) islands (12) and adjunct islands (13).

(11) **In-situ wh-phrase contained in wh-island**[2]

   a. **Wh-phrase as animate direct object**

(huwweh) ʔinta saʔalit [ʔiða iz-zalameh šaf **mi:n**

Q you asked.2S [whether the-man saw.3MS **who**

ʔimbariH]?
Yesterday]

'Who is (x) such that you asked whether the man saw (x) yesterday?'

   b. **Wh-word as determiner**

(huwweh) ʔinta saʔalit [ʔiða iz-zalameh šaf **ʔayya binit**

Q you asked.2S [whether the-man saw.3MS **which girl**

ʔimbariH]?
Yesterday]

'Which girl (x) is it such that you asked whether the man saw (x) yesterday?'

   c. **Wh-phrase as inanimate direct object**

(huwweh) ʔinta saʔalit [ʔiða iz-zalameh ištara **eiš**

Q you asked.2S [whether the-man bought.3MS **what**

ʔimbariH]?
Yesterday]

'What is (x) such that you asked whether the man bought (x) yesterday?'

(12) **In-situ wh-phrase contained in relative clause island**

   a. **Wh-phrase as animate direct object**

(huwweh) ʔinta bti9rif [iz-zalamehʔilli šaf **mi:n** ʔimbariH]?

Q you know.2S [the-man that saw.3MS **who** yesterday]

'Who is (x) such that you know the man who saw (x) yesterday?'

b. **Wh-word as determiner**

(huwweh) ʔinta bti9rif [iz-zalamehʔilli šaf **ʔayya binit**

Q you know.2S [the-man that saw.3MS **which girl**

ʔimbariH]?

yesterday]

'Which girl (x) is it such that you know the man who saw (x) yesterday?'

c. **Wh-phrase as inanimate direct object**

(huwweh) ʔinta bti9rif [iz-zalamehʔilli ištara **eiš** ʔimbariH]?

Q you know.2S [the-man that bought.3MS **what** yesterday]

'What is (x) such that you know the man who bought (x) yesterday?'

(13) **In-situ wh-phrase contained in adjunct island**

a. **Wh-phrase as animate direct object**

(huwweh) ʔinta rawwaHit [ba9idma iz-zalameh šaf **mi:n]**?

Q you left.2S [after the-man saw.3MS **who]**

'Who (is x) such that you left after the man saw (x)?'

b. **Wh-word as determiner**

(huwweh) ʔinta rawwaHit [ba9idma iz-zalameh šaf **ʔayya binit]**?

Q you left.2S [after the-man saw.3MS **which girl]**

'Which girl (x) is it such that you left after the man saw (x)?'

c. **Wh-phrase as inanimate direct object**

(huwweh) ʔinta rawwaHit [ba9idma iz-zalameh ištara **eiš]**?

Q you left.2S [after the-man bought.3MS **what]**

'What is (x) such that you left after the man bought (x)?'

The grammaticality of the above wh-interrogatives illustrates the island insensitivity of in-situ wh-questions in JA. Put differently, the grammaticality of such constructions indicates

that the operator-variable relation, which enables the construction to be interpreted as a direct interrogation, is still established across island clauses.

In summary, this section has described the syntactic properties of in-situ wh-questions in JA. It was shown that all nominal and adverbial wh-words are permitted in this wh-construction, and that wh-phrases appear in the same argument and adjunct positions that host the corresponding NP, AdjP, AdvP or PP in declarative structures. It was also shown that in-situ wh-questions can be employed in both direct and indirect interrogation. The most important observation is that a potentially infinite unbounded dependency exists between the matrix Comp and the in-situ wh-phrase, even when the dependency crosses what we might expect to be the boundary of a syntactic island. With the core properties of JA in-situ wh-questions now established, the following two sections lay the foundations for an analysis by surveying the LF movement (section 2.3) and unselective binding (section 2.4) approaches to in-situ questions.

2.3   The LF wh-movement analysis

Despite decades of research, the issue of whether in-situ wh-phrases undergo covert LF movement or are interpreted in-situ without movement is still controversial (Reinhart 1998; Bruening & Tran 2006; Cheng 2009). Although many linguists have assumed LF movement for in-situ wh-questions in Chinese and Japanese (e.g. Huang 1982; Lasnik & Saito 1984, 1992), this approach has been re-examined in several works, with asymmetry between overt and covert movement with respect to Subjacency being seen as a particularly problematic issue (cf. Pesetsky 1987; Tsai 1994a & b; Ouhalla 1996; Cheng 2009; Simpson 2000; Hsu 2010; Bayer & Cheng 2015).

This section has three parts. Subsection 2.3.1 gives an overview of the major assumptions of the LF movement approach as proposed by Huang (1982) and Lasnik & Saito

(1984, 1992). Subsection 2.3.2 draws on the argumentation of some linguists (notably, Aoun & Li (1993) and Simpson (2000)) against LF movement, presenting contradictory evidence from Chinese and English. Subsection 2.3.3 shows that such observations extend to other Arabic dialects and concludes that the LF movement approach on its own cannot account for this cross-linguistic variation. Subsection 2.3.4 introduces further typological variation from Japanese along with the proposed pied-piping analysis which was advanced to account for the Japanese situation, concluding, however, that this analysis is problematic as well.

2.3.1   Major assumptions of the LF movement approach

Huang's (1982) work on Chinese in-situ wh-questions is the first analysis that capitalizes on LF for the interpretation of in-situ wh-questions. This analysis was then defended by Lasnik & Saito (1984, 1992) for Japanese in-situ wh-questions.

Huang (1982) argues that the classification of languages should not be based upon the application of wh-movement, but instead upon the way and level at which this wh-movement applies, be it at LF or in the narrow syntax. He takes the fact that wh-questions across different languages, though having different syntactic representations, still have similar semantics to support his claim.

The major assumption in Huang's (1982) proposal is that in-situ wh-phrases attain scope in the same manner as overtly-moved wh-phrases—that is, by wh-movement, with the difference between the two being minimized to the level at which movement occurs: overtly moved wh-phrases attain scope via overt syntactic movement to a sentence-initial position, while the interpretation of in-situ wh-phrases is, on a par with quantifiers, achieved via covert movement at LF. The following example from Chinese, followed by its LF representation, puts this idea in concrete terms: although the wh-phrase remains in its base position in the surface pronunciation of the sentence, the wh-phrase undergoes covert wh-movement at LF

to an A'- position. When moved to this A'-position, the wh-phrase binds the variable it leaves behind as a result of this covert movement.

(14) **LF movement in Chinese**

  a. **Surface form of question**

   ni   xihuan   shei?
   You   like   who
   'Who do you like?'

  b. [Shei$_i$ [ni   xihuan   e$_i$]]
     Who   you   like   (Huang 1982: 370)

A major motivation for this proposal was the parallelism between movement at LF and movement in overt syntax. It was noticed that movement at LF obeys the same constraints imposed on overt movement in syntax such as the ECP.[3] Specifically, the traces left by both LF movement and overt movement must be properly governed. This point can be illustrated by considering multiple wh-questions in English. Although English is a wh-movement language (Chomsky 1977, 1995), multiple wh-questions are one place where English has been said to have in-situ wh-phrases and, consequently, LF movement (see also Lasnik & Saito 1984, 1992). Let's consider the following examples followed by their LF representations to illustrate this point.

(15) **Multiple wh-question with subject wh-phrase overtly moved**

  a. Who$_1$[t$_1$ saw   what$_2$]

  b. LF representation: [who$_1$ what$_2$]$_1$ [t$_1$ saw t$_2$]

(16) **Multiple wh-question with object wh-phrase overtly moved**

a. *what$_2$ [did who$_1$ see t$_2$]

b. LF representation: *[who$_1$ what$_2$]$_2$ [did t$_1$ see t$_2$]   (Lasnik & Saito 1984: 240)

According to Lasnik & Saito (1984), both LF movement and overt syntactic movement are subject to the ECP in that traces resulting from either type of movement must be properly governed. This is the case in the grammatical example (15): the trace t_1 which results from the movement of *who* in the narrow syntax is properly governed by *who* and the trace t_2 which results from the movement of *what* at LF is properly lexically governed by the verb *saw*. By contrast, the example in (16) is ungrammatical due to the violation of the ECP by the LF movement. While the trace t_2 which results from the overt syntactic movement of *what* is properly lexically governed by the verb *see*, the trace t_1 which results from the movement of *who* at LF is not. In this configuration, the trace t_1 cannot be governed by either a lexical governor or an antecedent; the impossibility of a proper antecedent government is due to the fact that the matrix Comp bears a different index from that borne by the trace. Lasnik & Saito (1984) take the observation that the traces left by both covert and overt movement are subject to the ECP as evidence for the parallelism between the two types of movement. They also generalize that the principle of ECP is universal in the sense that it applies at the LF level much in the same way as it applies in syntax.

Though both LF wh-movement and overt syntactic wh-movement are constrained by the ECP, they do not behave uniformly in island contexts. Specifically, while overtly moved wh-phrases observe island conditions, covertly moved wh-phrases violate them. In-situ wh-phrases in Chinese, for example, violate island conditions. This has led Huang (1982) to generalize that LF movement is less restricted than overt syntactic wh-movement. Consider the following example from Chinese which can have two LF representations.

(17) [ni   xiang-zhidao [shei   mai-le   sheme]]?
      You wonder   who   bought   what

    a. [$_{S'}$ shei$_x$ [$_S$ ni   xiang-zhidao [$_{S'}$ sheme$_y$ [$_S$ x   mai-le   y]]]]
        Who   you   wonder   what   bought

    b. [$_{S'}$ sheme$_y$ [$_S$ ni   wxiang-zhidao [$_{S'}$ shei$_x$ [$_S$ x   mai-le   y]]]]
        What   you   wonder   who   bought   (Huang 1982: 382)

The sentence in (17) is ambiguous: it can be a question about either the subject or the object. This means that either in-situ wh-phrase can have wide scope over the whole structure, which in turn asserts that they move to an A'-position at LF. The wh-phrase *shei* 'who' has wide scope over the entire structure in (17a) while the wh-phrase *sheme* 'what' has wide scope in (17b). It is also assumed, under Huang's analysis, that the LF movement of the wh-phrase leaves a variable behind. This variable is then bound by the covertly moved wh-phrase. A noticeable feature of this binding relation is that it does not obey the Subjacency principle, which states that no more than one cyclic node can be crossed at a time (Chomsky 1973, 1986). More specifically, the grammaticality of the representation in (17a) asserts that the relation between the wh-phrase *shei$_x$* and its trace $_x$ is free to violate the Subjacency principle in the sense that this relation holds across clause boundaries. The same observation holds for the wh-phrase *sheme$_y$* and its trace $_y$ in (17b).

    Ouhalla (1996) similarly observes that in-situ Chinese argument wh-phrases can be construed with the root Comp in island contexts without inducing ungrammaticality. He provides the following examples (which were originally taken from Aoun & Li (1993)) to support this observation.

(18) a. Ta   xiang-zhidao shei maile   shenme?
      He   wonder   who bought   what
      'What(x) he wonders who bought x?'

b. Ni   xihuan shei xie   de   shu?

You   like   who write DE   book

'Who(x) such that you like the book x wrote?'   (Ouhalla 1996: 677)

Although the argument wh-phrase in (18a) is embedded inside a wh-island, it has matrix scope over the whole structure, which is hence interpreted as a direct wh-question. The same holds for (18b), in which the wh-phrase occurs within a complex NP island. Under the assumption that in-situ wh-phrases are interpreted via LF movement to a scope position (Huang 1982; Lasnik & Saito 1984, 1992), the full acceptability of the above Chinese questions in island contexts indicates that this LF movement is not restricted by island conditions.

The same observation obtains in English multiple wh-questions (a context where in-situ wh-phrases can be found in English). Consider the example in (19b).

(19)   a. ??Who do you like books that criticise?

b. Who likes books that criticise who?   (Ouhalla 1996: 678)

If in (19b), the in-situ wh-phrase is interpreted via covert movement at LF, then the grammaticality of this covert movement indicates that it must not be subject to island constraints: the in-situ wh-phrase *who* can undergo LF movement crossing the boundary of the complex NP containing it without affecting the grammaticality of the structure. By contrast, the ungrammaticality of (19a), in which a wh-phrase moves overtly from the same position, shows that overt movement is more restricted by island conditions than its covert counterpart. The lack of island effects in English in-situ wh-questions is not restricted to complex NP islands, but is indeed found in all island contexts. The following examples (from Bayer 2005) confirm that there is a contrast between overtly-moved wh-phrases and in-situ wh-phrases in different island contexts. The degradation of (20a), (21a) and (22a) shows that overt extraction of wh-phrases in English is sensitive to complex NP islands, WH-islands and

adjunct clauses respectively. The full acceptability of the respective (b) examples, by contrast, shows that wh-in-situ in English is insensitive to different types of island constraints.

(20) a. ??What did you find evidence that Jim has bought?

b. Who found evidence that Jim has bought what?

(21) a. ??What do you know where we bought?

b. Who knows where we bought what?

(22) a. ??Who did you get jealous after I had spoken to?

b. Who got jealous after I had spoken to who?   (Bayer 2005: 380-1)

The Chinese and English examples presented above show that, under the assumption that in-situ wh-phrases undergo covert movement at LF, the two types of wh-movement (i.e., overt and covert) turn out to be not restricted in the same degree.

    To summarize, the preceding presentation has introduced the major assumptions in the LF movement approach to in-situ wh-questions. The lack of island effects in in-situ contexts has led some linguists, notably Huang (1982), to generalize that LF wh-movement is not constrained by locality conditions in the same way as overt syntactic wh-movement is. It was shown that these assumptions are compatible with the facts from Chinese and English. Reviewing the relevant literature, however, reveals that the adequacy of assuming LF movement as the only analysis for in-situ wh-questions in different languages is susceptible to debate on both theoretical and empirical grounds. The subsequent subsections highlight some problems with the LF movement analysis.

2.3.2   Problems with the LF movement analysis

Despite the wide influence of Huang's (1982) LF movement analysis, criticism of this approach can be identified in the literature. The asymmetry between overt and covert movement with respect to Subjacency is particularly problematic: while overt syntactic wh-movement is subject to the Subjacency principle, covert LF movement is less constrained by this principle (cf. Pesetsky 1987; Tsai 1994a & b; Cheng 2009; Simpson 2000; Hsu 2010; Bayer & Cheng 2015). More specifically, reviewing the works cited above raises the following question: If covert movement at LF is a real movement similar to its overt counterpart, why is it not then governed by the same grammatical constraints to which its overt counterpart is subject? (cf. Pesetsky 1987; Reinhart 1998; Simpson 2000; Cheng 2009; Soltan 2012; Bayer & Cheng 2015).

This asymmetry leads to a non-uniform treatment of both the wh-movement operation and the locality conditions. If we accept the assumption that in-situ wh-elements undergo wh-movement at LF, and that this movement is not subject to Subjacency, then the grammar has an undesirable property, namely, the duality in treating different levels of grammar, Subjacency, and the operation of movement. More specifically, this assumption entails the following dualities:

(i) Using GB terminology, the derivation of LF from S-structure is different and less constrained than the derivation of S-structure from D-structure. This is a duality in treating the two levels of grammar.

(ii) Subjacency governs one level to the exclusion of another, which is a duality in treating not only the two levels but also the Subjacency principle itself. This means that Subjacency is operative in syntax but not at LF.

(iii) The movement operation itself is also treated inconsistently under such an assumption: while it is subject to Subjacency in overt syntax, it is not at LF.

Many linguists, whether implicitly or explicitly, also consider it problematic from a Minimalist perspective to draw a distinction between overt and covert movement with respect to Subjacency. Postulating that LF movement parallels syntactic movement as far as the ECP is concerned, while it differs from syntactic movement in that it does not obey Subjacency, forms a real hindrance to a unified theory of the movement operation. Subjacency is a general condition on movement, thus any difference between phonetically visible and invisible movement in this regard cannot be accepted (Reinhart 1998). In the Minimalist Program, there are no levels; rather, there is only one derivation which derives LF, and this derivation can enter the PF interface for spellout at any stage. Assuming that the movement operation is subject to certain constraints up to the branching to PF, but not beyond PF, does not receive independent support under any minimalist account (cf. Reinhart 1998).

Cheng (2009) states that some linguists are no longer satisfied with the stipulation that the parametric difference between moved and in-situ wh-questions rests upon the level at which movement takes place. More importantly, some of the assumptions of the LF movement approach have turned out to be non-felicitous upon further typological investigations. In what follows, I will outline some of Simpson's (2000) and Aoun & Li's (1993) aarguments against the LF movement analysis, showing that this analysis gives rise to theoretical controversy and that some of its core assumptions are empirically problematic.

Simpson (2000) counters LF movement arguing that LF movement does not parallel overt syntactic wh-movement. Simpson (2000) builds his argument upon the asymmetry between the two types of movement with respect to island sensitivity, interpretation and the licensing of parasitic gaps (among other asymmetries). The following paragraphs briefly highlight Simpson's (2000) ideas concerning each of these three constructions.

The first difference between overt syntactic movement and LF movement is related to their interaction with island constraints. While overt syntactic movement in Chinese observes island constraints (i.e., it is island sensitive), LF movement violates island constraints (i.e., it is island insensitive). Simpson (2000) explains this contrast through the following examples from Chinese: (23) is a topicalization structure while (24) is a wh-question.

(23) *Zhangsan$_i$,   wo   mai-le   [[t$_i$ xie]   de   shu]
    Zhangsan   I   buy-ASP   write   rel.   book
    'Zhangsan, I bought the book that (he) wrote'

(24) Ni   mai-le   [[shei   xie]   de   shu]
    You   buy-ASP   who   write   rel.   book
    'Who is the x such that you bought books that x wrote'   (Simpson 2000: 14)

The topicalization structure in (23) is derived via overt raising of the NP *Zhangsan*. The ungrammaticality of this example is the result of the overt movement of the argument NP *Zhangsan* to a topicalised position out of a relative clause island. The overt movement of *Zhangsan* thus confirms island sensitivity. By contrast, the example in (24) shows that the wh-phrase stays in-situ within a relative clause island. Under the assumption that in-situ wh-phrases move to Comp at LF, this LF movement is island insensitive, as evident by the grammaticality of this question. If in-situ wh-phrases undergo movement at LF, this movement cannot be subject to the same locality constraints that apply to overt movement.

The second difference that Simpson (2000) identifies between overt syntactic movement and LF movement is connected to interpretive considerations and involves an application of Tancredi's (1990) and Aoun & Li's (1993) Principle of Lexical Association (PLA), which states that "an operator like *only* must be associated with a lexical constituent in its c-command domain" (Aoun & Li 1993: 206). More precisely, *only* can only be associated with a lexical element in its c-command domain; it cannot be associated with a

trace of this lexical element. The different interpretations induced by overt and covert movement in the following examples illustrate this point.

(25)   a. He only likes Mary.

b. Mary$_i$, he only likes t_i.   (Simpson   2000:17)

Sentence (25a), where there is no overt movement, can have two interpretations: (i) It is only Mary that he likes, or (ii) his relationship to Mary is only that he likes her (but he doesn't love her, for example). By contrast, sentence (25b), where there is overt movement, can only have the second reading.[4]

Building on this difference, Simpson (2000) argues that the LF movement analysis of in-situ wh-phrases contradicts the interpretations that are possible for in-situ wh-questions. To see how this is the case, consider the following examples.

(26)   a. Which girl said she only liked what?

b. Who$_i$ does Mary only like t_i?   (Simpson 2000: 17)

The scope of *only* in (26a) is associated with the in situ wh-phrase, giving rise to the following reading: 'which girl said of which thing such that that thing was the only thing that she liked?' However, under the assumption that the in-situ wh-phrase undergoes movement at LF, this reading should not be available. This is because LF movement of the wh-phrase will leave a trace with which the scope of *only* cannot be associated according to the PLA, just as in example (25b). In this case, the only available interpretation would be one in which the scope of *only* is associated with the verb *like*, not with the trace of the moved wh-phrase. This is not consistent with the actual interpretation of the in-situ wh-question outlined above. On the other hand, in (26b), the scope of *only* cannot be associated with the overtly moved wh-phrase, as this wh-phrase is not within the c-command domain of *only*. It is also impossible for *only* to be associated with the trace of the wh-phrase as this will lead to a violation of the

PLA. The only element with which the scope of *only* can be associated is the verb *like*, which is the typical reading of a moved wh-question such as (26b). Accordingly, it is not surprising that the overtly moved wh-question in (26b) cannot have the interpretation 'which person is such that he/she is the only person that Mary likes?'

Similarly, Aoun & Li (1993) argue against covert raising of Chinese wh-phrases at LF (and against LF movement in general), drawing on the interaction between in-situ wh-phrases in Chinese and the operator *only*. They take the fact that *only* can only modify an overt element (but not a trace) as evidence against the application of LF movement. Specifically, since *only* can modify in-situ wh-phrases, this means that the latter do not undergo LF movement simply because this movement would leave a trace, which *only* cannot modify. Consider the following example followed by its LF representation.

(27) a. Ta   zhi   xihuan   shei?
      He   only   like   whom
      'Who does he only like?'   (Aoun & Li 1993: 207)

    b. $Shei_k$ Ta   zhi   xihuan x_k
       Whom   he   only   like

If the wh-phrase *shei* 'whom' in the above example undergoes LF movement, it has to cross the operator *only* and leaves a trace in its in-situ position. This causes a violation of the PLA because the wh-phrase is no longer in the c-command domain of the operator *only*. In other words, the wh-phrase is inaccessible to the operator *only*; the operator is c-commanding the trace of the wh-phrase in this case. The interpretation of the above Chinese example is, however, one in which *only* is associated with the wh-phrase; under an LF movement, this reading contradicts the PLA. This point receives further support if considering the English translation where the operator *only* can only be associated with the verb *like* but not with the

trace of the overtly moved wh-phrase. Accordingly, Aoun & Li (1993) conclude that Chinese in-situ wh-phrases must not undergo LF movement at all.[5]

The third asymmetry between LF movement and overt movement Simpson (2000) highlights comes from the phenomenon of parasitic gaps. A parasitic gap is the second of two traces that are co-indexed with, and c-commanded by, the same extracted wh-phrase in the A'-position (cf. Chomsky 1982). Haegeman (1994: 474) defines a parasitic gap as "a null element whose presence must be licensed by   another gap in the sentence." Simpson (2000) notices that while parasitic gaps are permissible in the A'-chains resulting from overt movement, they are disallowed in the A'-chains resulting from LF movement. The contrast between (28a) and (28b) below illustrates the difference in licensing parasitic gaps in the two contexts.

(28)   a. What$_i$ did John send off t$_i$ without having copied e_i?

   b. *Who$_i$ did John give t_i what$_k$ without having copied e_k?   (Simpson 2000: 18)

Since the overt movement of the wh-phrase *what* to Comp in (28a) licenses the parasitic gaps, grammaticality is not a surprise. The parasitic gap in (28a) above is the null element e_i at the end of the sentence, which depends on another null element in the sentence (i.e., the one occurring after the verb *send off*). By contrast, LF movement of in-situ wh-phrases cannot license parasitic gaps, as shown by the ungrammaticality of (28b).

To summarize, Simpson (2000) argues against LF movement drawing on several asymmetries between LF movement and overt movement, of which I have highlighted three. The first difference is related to island effects: LF movement is not sensitive to the same island constraints as overt movement. The second difference involves the interpretation of fronted wh-phrases and in-situ wh-phrases with respect to operators such as *only*. The third difference involves the possibility of parasitic gaps. Such asymmetries between wh-

movement in the narrow syntax and wh-movement at LF have made Simpson (2000: 66) conclude that "LF wh-raising can be taken both to be theoretically unnecessary and virtually impossible to maintain in certain instances" and that "the interpretation of wh-phrases in in situ positions must be allowed for as a fully general possibility in language." In other words, Simpson (2000) calls into question the need to posit covert movement of wh-phrases at LF.

Although Aoun & Li (1993) and Simpson (2000) argue against LF movement for the interpretation of in-situ wh-questions altogether, it will be shown in the course of the discussion in this chapter that LF movement is still needed in natural language grammar for the interpretation of wh-in-situ in many languages and, thus, should be maintained along with the mechanism of unselective binding (Pesetsky 1987) (see section 2.7 below for more on this issue).

2.3.3 Further counterevidence from Arabic

This subsection presents two challenges to the LF movement approach involving data from Arabic dialects. One challenge is the existence of a clear disparity between overt and covert movement, as in the arguments from Simpson 2000 discussed above. The other challenge is the fact that, in Iraqi Arabic, the properties of the two types of movement are inverted, as observed by Ouhalla 1996.

Although one of the motivations for embracing the LF movement analysis is the parallel behaviour with overt syntactic movement (Huang 1982; Lasnik & Saito 1984, 1992), this parallelism has turned out to be inaccurate cross-linguistically (cf. Pesetsky 1987; Ouhalla 1996; Cole & Hermon 1998; Simpson 2000; Watanabe 2003; Bruening & Tran 2006). This non-uniformity is found in and across different Arabic varieties as well. Different Arabic varieties make use of both wh-fronting and in-situ strategies to form their wh-constructions. However, on the one hand, the LF movement, under the assumption that it

exists in Arabic in-situ wh-questions, behaves differently from overt syntactic movement, and on the other hand, the behaviour of in-situ wh-questions with regard to long-distance dependencies differs across Arabic varieties. Such differences further undermine the ability of the LF movement approach to provide a unified analysis for in-situ wh-questions across Arabic varieties.

The examples from JA in (29)–(31) highlight the non-parallelism between the two types of movement, in particular the asymmetry in the behaviour of in-situ and fronted wh-phrases with regard to islands. While in-situ wh-questions in JA violate island constraints, their overtly wh-moved counterparts observe these constraints. This is illustrated for wh-islands (29), complex NP (or relative clause) islands (30) and adjunct islands (31). In each case, the in-situ wh-construction is grammatical while the moved wh-construction is not.

(29) **Wh-island**

    a. **In-situ question grammatical**

        (huwweh)   Ɂinta   saɁalit   [Ɂiða   iz-zalameh
        Q   you.MS asked.2MS [whether   the-man
        šaf   **mi:n** ɁimbariH]?
        saw.3MS **who** yesterday]
        'Who is (x) such that you asked whether the man saw (x) yesterday?'

    b. **Moved question ungrammatical**

        *[(huwweh) **mi:n$_i$** saɁalit   [Ɂiða   iz-zalameh šafø$_i$ ɁimbariH]?]
         Q   **who** asked.2MS [whether   the-man   saw.3MS yesterday]
        '*Who did you ask whether the man saw yesterday?'

(30) **Relative clause island**

    a. **In-situ question grammatical**

      (huwweh) ʔinta   bti9rif [iz-zalamehʔilli šaf   **mi:n** ʔimbariH]?

      Q   you.MS know.2MS [the-man   that saw.3MS **who** yesterday]

      'Who is (x) such that you know the man who saw (x) yesterday?'

    b. **Moved question ungrammatical**

      *[(huwweh) **mi:n$_i$** bti9rif [iz-zalamehʔilli šaf ø$_i$ ʔimbariH]?]

       Q   **who**know.2MS [the-man   that saw.3MS yesterday]

       '*Who do you know the man that saw yesterday?'

(31) **Adjunct island**

    a. **In-situ question grammatical**

      (huwweh) ʔinta   rawwaHit [ba9idma iz-zalameh šaf   **mi:n**]?

      Q   you.MS   left.2MS [after   the-man   saw.3MS **who**]

      'Who is (x) such that you left after the man saw (x)?'

    b. **Moved question ungrammatical**

      *[(huwweh) **mi:n$_i$** rawwaHit [ba9idma iz-zalameh šaf   ø$_i$]?]

       Q   **who** left.2MS [after   the-man saw.3MS   ]

       '*Who did you leave after the man saw?'

The grammaticality of the (a) examples above illustrates the island insensitivity of in-situ wh-questions in JA while the ungrammaticality of the (b) examples shows that overtly moved wh-questions in JA do obey island constraints: the moved/fronted wh-constituent at the left-edge peripheral position of the clause cannot be directly associated with a sentence-internal gap across any island. This difference asserts that LF movement (if it occurs in in-situ wh-questions in JA) and overt syntactic wh-movement are not parallel in JA. The fact that the very same operation, i.e., wh-movement, is ruled out by the island effects when it applies in

the narrow syntax but is felicitous when it applies at LF reduces the desirability of assuming the existence of the latter as a bona fide counterpart of the former in JA.

One could argue that the difference between the two types of movement in JA does not constitute a serious challenge for the LF movement approach as it is compatible with Huang's (1982) assumption that LF movement is less restricted than overt movement. From a theoretical perspective, the question remains as to *why* LF movement should be taken as being less restricted, as this appears to be a stipulation that is ad hoc and thus unexplanatory. More seriously, there is also an empirical challenge for the generalization that LF movement is less restricted than overt syntactic wh-movement. While this generalization does indeed seem to hold in some languages (Chinese, English and JA), there are other languages, such as Hindi (Mahajan 1990, 1994; Dayal 1991) and Iraqi Arabic (Wahba 1991; Ouhalla 1996), in which in-situ wh-questions do exhibit island sensitivity, thus countering the assumption that in-situ wh-phrases are less constrained by the Subjacency principle. This is illustrated below using data from Iraqi Arabic. The presentation of the Iraqi data has two purposes: (i) to show that cross-dialectal variation in Arabic jeopardizes the assumed parallelism between the two types of movement within each dialect and even across different dialects, and (ii) to show that the Arabic facts do not conform to the LF approach.

Ouhalla (1996) provides a striking observation concerning the behaviour of wh-interrogative constructions in Iraqi Arabic: the ungrammaticality that results when an in-situ argument wh-phrase occurs inside a wh-clause island or a relative clause island in direct questions in Iraqi Arabic is stronger than the typical "milder Subjacency-type violation" associated with overtly extracted wh-phrases. Let's consider the following examples.

(32) **Covert wh-movement in Iraqi Arabic**

    a. *Nasat   Monali-meno   tinti   **šeno**?

      Forgot   Monato-whom   to-give   **what**

      '**What**(x) Mona forgot to whom to give x?'

    b. *ʕurfut Monail-bint   illiištarat   **šeno**?

      Knew   Monathe-girl   who bought **what**

      '**What**(x) Mona knew the girl who bought x?'

(33) **Overt wh-movement in Iraqi Arabic**

    a. ?? **Šeno**   nasat   Monali-meno   tinti?

      What   forgot   Monato-whom   to-give

      '**What**(x) Mona forgot to whom to give x?'

    b. ?? **Šeno**   ʕurfut   Mona   il-bint   illi   ištarat?

      What   knew   Mona   the-girl   who bought

      '**What**(x) Mona knew the girl who bought x?'   (Ouhalla 1996: 677-678)

Normally it is overt rather than covert wh-movement that induces Subjacency effects (Chomsky & Lasnik 1993), as was shown for JA for example (29b–31b above). In Iraqi Arabic, however, it is the covert movement that appears to be more restricted: while the overt wh-movements in (33) display a milder Subjacency-type violation, their covert counterparts in (32) are strongly ungrammatical. Ouhalla (1996) takes this unexpected difference as evidence that the LF movement cannot be the mechanism that derives in-situ wh-questions in Iraqi Arabic.

    Ouhalla (1996) instead accounts for the asymmetry displayed by Iraqi argument wh-phrases in (32) and (33) in terms of the complex internal morpho-syntactic structure of Iraqi argument wh-phrases. Specifically, he analyzes Iraqi argument wh-phrases as compound anaphoric expressions, building mainly on the fact that they are composed of two elements: a wh-morpheme and a pronominal element. The wh-element encodes the [+wh] feature and is

realised by the wh-morphemes *men* 'who' and *šen* 'what'; the pronominal element encodes φ-features and is realised by the clitic *-o* 'him/it'. This analysis is illustrated in (34).

(34) a. men-o
         who-him

      b. šen-o
         what-it   (Ouhalla 1996: 682)

Ouhalla regards Iraqi argument wh-phrases as compound anaphoric expressions on a par with compound reflexive anaphors, and he generalizes that both types of expressions require a local antecedent. This proposal is expressed in the form of the following constraint.

(35) A compound (refl-/wh-) anaphor must be bound to the nearest potential antecedent.[6]
      (Ouhalla 1996: 690)

Similar to compound reflexive anaphors which require an A-antecedent as a result of the anaphoric feature [+reflexive], Iraqi argument wh-phrases can only have an A-antecedent in the context of islands. They cannot be bound by the matrix [+wh] Comp in the context of islands because there is another potential local antecedent, namely, the [+wh] Comp of the embedded wh-/relative clause.

However, for the direct question interpretation to obtain in (32), the in-situ wh-phrase must be construed with the matrix Comp, something that is impossible as it gives rise to a binding theory violation: the in-situ wh-phrase cannot have as an antecedent the matrix Comp in the presence of an embedded Comp as a potential antecedent. To further explain, the ungrammaticality of the in-situ questions in the context of embedded wh-clauses (32a) or relative clauses (32b) is due to the fact that the compound wh-anaphor is separated from its antecedent (i.e., the root [+wh] Comp) by an intervening [+wh] Comp. This intervening Comp is the Comp of the wh-/relative clause, which qualifies as a closer potential antecedent. In a nutshell, since Iraqi Arabic wh-anaphors are compound anaphors, they cannot be bound

by the root [+wh] Comp when they occur in a wh-clause or a relative clause because long-distance binding for compound wh-anaphors, similar to compound reflexive anaphors, is disallowed. The ungrammaticality of the Iraqi in-situ questions in (32) is thus the result of a binding theory violation, hence the strong ungrammaticality.

The overt extraction of the wh-anaphors out of both islands in (33), by contrast, eliminates this strong ungrammaticality. Movement of the wh-anaphor to the root clause moves it out of the binding domain of the embedded [+wh] Comp and into the binding domain of the root [+wh] Comp, hence the milder Subjacency effects.

To sum up, in this subsection I have shown that in-situ wh-questions in JA, unlike their overtly moved counterparts, violate different island conditions, which means that LF movement (if it applies in JA) and overt syntactic movement are not restricted in the same way. This indeed calls into question the adequacy of LF movement as the mechanism for deriving in-situ wh-questions in JA. I have also introduced in-situ wh-questions in Iraqi Arabic which exhibit Subjacency effects stronger than those associated with the overtly extracted wh-questions in the language, showing that the LF movement analysis cannot capture this rather odd behaviour of in-situ wh-questions in Iraqi Arabic. Ouhalla's (1996) account for this phenomenon in Iraqi Arabic, which dispenses with the LF movement analysis, was also introduced in this subsection. From a cross-dialectal perspective, there is inconsistency in the behaviour of in-situ wh-phrases in JA and Iraqi Arabic: island conditions seem to apply to in-situ wh-phrases in some Arabic varieties (i.e., Iraqi) but not in others (i.e., JA). Under an LF movement analysis, we would have to say that LF movement is more constrained in some Arabic varieties (Iraqi) than in others (Jordanian), an inconsistency that cannot be easily reconciled. In the next subsection, I present data from Japanese showing that there can also be inconsistency in the behaviour of in-situ wh-phrases even within a single language, which will in turn trigger a discussion of the existing analysis of this phenomenon,

namely, the pied-piping analysis.

2.3.4   The pied-piping analysis

The discussion so far reveals that the picture of wh-in-situ in general is not uniform: some in-situ wh-questions induce Subjacency while others do not. As was shown above, in-situ wh-questions in JA, Chinese and English lack Subjacency effects. However, in-situ wh-questions induce Subjacency effects in other languages such as Hindi and Iraqi Arabic. In this subsection, I will present data from Japanese to further demonstrate that the behaviour of wh-in-situ in different languages is far from being consistent with respect to island effects (see also Cheng 2003a, 2003b, 2009; Watanabe 2003; Bayer 2005; Bayer & Cheng 2015). I will also introduce the pied-piping analysis which was initiated to account for the mixed behaviour of Japanese wh-in-situ with respect to island effects, showing at the end that this analysis is problematic on several grounds and that it cannot be extended to JA.

Japanese in-situ wh-questions induce Subjacency effects in the context of wh-islands (36b), but lack such effects in the contexts of relative clause islands (36a). Consider the following examples (from Cheng 2003b; her (43a & b) respectively).

(36) a. John-wa   [nani-o   kata   hito]-o   sagasite   iruno?
         John-TOP   what-ACC   bought person-ACC   looking-for   Q
      'What is John looking for the person who bought?'

   b. ??John-wa [Mary-ga   nani-o   kata   ka dooka] siritagatte iruno?
      John-TOP Mary-NOM   what-ACC bought   whether   know-want Q
      'What does John want to know whether Mary bought?'

The question in (36a) is fully acceptable though the wh-phrase occurs in a relative clause island. By contrast, the question in (36b) is ungrammatical due to a wh-island violation.

Watanabe (2003) also confirms that it is possible for the Japanese in-situ wh-phrase to occur in a complex NP island (37a), but not in a wh-island (37b); in (37b) 'what' cannot take a matrix scope.

(37) a. kare-wa [dare-ga   kaita]   hon-o   yonde-iru no?
       he-Top   who-Nom wrote   book-Acc   read-Prog Q
    'Is he reading a book that who wrote?'

    b. ??[nani-o   doko-de   kata   ka]   oboete-iru   no?
       what-Acc   where-At   bought   Q   remember-Prog   Q
     'What do you remember where we bought?'   (Watanabe 2003: 205)

The mixed behaviour Japanese in-situ wh-phrases exhibit with respect to island effects has received an account in terms of Huang's (1982) LF movement analysis. Nishigauchi (1986, 1990) and Pesetsky (1987) maintain the LF movement analysis, but counter Huang's (1982) assumption that LF movement is less restricted than overt movement. They instead defend the idea that LF movement parallels overt syntactic movement and is governed by the same constraints such as Subjacency. Accordingly, the ungrammaticality of (37b) above, for example, is the result of Subjacency violation. Specifically, the embedded object *nani-o* 'what-Acc' is extracted out of a wh-island, hence Subjacency effects. The following is the LF representation for (37b) under this LF movement analysis (from Watanabe 2003: 206).

(38) [$_{CP}$ nani$_i$-o [$_{IP}$ pro$_{you}$ [$_{CP}$ doko-de$_j$ [$_{IP}$ pro$_{we}$ t$_i$ t$_j$ katta]   ka]   oboete-iru]   no]
      what-Acc   where-at   bought   Q   remember-Prog   Q

However, Nishigauchi's (1986, 1990) and Pesetsky's (1987) assumption that both LF movement and overt syntactic movement are subject to the same restrictions was challenged by the island insensitivity of Japanese in-situ wh-phrases in complex NP islands (37a). Consequently, Nishigauchi (1986, 1990) and Pesetsky (1987) propose that Subjacency effects are invisible in (37a) due to large-scale pied-piping. The lack of Subjacency effects despite

the occurrence of *nani-o* 'what' inside a relative clause island is attributed to the assumption that what undergoes LF movement in this case is the entire complex NP [*dare-ga kaita hon*], not just the wh-phrase *dare*. Since movement/pied-piping of the complex NP itself does not cross an island, as shown in the LF representation below, grammaticality ensues. This analysis is known as the pied-piping hypothesis. The following LF representation of (37a) illustrates the application of the pied-piping analysis (from Watanabe 2003: 206).

(39) [$_{CP}$ [dare-ga   kaita]   hon$_i$-o [$_{IP}$ kare-wa t$_i$ yonde-iru]   no]
          who-Nom   wrote   book-Acc   he-Top   read-Prog   Q

Under Nishigauchi's (1986, 1990) pied-piping analysis, there is first a CP-internal wh-movement which marks CP as [+wh]. After that, the marked [+wh] CP moves to the specifier of NP, thus the complex NP is assigned the feature [+wh] (via percolation). Finally, the complex [+wh] NP moves to the matrix [Spec, CP] (see also Watanabe 2003; Bayer 2005). In brief, under the pied-piping analysis, what moves at LF is not the wh-phrase itself, but rather the whole complex NP island containing it.[7]

The way that such questions must be answered has been taken as evidence for this analysis. Specifically, the felicitous answer for a question involving a complex NP island in Japanese should repeat the whole island that contains the wh-phrase, as shown below.

(40) Mary-wa   [$_{NP}$[$_{S'}$ John-ni   nani-o   ageta]   hito-ni]   atta-no?
        Mary-Top   John-Dat   what-Acc   gave   man-Dat   met-Q
       'What did Mary meet the man who gave to John?'   (Pesetsky 1987: 113)

(41) A1: */??Konpyuutaa desu
'It's a computer'

A2: [_{NP}[_{S'} Konpyuutaa-o ageta]   hito] desu
computer-Acc   gave man Cop
'It's the man who gave a computer (to him)'   (Pesetsky 1987: 113)

The pied-piping analysis, however, has not gone unchallenged. One problem is related to semantic interpretation. Von Stechow (1996) noted that it is not clear how to semantically interpret the LF representation resulting from such a pied-piping at LF. The question in (40), for example, asks for the identity of thing such that a man gave it to John, but not for the identity of some man (see also Bayer 2005; Bayer & Cheng 2015). Even Nishigauchi (1990: footnote 24) states that an answer identifying a person would not be appropriate. This means that, according to Bayer (2005), the island must somehow be left by the in-situ operator at some level of representation to serve as an appropriate input to the semantic component.

Bayer (2005) adds that the morphosyntactic operations underlying the pied-piping mechanism must be more constrained. It is not clear, for example, by which operations the NP "evidence that Jim has bought what" in the question "Who found [evidence that Jim has bought what]?" can acquire the [+wh] feature under the pied-piping analysis. Moreover, Bayer (2005) indicates that it is impossible for the wh-phrase in Japanese to occur inside a definite NP island (42a), and it is impossible for the adverbial wh-phrase *naze* 'why' to occur inside a complex NP (42b. According to Bayer (2005), these cases require extra restrictions that do not follow from the general approach.

(42) a. *Kimi-wa   [[dare-ga   kai-ta] kono hon]-o   yomi masi-ta ka?
you-TOP   who-NOM   write   this book-ACC read   -Q
'You read this book that who wrote?'

b. *Kimi-wa [[kare-ga   naze   kai-ta]   hon]-o   yomi masi-ta   ka?

you-TOP   he-NOM   why   write   book-ACC read   -Q

'You read book that he wrote why?'   (Bayer 2005: 384)

Another problem with the pied-piping analysis is that it appears to switch the asymmetry from overt versus covert movement to overt versus covert pied-piping (Fiengo et al 1988; Cheng 2009). More specifically, there is a contrast between overt pied-piping and LF pied-piping; the former is much more restricted than what has been assumed for covert pied-piping. Consider the following examples (from Cheng 2009: 774).

(43) a. On which table did you put the book?

b. *After buying what did John leave?

c. *The man that bought what did John see?

More importantly, very little pied-piping is permissible in the context of embedded questions. Consider the following examples from Fiengo et al 1988; cited in Cheng 2009: 774-5).

(44) a. I wonder who Bill spoke to.

b. ?I wonder to whom Bill spoke.

c. I wonder whose mother Bill spoke to.

d. *I wonder pictures of whom Bill saw.

e. *I wonder Mary and whom Bill saw.

f. *I wonder the books that who wrote Bill bought.

Finally, the pied-piping solution, according to Fiengo et al (1988) cannot be universally applied to all island violations at LF. Cheng (2009: 775), for example, reports that it is impossible to answer by repeating the whole island if the wh-phrase is contained in a subject island in Mandarin Chinese, as shown below.

(45) Q: [shéi kàn zhèbèn shü] zuì héshì (adapted from Fiengo et al 1988, ex. 9)

        Who read this book most appropriate

        'That who read this book is most appropriate?'

  a. A: *Zhāngsān kàn zhèbên shü.

      'That Zhangsan read this book.'

  b. A: Zhāngsān.

Turning back to JA, it is not a must for the island wh-questions given in (11)-(13) above to be answered by repeating the whole island that contains the wh-phrase; answering all these island wh-questions with a single word is fully acceptable. The absence of this crucial piece of evidence, together with all the above-mentioned problems, weighs against adopting the pied-piping proposal to rescue the LF movement analysis for in-situ wh-questions in JA (and in Chinese).

It should be made clear, however, that, whether in island or non-island wh-questions in JA, the answer can vary: it can repeat the full sentence (46a); it can repeat part of the sentence such as the island (46b) or the lower VP (46c); it can also be a single word (46d). Consider the following range of acceptable answers:

(46) (huwweh) ʔinta rawwaHit [ba9idma iz-zalameh šaf **mi:n**]?

    Q you.MS left.2MS [after the-man saw.3MS **who**]

    'Who is (x) such that you left after the man saw (x)?'

  a. A: (ʔana) rawwaHit ba9idma iz-zalameh šaf mary.

        I left.1S after the-man saw.3MS Mary

       'I left after the man saw Mary.'

  b. A: ba9idma iz-zalameh šaf mary.

        after the-man saw.3MS Mary

       'After the man saw Mary.'

c. A: šaf   mary.
           saw.3MS   Mary
           'saw Mary.'

d. A: mary.
           Mary

I judge all of the above answers as equally acceptable. It is not easy to say that JA has a particular answering pattern that restricts the acceptability of the answer to a given question. The answer varies depending on contextual and sociolinguistic factors and the variation is best regarded as a stylistic issue.

Summarizing, in this subsection, I have presented data from Japanese showing that in-situ wh-phrases within a single language may exhibit a mixed behaviour with respect to island effects. While in-situ wh-phrases in Japanese observe the wh-island condition, they violate the relative clause island condition. Nishigauchi's (1986, 1990) and Pesetsky's (1987) pied-piping account for Japanese wh-in-situ was reviewed and shown to be problematic, and there is no motivation to extend it to JA.

2.3.5   Summary: The LF wh-movement analysis

This section has introduced the major tenets of an influential approach to the analysis of in-situ wh-questions, namely, the LF movement analysis introduced by Huang (1982). Under this analysis, it is assumed that in-situ wh-phrases are interpreted much in the same fashion as their overtly moved corresponding wh-phrases in the sense that both undergo wh-movement, albeit at different computational levels. This assumption was motivated by the parallel behaviour of both types of wh-phrase in certain languages, notably Chinese and English. Another core assumption in this analysis is that covert wh-movement is less restricted than overt wh-movement. However, cross-linguistic data was brought to the

discussion showing that this assumption is problematic on both theoretical and empirical grounds. While some languages fit with the assumption that LF movement is less restricted than overt syntactic movement (e.g., Chinese, English and JA), other languages (e.g., Iraqi Arabic and Hindi) deviate from this assumption to the extent that they exhibit opposite behaviour. In-situ wh-questions in Iraqi Arabic show locality restrictions stronger than those associated with their overtly moved wh-constructions. Japanese in-situ wh-questions exhibit a mixed behaviour in the sense that they observe certain island conditions and violate others. In brief, there is a clear variation between the different languages to the extent that no single pattern can be generalized to describe the behaviour of in-situ interrogative constructions across different languages.

The preceding discussion has shown that the LF movement analysis suffers from several problems and may not be the only possible mechanism for interpreting in-situ wh-questions in natural language grammar. Indeed, many linguists have abandoned the LF movement analysis: see, e.g., Saddy (1991) for Bahasa Indonesia; Cheng (1991), Aoun & Li (1993) and Tsai (1994a & b) for Chinese; Watanabe (1992, 2003) for Japanese; Cole & Hermon (1994) for Ancash Quechua; Ouhalla (1996) for Iraqi Arabic; Reinhart (1998) for English; Megerdoomian & Ganjavi (2000) for Persian and East Armenian; Simpson (2000) for various languages; Sabel (2001, 2002) and Paul (2003) for Malagasy; and Soltan (2011, 2012) for Egyptian Arabic. Reviewing these works on these different languages reveals no forceful arguments in favor of the LF movement analysis for in-situ wh-questions in these languages, especially when considering the asymmetries between covert and overt movement with respect to island effects and intervention effects in these languages. In other words, the parallelism between the two types of movement in different languages is not always a crisp one. Rather, there is plenty of evidence for a clear distinction between the two.

Even if the LF movement analysis for in-situ wh-questions in Chinese was feasible, there is overwhelming evidence now that it cannot capture the range of cross-linguistic facts highlighted above. If the LF movement analysis is adopted as the sole means of accounting for in-situ wh-questions, it is not clear how the cross-linguistic variation outlined above can be accommodated. The cross-linguistic facts presented so far suggest the type of analysis needed to resolve, or at least avoid, the inconsistent characterization of the behaviour of in-situ wh-questions. Since the set of conflicting cross-linguistic facts cannot be unified under any movement analysis, be it overt or covert, an alternative analysis should involve a question-forming mechanism that does not rely on the application of wh-movement and is not governed by locality restrictions. The relevant mechanism should ideally be one that is independently needed in the theory of grammar. The following section describes a mechanism that meets these criteria: unselective binding.

2.4   The unselective binding approach

This section presents another major approach to the analysis of in-situ wh-questions that does not depend on wh-movement. This alternative approach is the unselective binding analysis advanced in the work of Pesetsky (1987), who proposes that the interpretation of some in-situ wh-phrases does not involve movement at LF.[8] Unselective binding is an interpretive mechanism for licensing wh-phrases that are not in a local Spec-Head relation with a [+wh] C; the interpretation of the wh-phrase is achieved via binding in the sense that it is coindexed and c-commanded by the [+wh] C scopal position. Chomsky (1995: 291) also acknowledges the unselective binding mechanism and the idea that the licensing of wh-phrases may be achieved non-locally.

Pesetsky's unselective binding analysis can be regarded as a revived version of Baker's (1970) Q-morpheme proposal, which can be summarized as follows:

(47) **Baker's Q-morpheme proposal** (Wachowicz 1978: 153)

    a. Questions in SVO and VSO languages involve a clause-initial abstract Q-morpheme, whereas this Q-morpheme occurs clause-finally in SOV languages.

    b. Lexical items such as *whether* and *if* are lexical realizations of the Q-morpheme.

Under the Q-morpheme proposal, the scope of wh-phrases, both moved and in-situ, is attained through co-indexation between the wh-phrase and an interrogative morpheme in Comp. In other words, there is an interrogative operator in a matrix scope position that can bind more than one wh-phrase within the structure. According to Baker's (1970) analysis, the representation of the wh-question in (48a) below would then look like that in (48b).

(48) a. Who read what?

    b. Baker-style representation:
      $[[_{Comp}\ Q_{i,j}\ who_i]\ e_i\ read\ what_j]$ (Pesetsky 1987: 99)

According to this analysis, the two wh-phrases *who* and *what* in the above wh-construction are simultaneously unselectively bound by the Q-operator.[9] The term "unselective binding" is used in the sense that there is always a Q-particle in a scope position that can bind any variable occurring in its c-command domain. The scope of the in-situ wh-phrase *what* is assigned via co-indexation with the Q-operator in the matrix Comp and thus the wh-phrase does not need to undergo movement at LF to be interpreted.

    Pesetsky (1987) notices that LF movement violates the Complex NP Constraint and the adjunct clause constraint, contrary to its overt counterpart. He explains this observation through the following English and Japanese examples. The English examples in (49) involve overt wh-movement and are ungrammatical due to the violation of island constraints. The corresponding Japanese examples in (50) are wh-in-situ questions and are grammatical despite the presence of exactly the same island configurations.

(49) **Overt wh-movement in English is subject to island constraints**

    a. *__What___i did Mary meet [_{NP} the man [_{S'} who gave *e*_i to John]]?

    b. ?*__What___i did Mary leave before John read *e*_i?

(50) **Wh-in-situ in Japanese is not subject to island constraints**

    a. Mary-wa   [_{NP}[_{S'} John-ni   **nani-o**   ageta]   hito-ni]   atta-no?   Mary-Top

                      John-Dat   **what-Acc**   gave   man-Dat   met-Q

    'What did Mary meet the man who gave to John?'

    b. Mary-wa   [John-ga   **nani-o**   yomu   mae-ni] dekaketa-no?

      Mary-Nom   John-Nom   **what-Acc** read   before   left-Q

    'What did Mary leave before John read?'   (Pesetsky 1987: 110)

According to Pesetsky (1987), since island phenomena are one of the principal diagnostics for movement, the application of movement at LF is hard to find convincing as it lacks this important diagnostic. Therefore, Pesetsky considers Huang's (1982) and Lasnik & Saito's conclusion that Subjacency does not apply at LF, though plausible, disappointing.

    Pesetsky (1987) distinguishes two types of wh-phrase depending on their discourse characteristics: d(iscourse)-linked and non-d(iscourse)-linked wh-phrases. While d-linked wh-phrases imply the existence of a set of elements previously established in the discourse, non-d-linked wh-phrases are less associated with a preexisting set. The wh-phrase 'which NP' represents a d-linked wh-phrase, and the wh-phrases 'who' and 'what' are members of the non-d-linked group. The following examples illustrate this contrast.

(51)   a. Which book did you read?

    b. Which man read which book?   (Pesetsky 1987: 108)

(52)   How many angels fit on the head of a pin?   (Pesetsky 1987: 108)

The wh-phrase *which book* in (51a) is used to ask a question about one of a set of books previously known in the discourse; it is assumed that both the speaker and hearer are familiar with this set of books. Similarly, in the question in (51b), it is assumed that both the speaker and hearer are familiar with a set of men and a set of books whose members are established in the discourse. By contrast, in the question given in (52), there is no presumption that either the speaker or hearer has a particular set or quantity of angels in mind. However, Pesetsky (1987) explains that d-linking is not restricted to 'which-NP' phrases; all wh-phrases can be d-linked if put in a proper context whereby reference is established. Thus, 'who' and 'what' can also have a d-linked reading if they are understood to refer to members and/or entities that are already established in the previous discourse, as shown in the following examples.

(53) a. I know what just about everybody was asked to do, but what did who (actually) do?

   b. I know that we need to install transistor A, transistor B, and transistor C, and I know that these three holes are for transistors, but I'll be damned if I can figure out from the instructions where what goes!   (Pesetsky 1987: 109)

Pesetsky's (1987) discourse-based classification of wh-phrases entails a different analysis for each type. He suggests interpreting d-linked wh-phrases in their in-situ position without applying LF movement, while maintaining LF movement for the interpretation of non-d-linked wh-phrases.

   Mirroring Heim's (1982) analysis of indefinites, Pesetsky proposes that d-linked in-situ wh-phrases lack quantificational force of their own and thus do not need to move at LF. Rather, they gain scope by being unselectively bound in-situ by an interrogative operator in the root Comp. To see how the unselective binding analysis applies, let us first consider the manner in which indefinites such as *a man* and *a donkey* in (54) are interpreted under Pesetsky's proposal.

(54) a. If a man owns a donkey, he always beats it.

  b. [always$_{i, k}$ [if a man$_i$ owns a donkey$_k$, he$_i$ beats it$_k$]]   (Pesetsky 1987: 101)

In this example, the indefinites *a man* and *a donkey* are interpreted in their in-situ positions. This is because indefinites lack any quantificational force of their own and thus do not undergo movement. Rather, they are interpreted via the mechanism of binding, in which they function as variables that are bound by a binder (like *always* in the above example). Such binders, under Pesetsky's proposal, can unselectively bind multiple variables at once.

  Pesetsky (1987) proposes that, parallel to indefinites, d-linked in-situ wh-phrases are also non-quantificational and thus do not need to undergo movement. He analyzes them much in the same way as the indefinites *a man* and *a donkey* in (54), adopting a Baker-style analysis of interpretation and scope assignment. The following example illustrates the application of this analysis.

(55) a. Mary asked which man read which book.

  b. Baker-style LF representation:
    ... [S' [Comp Q$_{i,j}$ which man$_i$] [$_S$ e$_i$ read which book$_j$]]   (Pesetsky 1987: 107)

Under the unselective binding analysis, there is always a [+Q] interrogative operator in the matrix/root Comp, which is co-indexed with the two wh-phrases simultaneously. The in-situ wh-phrase is thus interpreted without applying LF movement.

  By contrast, Pesetsky (1987) analyzes non-d-linked wh-phrases as real quantifiers, thus he assigns them a Chomsky-style analysis whereby they are interpreted via covert movement to Comp at LF. This means that, in multiple wh-questions in English for example, both the wh-phrase that moves at S-structure and the non-d-linked in-situ wh-phrase that moves at LF will end up in Comp at LF. However, Pesetsky (1987) argues that non-d-linked in-situ wh-phrases do not move into Comp; rather, they move to a position to the left of

Comp, thus they adjoin to S'. The following examples followed by their LF representations illustrate Pesetsky's LF movement analysis of non-d-linked wh-phrases.

(56) a. Who$_i$ did you persuade e$_i$ to read what?

b. Mary asked [who$_i$ [e$_i$ read what]]?   (Pesetsky 1987: 104)

(57) **A Chomsky-style interpretation at LF:**

a. [S' what$_j$ [S' who$_i$ [S you persuade e$_i$ to read e$_j$]]]

b. ... [S' what$_j$ [S' who$_i$ [S e$_i$ read e$_j$]]]   (Pesetsky 1987: 106)

The representations given in (57) show that LF movement of the non-d-linked wh-phrase *what* satisfies the Subjacency Condition. The trace the LF movement leaves behind is properly governed by the verb *read*. This invites to the discussion the fact that under Pesetsky's (1987) proposal, wh-movement is uniform both in syntax and at LF, which is a crucial difference between Pesetsky's (1987) LF movement and that of Huang (1982). For Pesetsky, wh-movement, whether at LF or in syntax, is governed by the same constraints; no movement is more or less restricted than the other (contra Huang 1982). Accordingly, Pesetsky suggests interpreting in-situ wh-phrases that observe the general constraints on the movement operation via LF movement, while interpreting in-situ wh-phrases that do not observe these constraints in their in-situ position via unselective binding.

Summing up, Pesetsky (1987) distinguishes d-linked and non-d-linked wh-phrases and proposes a different analysis for each type. Non-d-linked wh-phrases are analyzed as real quantifiers and, thus, interpreted via wh-movement at LF (i.e., a 'Chomsky-style' interpretation). D-linked wh-phrases, by contrast, are treated on a par with Heim's (1982) indefinites as they lack quantificational force of their own and hence have no need to undergo movement at LF. They are instead interpreted via the mechanism of unselective binding (i.e., a non-movement or a 'Baker-style' interpretation).

Under the unselective binding approach, in-situ wh-phrases do not undergo movement at LF; scope assignment is taken care of through unselective binding by an element in Comp. The unselective binding analysis has been widely adopted for the interpretation of in-situ wh-questions in different languages: see, e.g., Nishigauchi (1990, 1991) and Morita (2012) for Japanese; Tsai (1994a & b, 2008), Takita et al (2007), and Stepanov & Tsai (2008) for Chinese; Cheng & Huang (1996) for wh-conditionals in Chinese; Ouhalla (1996) for Iraqi Arabic; Cole & Hermon (1998) for Malay; Aoun & Choueiri (1999) for Lebanese Arabic; Chang (2000) for Tsou; Sabel (2001, 2002) for Malagasy; Sabel & Zeller (2006) for Zulu; Bruening & Tran (2006) and Tsai (2009) for Vietnamese; Soltan (2011, 2012) for Egyptian Arabic; and Sato (2011) for Colloquial Singapore English and Singapore Bazaar Malay. It is argued that wh-phrases in all these languages do not undergo covert movement at LF. Rather, they are interpreted in the c-command domain of a Q-particle in a scope position. The adoption of unselective binding in the above studies is mainly triggered by considerations of the lack of island effects in in-situ questions in these languages. However, it remains to be made clear at this point that unselective binding, in principle, is not restricted to morphologically d-linked wh-phrases such as 'which NPs'. It can accommodate all wh-in-situ (cf. Pesetsky 1987 and Bayer 2005; see also all the above-cited studies). More importantly, the role of d-linking in wh-question formation seems to be different from one language to another (Bruening & Tran 2006).

I will adopt the unselective binding approach to account for in-situ wh-questions in JA, arguing that it can successfully capture the different syntactic properties of the wh-constructions under investigation and avoid the drawbacks associated with the LF movement approach. In the remainder of this chapter, I lay out an unselective binding analysis of in-situ wh-questions in JA and show that this analysis has several empirical merits.

2.5 **Analysis of in-situ wh-questions in JA**

This section puts forward my analysis of in-situ wh-questions in JA, which is based on the unselective binding proposal espoused by Baker (1970) and Pesetsky (1987), and adopted by Chomsky (1995) (see also Nishigauchi 1991; Tsai 1994a & b; Cole & Hermon 1998; and Bruening & Tran 2006). I will show how this analysis is more desirable than an LF movement analysis as it can straightforwardly account for all the facts observed in in-situ wh-questions in JA. Moreover, I will show that this approach has several theoretical benefits that can be reaped to provide a straightforward account for certain aspects of in-situ wh-constructions in JA, particularly the question particle *huwweh*.

I propose, following Pesetsky (1987), that wh-phrases in this type of wh-question are interpreted via unselective binding rather than movement at LF. Accordingly, I assume that there is always a null interrogative operator base-generated in the matrix Comp (or, more precisely, in the head C); this [+Q] operator bears the same index as the wh-phrase and, thus, unselectively binds it in its first-Merge position in the lexical domain. Under this proposal, the following abstract syntactic representation can be given for the derivation of in-situ wh-questions in JA in general.

(58) [CP Op$_i$ [TP … wh-phrase$_i$]]

In more detail, the derivation of an in-situ wh-question in JA proceeds as follows. The wh-phrase is directly merged in its base argument/adjunct position and remains there. The interpretation of the wh-phrase does not require it to undergo movement, either overtly or covertly. What takes care of the interpretation of the wh-phrase is the null interrogative operator in the [+wh] C, which binds the wh-phrase in its in-situ position. This analysis adopts the assumption that in-situ wh-phrases in such cases do not function as operators in the classical sense, but are rather variables that are bound (see also Heim 1982; Cheng 1991;

Watanabe 1991; Aoun & Li 1993). Correspondingly, the in-situ wh-question in (1a) above, reproduced here as (59) would be represented as in (60).

(59) (huwweh) iz-zalameh šaf   **mi:n** ʔimbariH?
     Q   the-man   saw.3MS   **who** yesterday
     'Who did the man see yesterday?'

(60) [CP **Op$_i$** [TP iz-zalameh šaf **mi:n$_i$** ʔimbariH]]

A Pesetsky-type (or a Baker-type) analysis for in-situ wh-questions in JA is favored to a Huang-type analysis for several reasons. Recall that this wh-construction manifests an infinite unbounded dependency between the interrogative Comp and the wh-phrase (see examples 9-10 above) and does not show island effects. The absence of island effects is explained if we take the relation between in-situ wh-phrases and the [+Q] Comp to be established not via wh-movement but rather by binding. The fact that in-situ wh-phrases can have a wide scope over the entire structure even when included in an island follows from the fact that binding in the sense of Pesetsky (1987) is not subject to locality restrictions (see also Nishigauchi 1991; Tsai 1994a & b; Cole & Hermon 1994, 1998; Simpson 2000; Bruening & Tran 2006).

The unselective binding approach also provides an explanation for the (optional) appearance of the question particle *huwweh* in such wh-constructions. Since this analysis posits that there is always a null interrogative operator in C unselectively binding the wh-phrase in-situ, *huwweh* can be regarded as a lexical realization of this operator, on a par with the analysis of English *whether* and *if* as lexical realizations of the Q-morpheme under Baker's (1970) analysis (see also Wachowicz 1978; Soltan 2011). An explicit diagram of the structure of a wh-question with *huwweh* is given in (61).

(61)

```
                          CP
                   ╱            ╲
               Spec              C'
                            ╱          ╲
                           C            TP
                           │       ╱         ╲
                    Huwweh/Op_i  DP           T'
                                  │        ╱      ╲
                            iz-zalameh_j  T        VP
                             the-man          ╱        ╲
                                            DP          V'
                                            t_j      ╱        ╲
                                                   V'          AdvP
                                                ╱      ╲
                                               V        NP
                                               │        │
                                              šaf      Mi:n_i    ʔimbariH
                                              saw      who       yesterday
```
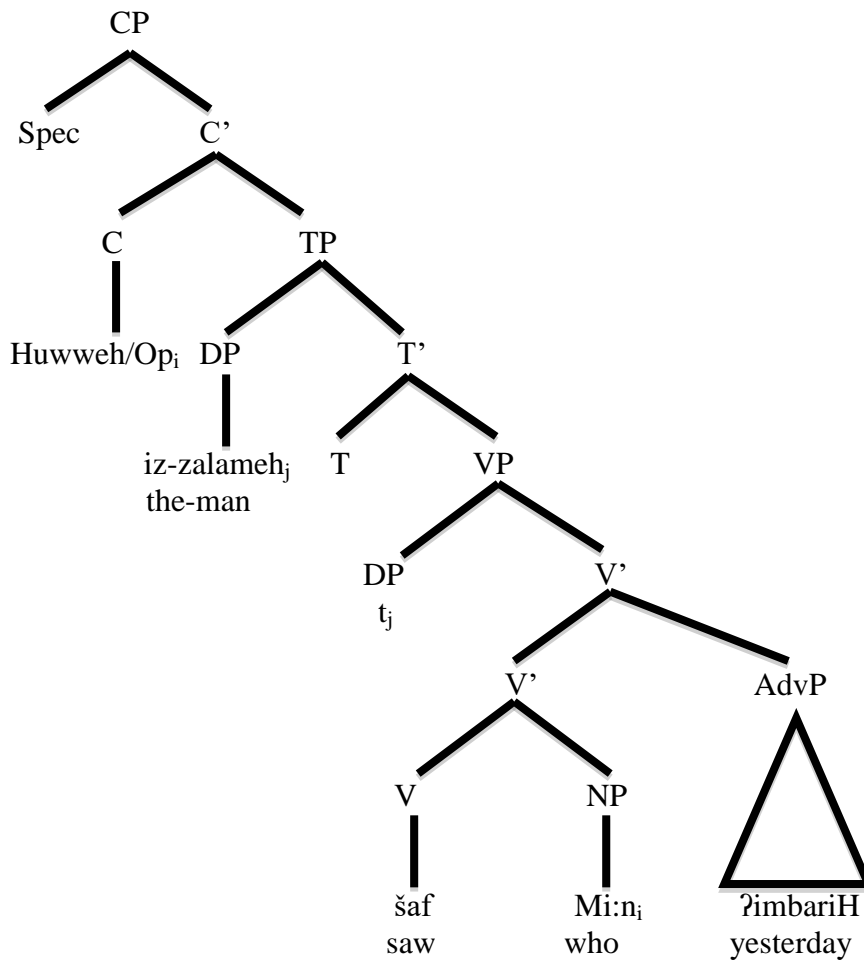
The appearance of the particle *huwweh* is a salient detail of JA wh-questions that would have no clear motivation under an LF movement analysis. More importantly, if we followed Huang (1982) in assuming that in-situ wh-phrases undergo movement at LF, this would entail that the wh-phrases themselves function as interrogative operators, thus targeting [Spec, CP]. However, if the interpretation of in-situ wh-phrases in JA were indeed done by covert movement at LF, the island insensitivity of this movement would remain a mystery. Even under a more lax theory where LF movement is less restricted than its overt counterpart, the question how and why such movement is less restricted if it was a bona fide movement would remain pending. Under the current non-movement/binding analysis, none of these questions arises. There is no duality in the status of the locality restrictions since there is no covert movement at all; the wh-phrase has never undergone any type of movement throughout the

derivation. The question particle *huwweh* also receives a principled account under the unselective binding analysis.

The optionality of the question particle in JA wh-questions can be explained in light of the fact that wh-phrases in JA, unlike Japanese and Chinese wh-phrases for example, are never ambiguous and invariably have a wh-interrogative reading. In other words, the use of the question particle in JA does not carry any functional weight such as disambiguating the meaning of the wh-phrase, and hence is optional. To make this point clear, let us consider the use of the question particle in Japanese and Chinese and compare it with the JA situation.

Japanese makes use of two question particles, *no* and *ka* (Cheng 1991; Aoun & Li 1993). The question particle *no* can be used only in matrix clauses, while the question particle *ka* can be used in both matrix and embedded clauses (Miyagawa 1987; Cheng 1991; Lasnik & Saito 1992; Aoun & Li 1993). The obligatoriness of the question particle in Japanese can be explained in light of the ambiguous nature of wh-phrases in the language. Specifically, Japanese wh-phrases can be interpreted as interrogative, existential and universal (Nishigauchi 1990; Cheng 1991). According to Nishigauchi (1990), Japanese wh-words do not have inherent quantificational force on their own. Thus, their quantificational force is determined by other elements such as the particle *ka*, which contributes quantificational force to the wh-word. Similarly, Chinese makes use of a question particle (i.e., *ne*) which is allowed only in matrix questions, but not in embedded questions (Cheng 1991; Aoun & Li 1993). Although wh-words in Chinese are also ambiguous (op. cit), the wh-particle *ne* is optional. Cheng (1991) attributes this optionality to the fact that the environments in which wh-phrases occur can disambiguate the different possible readings. For example, wh-words in Mandarin Chinese have an existential reading only when they are in a polarity environment, hence no need for the question particle in such contexts. However, when the Chinese wh-word occurs in the scope of negation, ambiguity arises: it can be either

existential or interrogative. The occurrence of an overt wh-particle is necessary in such cases to disambiguate such readings.

In brief, both Japanese and Chinese wh-phrases can have a non wh-interrogative reading in certain contexts. Accordingly, Cheng (1991) connects the use of the question particle with a functional reason: to resolve ambiguity. However, no such readings can obtain in JA: wh-phrases cannot have any reading other than the wh-interrogative. Thus, the optionality of the question particle in JA does not come as a surprise. Moreover, there is no restriction on the contexts where the question particle can be used in JA: it can appear in both matrix and embedded questions; it can also be used optionally in yes/no questions.

To recap, this section has laid out the proposed analysis for in-situ wh-questions in JA. Building mainly on island facts, it was asserted that the operator-variable relationship in this Jordanian wh-construction cannot be interpreted via the mechanism of movement at LF. Unselective binding (Baker 1970; Pesetsky 1987; Chomsky 1995) was shown to capture all the facts from JA in-situ wh-questions. Under this analysis, there is always a null interrogative operator base-generated in C, binding the wh-phrase in its original sentence-internal position. Characterized as such, in-situ wh-constituents do not function as interrogative operators. Rather, they form variables that are bound in-situ on a par with Heim's (1982) indefinites. Under this analysis, the matrix scope that in-situ wh-phrases take over the entire structure in island contexts finds a principled explanation in the absence of locality restrictions on binding (Pesetsky 1987; see also Simpson 2000 and Bruening & Tran 2006). The analysis neatly accounts for the Q-particle as well.

2.6 Further evidence for the absence of LF movement in JA: Intervention effects

The argument that the LF movement is not, and, in fact, cannot be, the underlying mechanism that stands behind interpreting in-situ wh-questions in JA receives further support

by considerations of intervention effects in the sense of Beck (1996). More specifically, a growing body of research converges on the idea that there exist certain elements that degrade or prevent LF movement. Such elements include the adverb *only* and the universal quantifier *every*. In this section, I consider the phenomenon of intervention effects (Beck 1996), which can be taken as a diagnostic, or at least an indication, of the application of LF movement. I will employ this phenomenon to further support the non-movement analysis of in-situ wh-questions in JA.

To illustrate the phenomenon of intervention effects, I will present data from a suite of typologically different languages ranging from wh-in-situ languages (e.g. Korean and Vietnamese), partial wh-movement languages (e.g. German) and optional wh-movement languages (e.g. French). After that, I will provide data from JA using the set of interveners discussed in the literature showing that they do not affect the grammaticality of in-situ wh-questions in JA, which in turn constitutes further evidence that no LF movement is at work in such Jordanian interrogative constructions. The class of interveners I am drawing upon in the Jordanian data includes the universal quantifier, the negation element, *bas* 'only', and *Kaman* 'also'.

According to Beck's (1996) Minimal Quantified Structure Constraint (MQSC), LF movement of in-situ wh-phrases is blocked by certain elements (or interveners) such as negative quantifiers. The result of this blocking is, if not ungrammaticality, degraded grammaticality of the in-situ wh-construction. The effect of the occurrence of such elements on the grammaticality of in-situ wh-constructions is known as the intervention effect. Beck points out, for example, that the occurrence of negation with in-situ wh-phrases in German downgrades the grammaticality of the structure. Under the assumption that in-situ wh-questions are interpreted via covert movement at LF, Beck argues that the downgraded grammaticality of wh-questions involving a negation element is due to the fact that such

elements block LF movement of the in-situ wh-phrase. To illustrate, let's consider the following examples.

(62) **Intervention involving 'where' and 'nobody' in German**

    a. ??Wer hat <u>niemanden</u> **wo** angetroffen?

       Who has <u>nobody</u> **where** met

       'Who didn't meet anybody where?'

    b. Wer hat **wo** <u>niemanden</u> angetroffen?

       Who has **where** <u>nobody</u> met

       'Who didn't meet anybody where?'

(63) **Intervention involving 'whom' and 'nobody' in German**

    a. ??*Was glaubt <u>niemand</u> **wen** Karl gesehen hat?

       What believes <u>nobody</u> **whom** Karl seen has

       'Who does nobody believe that Karl saw?'

    b. **Wen** glaubt <u>niemand</u> daβ Karl gesehen hat?

       Whom believes <u>nobody</u> that Karl seen has

       'Who does nobody believe that Karl saw?' (Beck 1996:3-5)

According to Beck (1996), the ill-formedness of the examples in (62a) and (63a) is an intervention effect. The presence of an intervener (i.e. the negative element *niemand* 'nobody') blocks the covert LF movement of the wh-phrase *wo* 'where' in (62a) and *wen* 'whom' in (63a). This blocking effect, or intervention effect, arises because the negative element *niemanden* 'nobody' occurs in a position higher than that of the wh-phrase, thus forming an intervener for the LF movement of the wh-phrase. Such an intervention effect, however, does not emerge when the wh-phrase overtly moves, as in (62b) and (63b). This is because the negation element is no longer a barrier to LF movement, being in a position lower than that of the wh-phrase. (Notice that German also applies partial wh-movement, hence the wh-phrase can appear in an intermediate position in the structure.)

A similar intervention effect is documented in Korean, which is an in-situ language. According to Beck & Kim (1997), the occurrence of *man* 'only' and *to* 'also' in in-situ wh-questions in Korean yields ungrammaticality. The following are illustrative examples.

(64) **Intervention involving 'who' and 'only' in Korean**

   a. * Minsu-<u>man</u> **nuku-lûl** po-ass-ni?

     Minsu-<u>only</u>   **who-Acc** see-Past-Q

     'Who did only Minsu see?'

   b. **Nuku-lûli** Minsu-<u>man</u> t_i po-ass-ni?

     Who-Acc Minsu-<u>only</u>   see-Past-Q

     'Who did only Minsu see?'

(65) **Intervention involving 'who' and 'also' in Korean**

   a.*Minsu-<u>to</u>   **nuku-lûl** po-ass-ni?

     Minsu-<u>also</u>   **who-Acc** see-Past-Q

     'Who did Minsu, too, see?'

   b. **Nuku-lûli**   Minsu-<u>to</u> ti po-ass-ni?

     Who-Acc   Minsu-<u>also</u>   see-Past-Q

     'Who did Minsu, too, see?'   (Beck & Kim 1997: 370-371)

The ungrammaticality of the wh-questions in (64a) and (65a) is the result of intervention. The LF movement of the wh-phrase 'who' is blocked because of the intervener 'only' in (64a) and 'also' in (65a), which both occur in a position higher than that of the in-situ wh-phrase. The full acceptability of the examples in (64b) and (65b), on the other hand, reflects the absence of intervention, as the potential interveners occur in a position lower than that of the overtly scrambled wh-phrase.

     French upholds the intervention effects under investigation as well. French is an optional wh-movement language in the sense that it allows its wh-phrases either to overtly move to a clause-initial position or to stay in-situ. Mathieu (1999), for instance, argues that

intervention effects arise under the in-situ wh-option if negation elements or operators (such as the focus marker 'only') occur in an A'-specifier position. Such intervention effects, however, are not observed in the case of overt wh-movement. Consider the French examples in (66).

(66) **Intervention involving 'what' and 'only' in French**

    a. *Seulement   JEAN   arrive   à faire **quoi**?
       Only   Jean   arrives to do **what**
      'What does only JEAN manage to do?'

    b. **Qu$_i$**'est-ce que   seulement JEAN   arrive   à faire t$_i$?
      What   that   only   Jean   arrives to do
      'What does only JEAN manage to do?'   (Mathieu 1999: 447-448)

The LF movement of the in-situ wh-phrase in (66a) is blocked by the operator *seulement* 'only', hence the ungrammaticality; such intervention does not arise in (66b).

Interestingly, Bruening & Tran (2006) argue that both LF movement and unselective binding are employed in the derivation of Vietnamese in-situ wh-questions. When there is no Q-particle in the structure, LF movement applies. Evidence for this analysis comes from the intervention effects observed in such structures. Specifically, when the question particle is absent, wh-words cannot be c-commanded by quantificational elements such as universal quantifiers and negation. By contrast, when a Q-particle is used in the structure, the scope of in-situ wh-phrases is interpreted via unselective binding rather than LF movement. Intervention effects also form the evidence for this analysis: wh-questions with the Q-particle are immune to intervention effects. To illustrate the intervention effects in Vietnamese, let's consider the following examples.

(67) **Intervention involving 'what' and 'everyone' in Vietnamese**

    a. *Aí   <u>cũng</u>   thích **cái gì**

      Who   <u>every</u>   like   **what**

      'What does everyone like?'

    b. Ai   <u>cũng</u>   thích **cái gì**   thê?

      Who <u>every</u>   like   **what**   PRT

      'What did everyone like?'

(68) **Intervention involving 'who' and 'no one' in Vietnamese**

    a. *<u>Chăng</u> aí   mò'i   **aí**?

     <u>Neg</u>   who invite   **who**

     'Who does/will no one invite?'

    b. <u>Chăng</u>   aí   mò'i   **aí**   thê?

     <u>Neg</u>   who invite   **who** PRT

     'Who did no one invite?'   (Bruening & Tran 2006: 329-330)

The above examples show that there is a contrast between Vietnamese in-situ wh-questions with respect to intervention effects depending on the presence of the question particle. While both the universal quantifier *Aí cung* 'everyone' and negation particle *chang Aí* 'no one' render in-situ wh-questions that lack the question particle ungrammatical (the (a) examples above), they do not have the same effect on otherwise identical wh-questions that involve the question particle (the (b) examples). Bruening & Tran (2006) take this contrast as evidence that wh-phrases in Vietnamese move at LF in such matrix questions only if there is no Q-particle. This LF movement is blocked by the preceding c-commanding quantifiers, hence ungrammaticality. The grammaticality of questions involving the Q-particle (the (b) examples), on the other hand, is due to the unselective binding mechanism which does not require movement; therefore, no blocking effects appear.

It is worth noting here that the question particle in Vietnamese also serves a semantic function, which is encoding realis mood and inducing presupposition. Questions with the particle are realis, whereas those lacking the particle are irrealis. The above Vietnamese data may thus give the impression that the Q-particle corresponds to unselective binding, and that unselective binding in Vietnamese is triggered by realis mood. However, Bruening & Tran (2006) assert that this is not the case upon investigation of a wide range of data.

Bruening & Tran (2006) explain that the question particle in Vietnamese is not what unselectively binds the wh-in situ. Rather, there is always a null existential quantifier that binds the wh-phrase in-situ. The question particle only serves a syntactic function: it licenses a null Q binder in its complement. Specifically, Vietnamese matrix and embedded questions have a null Q binder, which requires an appropriate licensor. The null Q binder in embedded questions is licensed by the head that selects the embedded clause (i.e. the higher verb). The Q binder in matrix questions is licensed by the question particle, which is itself a head of a particular projection related to realis mood. This means that not every unselectively bound question should involve a question particle, but rather only matrix questions. Accordingly, Bruening & Tran conclude that the connection between the question particle and unselective binding is indirect, and that the connection between realis mood and unselective binding is probably accidental. The question particle in Vietnamese serves a syntactic function and only adds a presupposition that the event has been realized.

The Jordanian situation, however, differs from the Vietnamese situation in three ways. First, the presence/absence of the question particle in JA has nothing to do with island effects (as was shown in section 2.2 above) or with intervention effects (as will be shown shortly). Second, the presence/absence of the question particle in JA is fully acceptable in both matrix and embedded questions (as was shown in section 2.2 above). Third, the question particle in

JA does not serve the function of licensing the null Q binder; rather, it is the overt realization of this null Q-binder as was shown in the previous section.

I turn now to in-situ wh-questions in JA and show that the intervention data supports my non-movement analysis. In-situ wh-questions in JA can co-occur with any of the interveners highlighted above and the result is consistently full grammaticality. This behaviour confirms that there is no LF movement of the in-situ wh-phrase to be blocked by such interveners. The following examples illustrate how in-situ wh-phrases in JA, unlike their German counterparts for instance, can co-occur with universal and negative quantifiers without degrading the grammatical status of the structure.

(59) **No intervention with 'who' and 'every'/'no' in JA**

a. (huwweh) <u>kol</u> <u>waHad</u> šaf **mi:n**?
   Q <u>every</u> <u>one</u> saw.3MS **who**
   'Who did everyone see?'

b. (huwweh) <u>wala</u> <u>waHad</u> šaf **mi:n**?
   Q <u>no</u> <u>one</u> saw.3MS **who**
   'Who did nobody see?'

If the in-situ wh-phrase *mi:n* 'who' were to undergo covert movement at LF in the sense of Huang (1982), an intervention effect would be expected to arise as a result of the wh-phrase's crossing over the universal quantifier in (69a) and the negative quantifier in (69b). However, such intervention effects are not observed in JA. The full grammaticality of the above in-situ wh-questions thus upholds the proposed non-movement analysis, as the intervention effects that would be expected under a movement analysis do not arise.

In addition to the data involving universal and negative quantifiers in (69), the intervention effects observed with the focus particles 'also' and 'only' in Korean and French also do not emerge In JA. Consider the following examples.

(70) **No intervention with 'who' and 'also'/'only' in JA**

a. (huwweh)   iz-zalameh   <u>Kaman</u>   šaf   **mi:n**?

Q   the-man   <u>also</u>   saw.3MS   **who**

'Who else did the man see?'

b. (huwweh)   iz-zalameh   <u>bas</u>   šaf   **mi:n**?

Q   the-man   <u>only</u>   saw.3MS   **who**

'Who only did the man see?'[10]

The grammaticality of the JA sentences in (69)–(70) indicates that the negative quantifiers, universal quantifiers, and the focus particles 'also' and 'only' do not act as interveners for the interpretation of in-situ wh-questions. As argued above, the lack of intervention effects in the context of such potential interveners indicates that Jordanian in-situ wh-questions are not formed by LF movement. Overall, then, with respect to both island constraints and intervention effects, we have seen that in-situ wh-constructions in JA do not observe the standard syntactic constraints on movement, leaving unselective binding as a more appropriate analysis of in-situ wh-questions in JA.

2.7   Implications for the typology of wh-in-situ

The discussion in this chapter has shown that there is clear inconsistency in the behavior of wh-in-situ across different languages, and sometimes even within the same language, in terms of island effects, which in turn suggests that wh-in-situ is far from being uniform. For example, while in-situ wh-phrases do not display island effects in English, Chinese and JA, they do in other languages such as Hindi and Iraqi Arabic. They can also display a mixed behaviour in this regard depending on the type of island as was shown for Japanese wh-in-situ. Such typological variation raises the question of whether all instances of wh-in-situ should be uniformly analyzed.

It can be safely said at this point that there are different types of wh-in-situ that need different treatments (see also Cheng 2003b, 2009). Whether in-situ wh-phrases undergo covert wh-movement that parallels the overt wh-movement is still a controversial issue in the field. For example, Huang (1982) and Lasnik & Saito (1984, 1992) argue that LF movement in general need not observe the Subjacency principle. By contrast, many linguists (e.g., Pesetsky 1987, 2000; Cole & Hermon 1998; Bruening & Tran 2006; among others) argue that LF movement obeys the Subjacency principle similar to its overt counterpart. Other linguists such as Aoun & Li (1993) and Simpson (2000) go further and try to eliminate LF movement completely as far as the derivation of wh-in-situ is concerned. This debate is not reconciled yet and it is possible that it will continue for a longer time (cf. Reinhart 1998).

The assumption that wh-movement languages apply overt syntactic movement which is always constrained by Subjacency while in-situ languages apply LF movement that may or may not be subject to the Subjacency principle is an ad hoc assumption that brings little insight. This indeed shows that LF movement is not sufficient on its own to capture the wide typological variation and to reconcile the asymmetries between moved and in-situ wh-phrases, hence the inadequacy of taking LF movement as the only mechanism for interpreting in-situ wh-questions. The approach advocated by Pesetsky (1987) and Cole & Hermon (1998) where both LF movement and unselective binding exist along with overt movement is more revealing.[11]

Both LF movement and unselective binding should be maintained for the interpretation of wh-in-situ across different languages, with a micro-parametric variation within the in-situ family depending on intervention and island effects. In other words, in addition to the overt/covert movement parametric variation, there is another variation at a micro level within the in-situ family where some languages apply LF movement and others apply unselective binding. Some linguists (e.g., Bruening & Tran 2006) even extend such an analysis to wh-in-

situ within a single language, namely, Vietnamese. This means that different mechanisms can be employed for interpreting wh-in-situ across different languages, and even within a single language. If the typological variation in island and intervention effects hinders any uniform classification of wh-in-situ, a uniform treatment of several grammatical constraints such as islandhood and intervention should at least be maintained.

Another implication of the preceding discussion is that islandhood and intervention effects should be maintained to determine the mechanism responsible for interpreting in-situ questions in different languages. I propose that, following and defending the conclusion of Pesetsky (1987, 2000), LF movement should be subject to the same constraints as overt movement (see also Cole & Hermon 1998; Bruening & Tran 2006). Subjacency is a general condition on movement, thus any difference between phonetically visible and invisible movement in this respect cannot be accepted (Reinhart 1998). By and large, if certain in-situ wh-phrases do not show Subjacency effects and intervention effects, this does not support Huang's (1982) assumption that LF movement is less constrained than its overt counterpart. Rather, this indicates that LF movement has never occurred in such cases and that the unselective binding is involved. By contrast, if in-situ wh-phrases show Subjacency and intervention effects, this means that LF movement applies in such cases.

In a nutshell, the mechanisms of LF movement and unselective binding are both needed in natural language grammar for the interpretation of wh-in-situ across different languages. Wh-in-situ can attain scope either through LF movement when the constraints on overt movement are observed, or through unselective binding when such constraints are violated. Indeed, this path has been pursued by many linguists (see, e.g., Pesetsky 1987, 2000; Cole & Hermon 1998; Richards 2001; Bruening & Tran 2006; among others). The syntactic evidence for maintaining both LF movement and unselective binding is much more compelling than the evidence for eliminating one in favor of the other. Eliminating the LF movement

completely, for example, will leave the island sensitivity and intervention effects found in different languages unexplained. Simultaneously, unselective binding makes available the type of analysis needed for in-situ wh-questions that disrespect island conditions and inntervention. Unselective binding also avoids a significant drawback in Huang's (1982) version of LF movement, namely, that Subjacency holds of S-Structure movement only. I conclude that neither the LF movement analysis nor the unselective binding analysis should be eliminated in favor of the other.

2.8   Conclusion

This chapter introduced the typical in-situ wh-questions in JA and proposed that unselective binding is the best approach to account for their syntactic derivation. Two major approaches to the analysis of in-situ wh-questions were considered: the LF movement approach (Huang 1982; Lasnik & Saito 1984, 1992) and the unselective binding approach (Baker 1970; Pesetsky 1987). It was shown that Huang's (1982) version of the LF movement analysis runs into several theoretical and empirical problems upon further cross-linguistic examination, notably including the breakdown of the assumed parallelism between overt movement in syntax and covert movement at LF. The unselective binding analysis of Pesetsky (1987) was found to be a more appropriate approach, as it not only avoids the problems associated with the LF movement approach but also provides a straightforward analysis of the particular syntactic properties of in-situ wh-questions in JA, including island-insensitivity, the (optional) sentence-initial question particle, and the absence of intervention effects. All in all, the discussion presented in this chapter provides further support to the claim that both LF movement and unselective binding are needed in natural language grammar to assign scope to in-situ wh-expressions. In the next chapter, I show how the unselective binding analysis can be extended to wh-constructions that involve apparently

fronted wh-phrases, thus instantiating what I am referring to as pseudo wh-fronting, i.e., the occurrence of a wh-phrase in sentence-initial position for reasons other than wh-movement.

Endnotes

1. I use the term "canonical" in this context, and "typical" in other contexts, to distinguish this type of wh-question from other three types to be discussed in the subsequent three chapters, which I argue are, albeit apparently similar to moved/fronted wh-questions, mere in-situ wh-questions that are fed by different underlying structures.

2. Although *whether* or its equivalent may not constitute a wh-island universally, it does constitute a wh- island in JA as well as in other spoken varieties such as Lebanese Arabic (cf. Aoun & Choueiri 1999; Aoun et al 2010). As the discussion unfolds, it will be shown that *whether* constructions in JA constitute wh-islands exactly as they do in English. For example, extracting a wh-phrase across *whether* in focus fronted wh-questions is disallowed (see example (29b) below and example (7) in the next chapter).

3. The ECP stands for the Empty category Principle. According to Chomsky (1981), all traces must be properly governed. Proper government is achieved either by an appropriate antecedent or lexical element, or by both.

4. It is worth indicating here that the two possible readings of (25a) can be disambiguated with prosody. The first reading comes about with focus on *Mary* and the second one with focus on *like*. In (25b), however, the first reading is not available even if we focus *Mary*, which further supports Simpson's position.

5. One might argue that a timing story with respect to where the scope relations of *only* are interpreted and when covert wh-movement applies can account for the interpretive values of the Chinese example in (27) and at the same time maintain the LF movement analysis. In other words, it can be said that the scope relations of *only* are interpreted at a time prior to movement. My understanding of the PLA, however, is that the lexical element with which the operator *only* is associated should remain in the C-command domain of *only* throughout all levels, even at LF. More crucially, if this timing story were possible, Simpson's observation in example (25b) would have no explanation. It would remain unexplained why the operator *only* can not have a scope over the moved NP *Mary* under such a timing story: the operator *only* is first associated with *Mary* at a certain point and then the NP *Mary* undergoes overt movement maintaining the initial scopal interpretation.

6. Ouhalla adopts the version of binding embodied in Aoun's (1985, 1986) Generalised binding: Condition A requires that anaphors be bound in a given domain. Compound anaphors, which are morphologically complex, are bound locally. By contrast, bare anaphors, which are morphologically simplex, are bound long-distance.

7. Watanabe (1992) pursues a different path to account for the aforementioned Japanese facts arguing that Japanese wh-in-situ involves overt movement of part of the wh-phrase, namely, a phonologically invisible operator, to [Spec, CP] in overt syntax, and there is no LF movement. This overt movement, but not LF movement, is constrained by the Subjacency principle. According to Watanabe (1992), and based on certain morphological considerations, the invisible operator originates in Spec, DP] which is the wh-phrase. Under this analysis, the wh-question given in (i) has the representation given in (ii) in overt syntax:

(i) Boku-wa [_{CP} [_{IP} John-ga   nani-o   katta] ka] shiritai.
    I-Top   John-Nom what-Acc bought Q   want-to-know
    'I want to know what John bought.'

(ii) Boku-wa [CP Op_i [IP John-ga [t_i nani]-o katta] Q] shiritai. (Watanabe 2003: 207)

According to Watanabe (2003), adopting the null operator analysis, the lack of island effects in (37a) is the result of generating the wh-operator on the complex NP itself; movement does not cross an island, which explains the island insensitivity.

8. This approach was first initiated in the work of Baker (1970) and was revived in the work of Pesetsky (1987). It is worth indicating here that other analyses along the same lines do exist (see notably Nishigauchi 1991; Watanabe 1991, 1992; Aoun & Li 1993 and Reinhart 1998). However, the moral from all these proposals is pretty much the same, namely, an LF movement approach to in-situ wh-phrases can not convincingly account for in-situ wh-questions across different languages. I will not discuss the details of these proposals here due to space considerations. The reader is referred to these sources for further details and discussion. One issue remains in order, however. That is, there is a difference between these analyses in terms of the degree of rejecting the covert movement at LF. While Pesetsky (1987) and Nishigauchi (1991), for example, reject the covert movement of their "d-linked" wh-phrases (i.e., which-NPs), Aoun & Li (1993) argue against covert movement at LF for all wh-phrases.

9. The Q-morpheme of Katz & Postal (1964) and the [+wh] feature introduced by Chomsky & Lasnik (1977) are used interchangeably throughout this study, similar to several studies in the field, simply because the difference between the two is basically a terminological one.

10. It is worth mentioning here that the English translations provided for these examples reflect the typical interpretations of these in-situ wh-questions whereby *Kaman* 'also' and *bas* 'only' are construed with the wh-phrase 'who'. In this case, the typical interpretation of (70a) is 'who is (x) such that the man saw also (x), in addition to someone else the man already saw?' and the typical interpretation of (70b) is 'who is (x) such that (x) is the only person that the man saw?' However, it is possible for *Kaman* 'also' and *bas* 'only' in these examples to be construed with the verb *saw* as well, but with the proviso that the verb receives a focal stress. Under such a focus reading, the interpretation of (70a) would be 'who is (x) such that the man also saw (x), in addition to another action the man already did with respect to (x), say, emailing (x))?' and the interpretation of (70b) would be 'who is (x) such that the man only saw, but not, say, talked to, (x)?' These readings, however, are not the typical readings of such wh-questions and they cannot obtain without prosody, whereas the typical readings come about without focusing the wh-phrase.

11. Other analyses for wh-in-situ also exist in the literature. Pesetsky (1998), for example, proposes that in-situ wh-questions involve overt syntactic movement; however, it is the tail of the chain which is pronounced rather than the head, i.e., the lower copy of the moved wh-phrase is what spelled out. Other linguists (notably Aoun & Li (1993), Hagstrom (1998) and Watanabe (1992, 2003)) propose that what moves is a null operator associated with the wh-phrase, but the wh-phrase itself never moves. (For further details and discussion, the reader is referred to these sources and to Cheng 2003a, 2003b, 2009; Bayer 2005; and Bayer & Cheng 2015.)

Chapter 3
Pseudo Wh-Fronting: Clitic-Left Dislocation and Focalization as Interrogative
Strategies in Jordanian Arabic

3.1 Introduction

The seminal work of Chomsky (1977) represents a substantial step toward unifying the derivation of wh-questions and other related structures across different languages. Under Chomsky's (1977) analysis, wh-phrases in English, for example, always undergo overt syntactic movement creating an operator-variable configuration that can enable the wh-phrase to take scope over the rest of the structure. The following example illustrates this point.

(1)   a. Who did she marry?

   b. [CP Who$_i$ did [TP she marry t$_i$]].

Chomsky's (1977) wh-movement hypothesis is widely adopted in the analyses of wh-questions and other related issues in various languages (see, e.g., Huang 1982; Lasnik & Saito 1984 & 1992; Wahba 1984 & 1991; Pesetsky 1987 & 1998; Cheng 1991, 2003a & b, 2009; Watanabe 1992; Simpson 1999 & 2000; Cheng & Rooryck 2000; Aoun & Li 2003; Bruening & Tran 2006; Aoun et al 2010; inter alia).

However, I propose in this and subsequent chapters that not every instance of clause-initial wh-phrases, and not even every instance of apparent wh-fronting, involves movement of the wh-word to [Spec, CP] similar to that found in English-type languages. Rather, and based upon the observation of a striking resemblance between certain wh-constructions involving clause-initial wh-elements (the so-called "resumptive wh-questions") and clitic-left dislocated structures on one hand, and between wh-questions involving apparent wh-fronting (the so-called "typical fronted/moved" wh-questions) and focus fronting constructions on the other hand, I hypothesize that such wh-constructions in JA represent instances of clitic-left dislocation (CLLD, henceforward) and focalization respectively. Indeed, many linguists have

proposed that wh-phrases move to a position of (contrastive) focus, which is different from the clause-initial [Spec, CP] position (see, e.g., Horvath (1986) for Hungarian; Rochemont (1986) for Basque; Kiss (1995) for Aghem; Stjepanovic (1995, 1999) and Boskovic (1997) for Serbo-Croatian; Ndayiragije (1999) for Kirundi; Kahnemuyipour (2001) for Persian; Al-Momani & Al-Saidat (2010) for Jordanian Arabic; Lassadi (2005) and Gad (2011) for Egyptian Arabic; among others).

The discussion in this chapter starts by calling into question the possibility of subsuming all cases of wh-questions involving clause-initial wh-phrases in JA under Chomsky's (1977) wh-movement analysis. I then turn to the asymmetries between CLLD and focalization. Evidence from island facts (Ross 1967; Chomsky 1973; inter alia) as well as resumption are adduced with the consequence of nullifying the derivation of the so-called "resumptive wh-questions" (in the sense of Aoun & Choueiri 1999; Aoun et al 2010; Abdel Razaq 2011), or what I will be referring to as CLLD wh-questions, via wh-movement. In addition, I will show that the wh-movement schema cannot adequately capture the different syntactic aspects of the typical "fronted/moved/gap" wh-questions in JA.

As the discussion unfolds, I contrast these two wh-constructions and show that, though superficially similar, they are significantly distinct. An alternative analysis is advanced building mainly on the detected parallelisms between non-wh CLLD structures and resumptive wh-constructions on one hand, and the detected parallelisms between non-wh focus fronting and typical fronted wh-questions on the other hand. In other words, I will derive the different asymmetries between these two wh-constructions from different underlying structures that can feed each wh-construction.

The proposed analysis entails the presence of two different wh-constructions that can surface with almost the same PF realization, one with a pronominal clitic (i.e., resumptive wh-questions) and one without (i.e., typical fronted wh-questions). This pronominal clitic,

which constitutes the basic difference between these two types of wh-question, thus cannot be considered an optional element in the traditional sense as it might seem. Rather, under my analysis, wh-questions surfacing with the pronominal clitic start from a CLLD construction, whereas wh-questions that lack them start from a focus fronted construction.

The scenario that emerges is one where the wh-phrase is predestined by the initial numeration and configuration to be either a left-dislocated element or a focalized constituent. In the first case (i.e., resumptive/CLLD wh-questions), the wh-phrase surfaces in [Spec, TopP] forming a topic-comment structure. By contrast, the wh-phrase in typical fronted wh-questions surfaces in [Spec, FocP]. This incorporates the assumption that wh-constructions involving the pronominal clitic contain an interrogative CP dominating a TopP, whereas wh-constructions lacking this pronominal clitic involve an interrogative CP dominating a FocP.

I contend that clitic-left dislocation and focalization should be added to the inventory of representations available for the derivation of wh-constructions, on a par with Cheng's (1991) wh-clefting in some "optional fronting" languages, at least in certain languages such as Arabic. The analysis also provides further evidence that the operation of unselective binding (Baker 1970; Pesetsky 1987; Chomsky 1995), introduced in the previous chapter, can provide a uniform account of wh-constructions in a language that appears to employ both the in-situ and fronting strategies.

In terms of presentation, the chapter is organized as follows. Section 3.2 questions the validity of positing wh-movement as the underlying mechanism for deriving any wh-construction with a clause-initial wh-element in JA. In this section, I identify asymmetries between resumptive wh-constructions and typical fronted wh-questions in the language (which both involve clause-initial wh-phrases), removing the possibility of adopting the same analysis for both types. The different structural and distributional characteristics, especially the nature of the relationship between the wh-phrase and its variable position in island

contexts, indicate that a split analysis is required. Section 3.3 establishes the rationale for the split analysis I am proposing and provides an outline of the analysis. Sections 3.4 and 3.5 develop the analysis in greater detail. In section 3.4 I analyze resumptive wh-questions as a CLLD construction while in section 3.5 I analyze typical fronted wh-questions as cases of focus fronting. Section 3.6 discusses the implications of my proposal and Section 3.7 concludes the chapter.

3.2   The core problem in the analysis of clause-initial wh-phrases

The core issue this section highlights is the asymmetric behavior of clause-initial wh-phrases in JA. While only argument wh-phrases can occur sentence-initially when associated with a sentence-internal resumptive clitic (2a-c), all wh-phrases, whether argument or adjunct ones, can occur clause-initially when related to a sentence-internal gap (3). All the examples given in the two sets of questions below are non-subject wh-questions. Subject wh-questions will be discussed separately in Chapter 4. Though resumptive wh-questions disallow adjunct wh-phrases and PPs, I have constructed what I expect the CLLD version of these resumptive wh-questions would be if they were possible. The goal of providing such ungrammatical examples, though they do not in fact exist, is purely explanatory and to make the comparison between the two types of question under investigation complete. The type of English translation adopted for resumptive/CLLD wh-questions throughout the chapter is intended to capture the number and gender features borne by the sentence-internal resumptive clitic found in this wh-construction.

(2) **Resumptive wh-questions**[1]

  a. **Wh-phrase as animate direct object**

    (huwweh)   **mi:n$_i$** iz-zalameh šaf-**ha$_i$**   ʔimbariH?

    Q   **who** the-man   saw.3MS-**her** yesterday

   'Who is the female person (x) such that the man saw (x) yesterday?'

  b. **Wh-word as determiner**

    (huwweh) **ʔayya**   **binit$_i$** iz-zalameh šaf-**ha$_i$**   ʔimbariH?

    Q   **which**   **girl** the-man   saw.3MS-**her** yesterday

   'Which girl (x) is it such that the man saw (x) yesterday?'

  c. **Wh-phrase as inanimate direct object**

    (huwweh) **eiš$_i$**   iz-zalameh ištar-**ah$_i$**   ʔimbariH?

    Q   **what** the-man   bought.3MS-**it**   yesterday

   'What is (x) such that the man bought (x) yesterday?'

  d. **Wh-phrase as locative adjunct**

    *[(huwweh)   **wein$_i$**   iz-zalameh šaf   maha-**uh$_i$**?]

     Q   **where**   the-man   saw.3MS   Maha-**it**

    'Where did the man see Maha?'

  e. **Wh-phrase as temporal adjunct**

    *[(huwweh)   **ʔeimta$_i$** iz-zalameh šaf   maha-**uh$_i$**?]

     Q   **when**   the-man   saw.3MS   Maha-**it**

    'When did the man see Maha?'

  f. **Wh-phrase as purpose adjunct**

    *[(huwweh)   **leiš$_i$**   iz-zalameh raH   9-as-soog-**uh$_i$**?]

     Q   **why** the-man   went.3MS on-the-market-**it**

    'Why did the man go to the market?'

g. **Wh-phrase as manner adjunct**

    *[(huwweh) **Keif_i** iz-zalameh riǰ9   min is-soog-**uh_i**?]

    Q   **how** the-man   returned.3MS from the-market-**it**

    'How did the man come back from the market?'

h. **Wh-phrase as object of preposition**

    *[(huwweh) **la-mi:n_i** iz-zalameh ʔa9Ta   ʔil-maSari-**ha_i**?]

    Q   **to-who** the-man   gave.3MS the-money-**her**

    'To whom did the man give the money?'

(3)   **Fronted/moved/gap wh-questions**

a. **Wh-phrase as animate direct object**

    (huwweh) **mi:n_i** iz-zalameh šaf   ø_i ʔimbariH?

    Q   **who** the-man   saw.3MS   yesterday

    'Who did the man see yesterday?'

b. **Wh-word as determiner**

    (huwweh) **ʔayya**   **binit_i** iz-zalameh šaf   ø_i ʔimbariH?

    Q   **which** **girl** the-man   saw.3MS   yesterday

    'Which girl did the man see yesterday?'

c. **Wh-phrase as inanimate direct object**

    (huwweh) **eiš_i**   iz-zalameh ištara   ø_i ʔimbariH?

    Q   **what** the-man   bought.3MS   yesterday

    'What did the man buy yesterday?'

d. **Wh-phrase as locative adjunct**

    (huwweh) **wein_i**   iz-zalameh šaf   maha   ø_i?

    Q   **where** the-man   saw.3MS Maha

    'Where did the man see Maha?'

e. **Wh-phrase as temporal adjunct**

(huwweh) **ʔeimta$_i$** iz-zalameh šaf maha ø$_i$?

Q **when** the-man saw.3MS Maha

'When did the man see Maha?'

f. **Wh-phrase as purpose adjunct**

(huwweh) **leiš$_i$** iz-zalameh raH 9-as-soog ø$_i$?

Q **why** the-man went.3MS on-the-market

'Why did the man go to the market?'

g. **Wh-phrase as manner adjunct**

(huwweh) **Keif$_i$** iz-zalameh rij9 min is-soog ø$_i$?

Q **how** the-man returned.3MS from the-market

'How did the man come back from the market?'

h. **Wh-phrase as object of preposition**

(huwweh) **la-mi:n$_i$** iz-zalameh ʔa9Ta ʔil-maSari ø$_i$?[2]

Q **to-who** the-man gave.3MS the-money

'To whom did the man give the money?'

The above observations raise two important issues. The first is related to the contrastive behavior of argument vs. adjunct wh-phrases. Only argument wh-phrases can be resumed by a clitic (2a-c); adjunct wh-phrases (2d-h) are always precluded from such resumptive constructions. The second issue is related to the asymmetric behavior of argument wh-phrases when occurring clause-initially. In particular, argument wh-phrases, when sentence-initial, can be associated either with a resumptive clitic (2a-c) or a gap (3a-c) in their original sites.[3]

A simple possibility presents itself here: the above wh-questions could be given a uniform explanation in which wh-movement is always responsible for the clause-initial position of the wh-phrase, and that the resumptive clitic is simply the spell-out of the trace

resulting from this movement. As for the ban on resumptive clitics in the context of adjunct wh-phrases (2d-h), it can be argued that, since clitics are of category D, they can only double/resume DPs. More precisely, argument wh-phrases are all DPs, hence the possibility of being resumed by a clitic, whereas adjunct wh-phrases are PPs and AdvPs, so there are no clitics available to double/resume them (see also Aoun 1999; Aoun et al 2010). However, three reasons militate against an analysis of this sort.

First, postulating such an analysis entails stipulating that the traces left by moved argument wh-phrases can be optionally spelled-out as a resumptive clitic, a stipulation that cannot go unchallenged. It is not clear how to motivate this optionality.

Second, such an analysis is challenged by the view that resumption signals absence of movement (but see a different view of resumption in Boeckx 2003). It is widely assumed in the literature that the existence of resumption in the place of traces indicates that we should not be applying a movement analysis in the first place (see, e.g., Shlonsky 2002; Aoun & Li 2003; McCloskey 2006; Aoun et al 2010; among others). It can also be challenged by the view that traces left by movement and resumptive pronouns are essentially different (Shlonsky 1992 & 2002; Aoun et al 2001; Aoun and Li 2003; Soltan 2007).

Third, and perhaps most importantly, this possible analysis is at odds with the fact that the two wh-constructions differ with respect to island constraints, which do not apply when a resumptive clitic is involved (4-6 below) but do apply when there is a gap (7-9 below).

Resumptive wh-questions: Island constraints do not apply

(4)   **Resumptive clitic can occur in wh-island**

a. (huwweh) [**mi:n$_i$** [saʔalit [ʔiða iz-zalameh šaf-**ha$_i$** ʔimbariH]]]?
Q [**who** [asked.2S [whether the-man saw.3MS-**her** yesterday]]]
'Who is the female person (x) such that you asked whether the man saw (x) yesterday?'

b. (huwweh) **[ʔayya binit_i** [saʔalit [ʔiða iz-zalameh šaf-**ha_i**

    Q   **[which girl** [asked.2S [whether the-man saw.3MS-**her**

    ʔimbariH]]]

    ?yesterday]]]

    'Which girl (x) is it such that you asked whether the man saw (x) yesterday?'

(5)   **Resumptive clitic can occur in relative clause island**

  a. (huwweh) [**mi:n_i** [bti9rif [iz-zalameh ʔilli šaf-**ha_i** ʔimbariH]]]?

    Q   [**who** [know.2S [the-man that saw.3MS-**her** yesterday]]]

    'Who is the female person (x) such that you know the man that saw (x) yesterday?'

  b. (huwweh) **[ʔayya binit_i** [bti9rif [iz-zalameh ʔilli šaf-**ha_i** ʔimbariH]]]?

    Q   **[which girl** [know.2S [the-man that saw.3MS-**her** yesterday]]]

    'Which girl (x) is it such that you know the man that saw (x) yesterday?'

(6)   **Resumptive clitic can occur in adjunct island**

  a. (huwweh) [**mi:n_i** [rawwaHit [ba9idma [iz-zalameh šaf-**ha_i**]]]?

    Q   [**who** [left.2S [after the-man [saw.3MS-**her**]]]

    'Who is the female person (x) such that you left after the man saw (x)?'

  b. (huwweh) **[ʔayya binit_i** [rawwaHit [ba9idma iz-zalameh šaf-**ha_i**]]]?

    Q   **[which girl** [left.2S [after the-man saw.3MS-**her**]]]

    'Which girl (x) is it such that you left after the man saw (x)?'

Fronted/moved/gap wh-questions: Island constraints do apply

(7)   **Gap cannot occur in wh-island**

  a. *[(huwweh) [**mi:n_i** [saʔalit [ʔiða iz-zalameh šaf ø_i ʔimbariH]]]?]

    Q   [**who** [asked.2S [whether the-man saw.3MS yesterday]]]

  '*Who did you ask whether the man saw yesterday?'

b. *[(huwweh) **[ʔayya binit_i** [saʔalit   [ʔiða   iz-zalameh šafø_i

Q   **[which girl** [asked.2S [whether the-man   saw.3MS

ʔimbariH]]]?]

yesterday]]]

'*Which girl did you ask whether the man saw yesterday?'

(8) **Gap cannot occur in relative clause island**

a. *[(huwweh) **[mi:n_i** [bti9rif [iz-zalamehʔilli šafø_i ʔimbariH]]]?]

Q **[who** [know.2S [the-man that saw.3MS   yesterday]]]

'*Who do you know the man that saw yesterday?'

b. *[(huwweh) **[ʔayya binit_i** [bti9rif [iz-zalamehʔilli šafø_i ʔimbariH]]]?]

Q **[which girl**[know.2S [the-man   that saw.3MS   yesterday]]]

'*Which girl do you know the man that saw yesterday?'

(9) **Gap cannot occur in adjunct island**

a. *[(huwweh) **[mi:n_i** [rawwaHit [ba9idma   iz-zalameh šaf   ø_i]]]?]

Q   **[who** [left.2S [after   the-man saw.3MS]]]

'*Who did you leave after the man saw?'

b. *[(huwweh) **[ʔayya binit_i** [rawwaHit [ba9idma   iz-zalameh šafø_i]]]?]

Q   **[which girl**   [left.2S [after   the-man saw.3MS]]]

'*Which girl did you leave after the man saw?'

The above examples show that the relation between the initial argument wh-phrase and its variable differs depending on the nature of the variable. The relation between the initial wh-phrase and its sentence-internal resumptive clitic can reach into domains that a gap cannot occupy. More precisely, the examples given in (4-6) show that clause-initial wh-phrases can be related to a corresponding resumptive pronoun in island contexts, hence a movement analysis is unlikely (cf. Ross 1967; Chomsky 1977; among others). By contrast, the examples given in (7-9) above illustrate that clause-initial wh-phrases cannot be related to a gap within islands. This difference makes it difficult to subsume the two types of questions under a

single wh-movement analysis. By doing so, the question of how an island insensitive construction can be derived via movement will remain unexplained.

Though the data given in (3) above indicate that there is a case for assuming the existence of wh-fronting constructions in JA, the argument cannot be made that any construction with a clause-initial wh-phrase is indeed a case of wh-fronting. Wh-constructions where the initial wh-phrase is related to a resumptive clitic (paradigm 2) are cases in point; such constructions lack the defining properties of fronted constructions. When combined with the fact that questions involving a resumptive clitic allow only argument wh-phrases while questions involving a gap allow both argument and adjunct wh-phrases, as shown in (2) and (3) above, it becomes clear that the set of data at hand cannot be accounted for by appealing to a unified wh-movement analysis. Therefore, I will instead develop a split analysis.

An appropriate analysis of resumptive wh-questions must allow wh-phrases to appear clause-initially without the need to apply wh-movement, given the island insensitivity of such questions. On the other hand, an appropriate analysis of typical fronted wh-questions must capture their island sensitivity as well as the clause-internal gap and the optional question particle found in typical fronted wh-questions. The detailed analysis of each type of question will be laid out in sections 3.4 and 3.5 below. First, however, section 3.3 sets out the central tenets of my proposal.

3.3   My proposal

Central to my analysis of the two wh-constructions is the resemblance that each bears to a distinct A'-construction in Arabic: resumptive wh-questions share similar properties with CLLD constructions in Arabic while typical fronted/moved/gap wh-questions share the defining properties of focus fronting in Arabic. This section identifies the fundamental

differences between these two A'-constructions and then extends the analysis of each A'-construction to the corresponding wh-construction.

My analysis makes use of the "split-CP" proposal developed by Rizzi (1997) and adopted by Shlonsky (2000) and Aoun et al (2010) for the mapping of the left-periphery in Arabic. Shlonsky (2000) establishes that left-dislocated constituents and focused elements occupy distinct positions in the CP layer in Arabic: left-dislocated elements are base-generated in the specifier of a topic phrase (TopP) while fronted/preposed focused constituents surface in the specifier position of a focus phrase (FocP/FP) via movement (see also Ouhalla 1997; Aoun et al 2010). The fully articulated structure of Shlonsky's (2000) cartography of the left periphery in Arabic is given in (10).

(10)   ForceP > TopP > FocP > TopP > FinP

Note that the Arabic left periphery allows for more than one TopP, which is congruent with the fact that more than one element can be CLLD'ed in a given clause in spoken varieties (Aoun & Benmamoun 1998; Aoun et al 2010). Also, there is only one focus phrase, which is also compatible with the restriction that only one element can be focalized in a given Arabic sentence (op. cit). I will show that the specifier positions introduced by Top and Foc are not restricted to non-wh elements; rather, wh-elements can be hosted in such left-peripheral positions as well. Further, I will propose that the distinction between TopP and FocP can be employed to capture the differences between the two wh-constructions under investigation. To this end, I examine two superficially similar, but crucially different, A'-constructions in Arabic: CLLD and focus fronting. The properties of these two constructions bear striking resemblance to those of the two wh-constructions under investigation.

I propose that resumptive wh-questions involve a CLLD structure in which the initial wh-element occupies the specifier position of a topic phrase (TopP) located below the interrogative CP, forming a topic-comment structure. The clause-initial (or left-dislocated)

wh-phrase is base-generated in its surface position (i.e., in [Spec, TopP]) and is resumed by a pronominal clitic occupying its thematic position inside the clause. The wh-phrase forms the topic part of the structure while the following full clause forms the comment. The CLLD analysis captures the fact that resumptive wh-questions involve a clause-initial wh-phrase that is associated with a resumptive clitic and concurrently lacks the hallmarks of wh-movement.

By contrast, typical fronted wh-questions involve a fronted wh-phrase that undergoes movement to the specifier position of a focus phrase (FocP) located beneath the interrogative CP. This movement leaves a gap in the clause-internal position of the wh-phrase. The focus fronting analysis is consistent with the applicability of island constraints and the absence of a resumptive clitic in this construction.

In summary, I propose that the two wh-constructions differ in that the interrogative CP dominates a clitic-left dislocation structure (i.e., a TopP) when the pronominal clitic is involved and a focus-fronting structure (i.e., a FocP) when the pronominal clitic is absent. The details of the analysis of each construction are spelled out in the following two sections.

3.4   The analysis of resumptive wh-questions

This section shows how resumptive wh-questions in JA instantiate a CLLD structure. As illustrated in section 3.2 above, resumptive wh-questions involve the occurrence of a nominal/argument wh-phrase surfacing initially at the left-most peripheral position of the sentence. This wh-construction disallows adjunct wh-phrases and PPs. In addition, there is always a pronominal resumptive element inside the clause related to the clause-initial argument wh-phrase. Such pronominal elements (or resumptive clitics) are normally the weak pronouns used in non-subject argument positions; they appear as clitics attached to their preceding heads, which may be a noun, verb or preposition (see Aoun et al 2001 & 2010; Guilliot & Malkawi 2006 & 2011; Jassim 2011 for more on resumptive pronouns in Arabic).

A resumptive wh-construction can optionally be introduced by the Q-particle *huwweh* (see the examples in (2) above). The linear structure of resumptive interrogative constructions can be summarized as in (11).

(11) [(Q-particle) argument wh-phrase$_i$ [TP … pronominal clitic$_i$]]

Recall from examples (4-6) that this interrogative construction is also island-insensitive, allowing the initial argument wh-constituent to enter a cross-island binding relationship with the resumptive clitic. McCloskey (2006) argues that the presence of a resumptive clitic in the position of the gap inside the island is an indication of island insensitivity and, consequently, the absence of movement (see also Ross 1967; Chomsky 1977; Wahba 1984; Aoun & Choueiri 1999; Ritchards 2001; Aoun et al 2010; Soltan 2012; among others). The non-applicability of island constraints and the occurrence of resumption lead me to conclude that resumptive wh-questions are not derived via movement.

My proposed analysis for resumptive wh-questions is based upon the observation that such questions bear a strong resemblance to non-wh CLLD structures in Arabic. This similarity suggests treating such wh-constructions as topic-comment structures on a par with non-wh CLLD structures, differing only in that the wh-phrase is the dislocated element.

In order to develop this analysis, in the following subsection, I present the phenomenon of CLLD in Arabic. Subsection 3.4.2 then shows how a CLLD analysis captures the properties of resumptive wh-questions. In subsection 3.4.3 I discuss the validity of positing that wh-phrases in resumptive wh-questions are base-generated in [Spec, TopP].

3.4.1   CLLD in Arabic

This section summarizes the phenomenon of CLLD in Arabic, focusing mainly on the nature and distribution of the CLLD'ed elements and their relationship to the resumptive clitic. This discussion draws on literature on the phenomenon of left-dislocation in Arabic

(i.e., Ouhalla 1997; Aoun & Benmamoun 1998; Shlonsky 2000; Aoun et al 2010). Left-dislocation in Standard Arabic (SA, henceforward) has been widely discussed under the term "topicalization" by many Arab linguists (see notably Bakir 1980; Moore 1988; Shlonsky 2000) or under the term "clitic-left dislocation (CLLD)" (see notably Lalami 1996; Aoun & Benmamoun 1998; Aoun et al 2010).[4]

Left-dislocation or CLLD constructions consist of a lexical noun phrase in the left periphery of a clause associated with a resumptive pronoun/clitic inside the clause (Ouhalla 1997; Aoun & Benmamoun 1998; Shlonsky 2000; Aoun et al 2010). Such constructions instantiate what is known in the literature as topic-comment structures (Bakir 1980; Farghal 1986; Fassi-Fehri 1993; Soltan 2007), with the comment part having its own subject and predicate. The following are illustrative examples. These examples, and all subsequent examples from Lebanese and Standard Arabic in this subsection, are retrieved from Aoun & Benmamoun (1998) and Aoun et al (2010). All the Jordanian examples are my own.

(12) a. [**naadia** [šeef-**a**   saamimbeeriħ].   Lebanese Arabic
         [**Nadia**   [saw.3MS-**her**Sami yesterday]
         'Nadia, Sami saw her yesterday.'

      b.[**at-tilmiiðat-u**   [raʔaa-**ha**   saami   l-baariħa].   Standard Arabic
         [**The-student.fs-Nom**   [saw.3MS-**her**   Sami   the-yesterday]
         'The student, Sami saw her yesterday.'   (Aoun et al 2010: 191)

      c. [**ʔil-binit**ᵢ [iz-zalamehšaf-**ha**ᵢ   ʔimbariH].   Jordanian Arabic
         [**The-girl**   [the-man   saw.3MS-**her** yesterday]
         'The girl, the man saw her yesterday.'

Worth indicating here is that left-dislocated noun phrases in SA (12b) always bear nominative case marking, even when they correspond to a sentence-internal object position in which an accusative clitic occurs (Farghal 1994; Ouhalla 1997; Aoun & Benmamoun 1998; Shlonsky 2000; Aoun et al 2010). However, since case marking in spoken varieties, such as

Lebanese and Jordanian Arabic, has vanished completely, nominative case is not marked morphologically on left-dislocated elements (12a & c).

Left-dislocated NPs in Arabic must follow the complementizer in embedded contexts. This is a straightforward indication that though their position is higher than the TP, it is still somewhere lower than the head C. The following paradigm further demonstrates this point.

(13) **Left-dislocated NP follows complementizer in Lebanese Arabic**

  a. fakkart   [ʔənno [**naadia** [**šeef-a**   kariim   mbeeriħ]]].
    Thought.1S[that   [**Nadia** [saw.3MS-**her** Karim   yesterday]]]
    'I thought that Nadia, Karim saw her yesterday.'

  b. *fakkart   [**naadia** [ʔənno [šeef-**a**   kariim   mbeeriħ]]].
     Thought.1S [**Nadia** [that   [saw.3MS-**her**Karim   yesterday]]]

<div align="right">(Aoun et al 2010: 192)</div>

(14) **Left-dislocated NP follows complementizer in Standard Arabic**

  a. zaʕamtu   [ʔanna [**r-risaalat-a**   [al-walad-u kataba-**ha**]]].[5]
    claimed.1S [that   [**the-letter-Acc** [the-boy-Nom wrote.3MS-**it**]]]
    'I claimed that the letter, the boy wrote it.'

  b. *zaʕamtu   [**r-risaalat-a**   [ʔanna [al-walad-u   kataba-**ha**]]].StandardArabic
    Claimed.1S   [**the-letter-Acc** [that   [the-boy-Nom wrote.3MS-**it**]]]

<div align="right">(Aoun et al 2010: 192)</div>

(15) **Left-dislocated NP follows complementizer in Jordanian Arabic**

  a. maha fakkarat   [ʔinno [**ʔil-binit$_i$** [iz-zalamehšaf-**ha$_i$**   ʔimbariH]]].
    Mahathought.3MS [that   [**the-girl** [the-man   saw.3MS-**her** yesterday]]]
    'Maha thought that the girl, the man saw her yesterday.'

  b. *maha fakkarat   [**ʔil-binit$_i$** [ʔinno [iz-zalamehšaf-**ha$_i$**   ʔimbariH]]].
    Maha   thought.3MS [**the-girl** [that   [the-man   saw.3MS-**her** yesterday]]]

Indefinite noun phrases cannot be left dislocated, as the contrast between (16) and (17) demonstrates.

(16) **Indefinite NPs cannot be left-dislocated**

    a. *[**qaSiidat-un**[ʔallafa-**ha** ʕomar]].   Standard Arabic

       [**Poem-Nom** [wrote.3MS-**it** Omar]]

       'A poem, Omar wrote it.'

    b. *[**ʔaSiide** [ʔallaf-**a** ʕomar]].   Lebanese Arabic

      [**Poem** [wrote.3MS-**it** Omar]]

      'A poem, Omar wrote it.'   (Aoun et al 2010: 194)

    c. *[**binit$_i$** [iz-zalamehšaf-**ha$_i$** ʔimbariH]].   Jordanian Arabic

       [**Girl** [the-man saw.3MS-**her** yesterday]]

       'A girl, the man saw her yesterday.'

(17) **Corresponding definite NPs can be left-dislocated**

    a. [**al-qaSiidat-u** [ʔallafa-**ha** ʕomar]].   Standard Arabic

      [**The-poem-Nom**[wrote.3MS-**it** Omar]]

      'The poem, Omar wrote it.'

    b. [**l-ʔaSiide** [ʔallaf-**a** ʕomar]].   Lebanese Arabic

      [**The-poem**[wrote.3MS-**it** Omar]]

      'The poem, Omar wrote it.'   (Aoun et al 2010: 194)

    c. [**ʔil-binit$_i$** [iz-zalamehšaf-**ha$_i$** ʔimbariH]].   Jordanian Arabic

      [**The-girl** [the-man saw.3MS-**her** yesterday]]

      'The girl, the man saw her yesterday.'

Another distinctive feature of CLLD in Arabic is that it is restricted to noun phrases. Only NPs can be (clitic-) left-dislocated; adverbials and PPs are precluded from such constructions. This ban on adverbials and PPs can be attributed to the absence of appropriate clitics that correspond to, or can resume, such constituents (Aoun et al 2010). The ill-

formedness of the following Jordanian examples illustrates the inadmissibility of adjuncts (18a) and PPs (18b) in CLLD structures.

(18) a. *[**ʔimbariH**ᵢ [iz-zalameh šaf   maha-**uh**ᵢ]].

      [**yesterday**   [the-man   saw.3MS   Maha-**it**]]

   b. *[**la-maha**ᵢ   [iz-zalameh ʔa9Ta   ʔil-maSari-**ha**ᵢ]].

     [**to-Maha**   [the-man   gave.3MS the-money-**her**]]

Finally, the relationship between left dislocated NPs and the sentence-internal resumptive pronoun is not sensitive to island constraints. The following examples illustrate the violation of the wh-island condition (19), the relative clause island condition (20), and the adjunct clause condition (21) (see also Shlonsky (2000) for a similar diagnosis of SA).

(19) **Left-dislocation is insensitive to wh-islands**

   a. sməʕtʔənno   [**naadia** byaʕrfo [miin šeef-**a**]].   Lebanese Arabic

    heard.1S that   [**Nadia**   know.3P[who saw.3MS-**her**]]

    'I heard that Nadia, they know who saw her.'   (Aoun et al 2010: 201)

   b. smi9it   ʔinno [**ʔil-binit**ᵢ   bidko   ti9rifo   [mi:n šaf-**ha**ᵢ]].   JA

    Heard.1S   that   [**the-girl**   want.2P know.2P   [who saw.3MS-**her**]]

    'I heard that the girl, you want to know who saw her.'

(20) **Left-dislocation is insensitive to relative clause islands**

    a. **Lebanese Arabic**

sməʕt	ʔənno	[**ha-l-kteeb**	ħkiit	maʕ	[l-walad	yalli
heard.1S	that	[**this-the-book**	talked.2MS	with	[the-boy	that

katab	ʕal-**ee**]].
wrote.3MS	on-**it**]]

    'I heard that this book, you talked with the boy that wrote on it.'

        (Aoun et al 2010:201)

    b. **Jordanian Arabic**

smi9it	ʔinno	[**ʔil-binit**ᵢ	bti9rifo	[iz-zalamehʔilli	šaf-**ha**ᵢ]].
Heard.1S	that	[**the-girl**	know.2P	[the-man	that saw.3MS-**her**]]

    'I heard that the girl, you know the man who saw her.'

(21) **Left-dislocation is insensitive to adjunct clause islands**

    a. **Lebanese Arabic**

sməʕt	ʔənno	[**naadia**	rəħt	[mən dun	ma	təħke	maʕ-**a**]].
heard.1S	that	[**Nadia**	left.2MS	[without	Comp	talk.2MS	with-**her**]]

    'I heard that Nadia, you left without talking to her.'   (Aoun et al 2010: 201)

    b. **Jordanian Arabic**

smi9it	ʔinno	[**ʔil-binit**ᵢ	rawwaHto	[ba9idma	iz-zalameh	šaf-**ha**ᵢ]].
Heard.1S	that	[**the-girl**	left.2P	[after	the-man	saw.3MS-**her**]]

    'I heard that the girl, you left after the man saw her.'

The consistent violation of island conditions in CLLD structures has led Aoun et al (2010) to conclude that CLLD constructions in Arabic are not derived via movement. Rather, the left-dislocated constituents are base-generated in their surface position and coindexed with a resumptive pronoun/clitic in a sentence-internal argument position, a conclusion consistent with that of many other Arab linguists (see notably Farghal 1994; Ouhalla 1997; and Shlonsky 2000).[6] The base-generation analysis of CLLD captures all the aforementioned

facts: the nominative case marking on CLLD'ed elements, the obligatoriness of the sentence-internal resumption, and the absence of island effects.

Left-dislocated object DPs in the Arabic CLLD construction are unanimously regarded as topics (Farghal 1994; Ouhalla 1997; Shlonsky 2000; Aoun & Benmamoun 1998; Aoun et al 2010), with a topic position available to host left-dislocated DPs in both root and embedded clauses (Shlonsky 2000; Aoun et al 2010). Based on the similarities between left-dislocation in SA and clitic-left dislocation in Romance (Cinque 1990), Shlonsky (2000) proposes that left-dislocated objects in SA occupy [Spec, TopP].

3.4.2   Resumptive wh-questions are topic-comment/CLLD structures

This subsection shows how resumptive wh-questions in JA can be analyzed as the interrogative counterpart of CLLD constructions discussed in the previous subsection. A major consequence of this analysis is that resumption, which has been analyzed as an interrogative strategy on its own (Aoun & Choueiri 1999; Aoun et al 2010), is in fact merely a side-effect of the underlying structure feeding this type of wh-question. The resumptive element occurs because the structure involves left-dislocation, not because of some particular interrogative mechanism.

The first symmetry between resumptive wh-questions and CLLD structures is the syntactic composition. Both constructions consist of a displaced noun phrase in a left-peripheral position associated with a resumptive pronoun occupying its thematic position inside the clause. To use the terminology of traditional Arabic syntax, both constructions are topic-comment structures (cf. Bakir 1980; Farghal 1986; Fassi-Fehri 1993; Shlonsky 2000; Soltan 2007), with the comment part forming a full predication (i.e., it has its own subject and predicate). The difference between resumptive wh-questions and typical CLLD structures is

reduced to whether the left-dislocated/displaced constituent is a lexical noun phrase or a nominal wh-phrase.

As a concrete illustration of the CLLD analysis of resumptive questions, consider the following examples.

(22) a. (huwweh) [**mi:n**$_i$ [iz-zalamehšaf-**ha**$_i$ ʔimbariH]]?

     Q   [**who**   [the-man   saw.3MS-**her** yesterday]]

     'Who is the female person (x) such that the man saw (x) yesterday?'

   b. (huwweh) [**ʔayya binit**$_i$ [iz-zalamehšaf-**ha**$_i$ ʔimbariH]]?

     Q   [**which girl**   [the-man   saw.3MS-**her** yesterday]]

     'Which girl (x) is it such that the man saw (x) yesterday?'

   c. (huwweh) [**eiš**$_i$ [iz-zalamehištar-**ah**$_i$ ʔimbariH]]?

     Q   [**what** [the-man   bought.3MS-**it**   yesterday]]

     'What is (x) such that the man bought (x) yesterday?'

The wh-phrases in these examples are left-dislocated objects (or topics in the traditional sense), and are resumed by a resumptive pronoun occupying their thematic object position. The full sentence following the wh-phrase forms the comment part of the structure. Accordingly, the whole wh-construction forms a topic-comment structure exactly the same as typical/CLLD/left-dislocated structures in Arabic (see examples (12) above).[7]

Another syntactic property that resumptive wh-questions share with standard CLLD structures in the language is the ban on adverbial/adjunct elements (23a) and PPs (23b). As was shown in section 3.2 above, only nominal wh-arguments are admissible in resumptive wh-questions, hence the ungrammaticality of the following examples.

(23) a. *[(huwweh) [**ʔeimta**$_i$ [iz-zalamehšaf   maha-**uh**$_i$]]?]

      Q   [**when** [the-man   saw.3MS   Maha-**it**]]

   b. *[(huwweh) [**la-mi:n**$_i$ [iz-zalameh ʔa9Ta   ʔil-maSari-**ha**$_i$]]?]

      Q   [**to-who**   [the-man   gave.3MS the-money-**her**]]

Thus, resumptive wh-questions cluster with CLLD structures in terms of excluding non-nominal arguments (see examples 18 above).

A third parallelism between resumptive wh-questions and CLLD constructions is the absence of island effects. Recall from section 3.2 above that resumptive wh-questions violate the wh-island condition (example 4), the relative clause island condition (example 5) and the adjunct clause condition (example 6). CLLD constructions behave symmetrically in this regard (see examples 19-21 above).

My reasons for comparing resumptive wh-questions with CLLD constructions should now be clear. The strong parallelism between the two constructions points to a shared account of the syntax of the two constructions. My analysis of resumptive wh-questions therefore mirrors the one outlined for their non-interrogative CLLD counterparts by Shlonsky (2000) and Aoun et al (2010). I propose that resumptive wh-questions in JA involve a representation in which TopP occurs in a position between CP and TP. The wh-phrase, being a left-dislocated object, occupies the specifier position of TopP and is associated with a resumptive clitic occupying the thematic object position inside the TP. The wh-phrase is base-generated in [Spec, TopP] by virtue of its syntactic function as a left-dislocated element/topic. Accordingly, the following abstract syntactic representation illustrates the underlying structure feeding all the wh-questions in (22) above.

(24) [TopP wh-phrase$_i$ [TP … resumptive clitic$_i$ …]]]]]

To account for scope assignment in such questions, I again make use of the mechanism of unselective binding (Pesetsky 1987), as proposed for in-situ wh-phrases discussed in the previous chapter, which are similarly island-insensitive. I assume that resumptive and typical in-situ wh-questions share the same CP level. The null operator checks the [+wh] feature borne by the matrix complementizer and unselectively binds the initial (or left-dislocated) object wh-phrase, which in turn binds a resumptive pronoun occupying its thematic position

in the clause; this binding relationship is not subject to island constraints. Granting this proposal, the abstract syntactic representation in (24) above should be amended as in (25).

(25) [CP Op$_i$ [TopP wh-phrase$_i$ [TP … resumptive clitic$_i$ …]]]]]

To illustrate this analysis in full detail, a tree diagram showing the structure of a CLLD wh-question is given in (26b).

(26) a. (huwweh) **mi:n$_i$**   iz-zalameh šaf-**ha$_i$**   ʔimbariH?

         Q   **who**   the-man   saw.3MS-**her** yesterday

         'Who is the female person (x) such that the man saw (x) yesterday?'

b.

```
                            CP
                   ╱              ╲
                Spec              C'
                            ╱          ╲
                          C              TopP
                          │          ╱        ╲
                 huwweh/OPᵢ    DP              Top'
                               │          ╱          ╲
                            mi:nᵢ        Top            TP
                            Who                    ╱        ╲
                                                 DP            T'
                                                 │         ╱      ╲
                                          Iz-zalamehⱼ     T          VP
                                          The-man              ╱        ╲
                                                             DP           V'
                                                             tⱼ      ╱          ╲
                                                                   V'            AdvP
                                                              ╱        ╲          ╱╲
                                                            V            NP       ╱  ╲
                                                            │            │       ╱____╲
                                                           Šaf         -haᵢ     ʔimbariH?
                                                           saw.3MS     -her     yesterday?
```
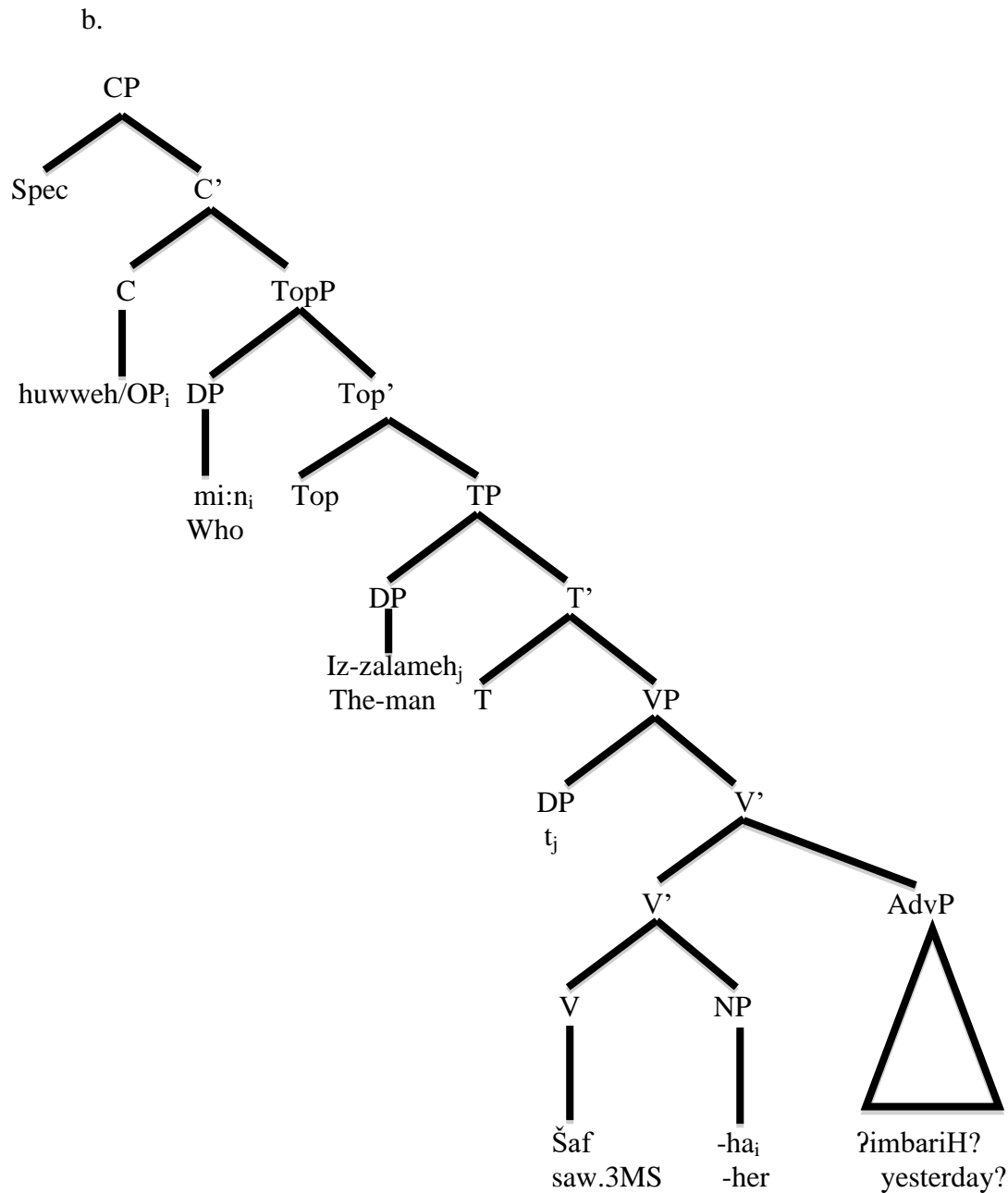
The above structure involves the following assumptions. First, the initial wh-phrase is base-generated in its surface position in [Spec, TopP] as a left-dislocated object forming a topic-comment structure. Second, the comment part of the structure involves a full predication in the sense that it has its own subject and predicate. Third, there is a coreferential relation between the wh-phrase in [Spec, TopP] and the clause-internal clitic. Finally, the interrogative force of the whole structure is interpreted via a null interrogative operator base-generated in C, thus checking the [+wh] feature borne by the matrix complementizer and

unselectively binding the initial wh-phrase (Pesetsky 1987). This null interrogative operator can be overtly lexicalized as the question particle *huwweh*.

A precedent for this analysis should be noted here. Aoun & Choueiri (1999) and Aoun et al (2010) report that resumptive wh-questions in Lebanese Arabic are island insensitive, converging on the conclusion that no wh-movement is involved in their derivation. They propose that the wh-phrase in such wh-constructions is base-generated in [Spec, CP]. My analysis diverges from that of Aoun & Choueiri (1999) and Aoun et al (2010) in two important respects. First, I do not share their assumption that resumption is an independent interrogative strategy in Arabic that parallels the gap strategy, having instead argued that resumption in this wh-construction is simply an epiphenomenon of the underlying CLLD structure. Second, I divert from their assumption that the wh-phrase in resumptive wh-questions is base-generated in [Spec, CP], proposing instead that, as with other CLLD'ed elements in Arabic, it originates in [Spec, TopP] below CP.

One piece of empirical evidence that the wh-phrase must be lower than C comes from the optional question particle *huwweh*. The data discussed so far show that *huwweh* always precedes the wh-phrase. If we followed Aoun & Choueiri (1999) and Aoun et al (2010) in assuming that the wh-phrase is directly base-generated in [Spec, CP], we would predict a word order never attested in the language, namely, a word order in which the wh-phrase precedes the question particle (under the assumption that the question particle is realized under the head C). Aoun & Choueiri's (1999) and Aoun et al's (2010) analysis cannot be salvaged by placing the Q-particle *huwweh* in [Spec, CP] rather than under the head C, as the specifier position of CP would then be occupied by two elements at the same time: the wh-phrase and the Q-particle *huwweh*. In brief, Aoun & Choueiri's (1999) and Aoun et al's (2010) analysis does not account for the position of *huwweh*. Under my analysis, *huwweh* is

base-generated under the head C, which is higher than the TopP where the wh-phrase is situated, thus capturing the fact that the question particle must precede the wh-phrase..

Further evidence that the wh-phrase cannot be in [Spec, CP] comes from the fact that the whole wh-construction can be embedded after the complementizer *ʔinno* 'that'. Consider the following examples.

(27) a. (huwweh) enta golit [ʔinno [**mi:n_i** iz-zalameh šaf-**ha_i**

      Q you said.2MS [that [**who** the-man saw.3MS-**her**

      ʔimbariH]]?

      yesterday]]

    'Who is the female person (x) such that you said that the man saw (x) yesterday?'

   b. (huwweh) enta golit [ʔinno **[ʔayya binit_i** iz-zalameh šaf-**ha_i**

      Q you said.2MS [that **[which girl** the-man saw.3MS-**her**

      ʔimbariH]]?

      Yesterday]]

    'Which girl (x) is it such that you said that the man saw (x) yesterday?'

   c. (huwweh) enta golit [ʔinno [**eiš_i** iz-zalameh ištar-**ah_i**

      Q you said.2MS [that [**what** the-man bought.3MS-**it**

      ʔimbariH]]?

      yesterday]]

    'What is (x) such that you said that the man bought (x) yesterday?'

The above examples show that the whole wh-construction can appear after the complementizer, which in turn asserts that the wh-phrase must be somewhere below C.

The CLLD analysis captures all the syntactic properties of resumptive wh-questions in JA: island-insensitivity, resumption, the inadmissibility of adjunct wh-phrases and PPs, and the optional occurrence of the question particle to the left of the wh-phrase. In addition to capturing this set of syntactic properties, the CLLD analysis is also compatible with the interpretive properties of resumptive wh-question. Another symmetry between resumptive

wh-questions and CLLD constructions involves the presuppositional values associated with each construction. Left-dislocated structures express old information with which the conversants are familiar, such as a particular individual who is already the topic of the discussion (Ouhalla 1997; Aoun & Benmamoun 1998). Likewise, resumptive wh-questions are employed to seek old information: the identity of a person or a thing that has already been the topic of discussion without being explicitly identified. The "old information" status of the wh-phrase is indicated by the fact that the corresponding resumptive clitic carries a particular set of person, number and gender features that match those of the questioned entity. The possibility of selecting particular phi-features supports my claim that CLLD wh-questions are intended to ask for the specific identity of an entity whose existence (and grammatical features) are already established (unlike moved wh-questions; see section 3.5.2 below). Therefore, it does not come as a surprise that CLLD wh-questions are normally not used to start or initiate a conversation without a previous context giving some clues about a particular identity. In a nutshell, it can be said that the contextual and presuppositional values associated with resumptive wh-questions bolster my analysis of such wh-constructions as cases of CLLD.

If we grant the CLLD analysis of resumptive wh-questions in JA, we must address the validity of treating wh-phrases in such wh-constructions on a par with clitic-left dislocated lexical NPs and, thus, placed in the specifier position of a TopP. I discuss this issue in the following subsection.

3.4.3   Wh-phrases as topics/CLLD'ed elements in JA

The presuppositional values and the resumptive clitic involved in CLLD wh-constructions in JA clearly point in the direction that there is something topical about the CLLD wh-phrase. Recall that only nominal wh-phrases are allowed in this wh-construction.

Nominal wh-phrases in JA can be d-linked (see Aoun & Choueiri 1999 and Aoun et al 2010 for a similar observation in Standard and Lebanese Arabic; see also Pesetsky 1987 and the references cited in chapter 2 on unselective binding in different languages). I take the nominal and d-linking properties of the wh-expressions allowed in CLLD wh-constructions to be crucial to my analysis of wh-phrases in this wh-construction as topics/CLLD'ed elements.

Topics are presupposed entities, salient or somehow familiar in discourse; topics are characterized by the combination of aboutness and d-linking (Rizzi 2011). These values are typical of CLLD wh-phrases in JA as was shown above. Indeed, the topic-like character of d-linked wh-phrases have been underlined by many scholars (see, notably, Richards 1997; Rizzi 2001, 2011 and Boskovic 2002; see also Boeckx & Grohmann 2004, cited in Rizzi 2011).

Rizzi (2011), for example, gives d-linked wh-phrases a topic feature in addition to their usual wh-feature. Building on data from Romanian and Bulgarian, Rizzi (2011) proposes that d-linked wh-phrases have the option of targeting a position distinct from the one targeted by non-d-linked wh-phrases. Specifically, d-linked wh-phrases can target the composite +Wh, +Top] position, which is a position distinct from and higher than the pure [+Wh] position. More specifically, to account for the "partial topicality" of d-linked wh-phrases, Rizzi (2011) posits the possibility that wh- and topical heads can combine in the left periphery of the clause through head movement, yielding the composite head [+Wh, +Top]. Consequently, such a composite head can then attract d-linked wh-phrases, which have both wh- and topical properties. The topical property of d-linked wh-phrases stems from their presupposed interpretations.

Rizzi (2011), however, indicates that d-linked wh-phrases cannot be fully assimilated to topics because they, unlike pure topics in Italian for example, are incompatible with clitic

resumption. In the following examples, d-linked wh-phrases in Italian (28a) cannot be associated with a resumptive clitic, whereas direct object topics (28b) are obligatorily associated with a clitic resumption.

(28) a. Quale   problema   credi che   (*lo) potremmo risolvere?
      'Which problem do you believe that we could solve (*it)?'

   b. Questo problema, credo   che   *(lo) potremmo risolvere.
      'This problem, I believe that we could solve *(it).'   (Rizzi 2011: 229)

The preceding discussion of the syntactic properties of CLLD wh-questions in JA reveals that the situation in JA is rather different from that of Italian. Wh-phrases in JA cluster with non-wh elements in the sense that they can be related to a resumptive clitic inside the clause (unlike Italian wh-phrases). This leads me to conclude that CLLD wh-phrases in JA can be treated on a par with their CLLD declarative lexical counterparts, and thus can originate in [Spec, TopP]. I propose that CLLD, a common option under A-bar declarative constructions, can, and indeed should, be put to good use in the analysis of interrogative constructions as well, especially when the declarative and interrogative constructions behave symmetrically. (As for the contrast between JA and Italian with respect to resuming the wh-phrase by a clitic, I hypothesize that Italian has not grammaticalized the resumptive strategy yet (cf. Rizzi 2011), whereas Arabic varieties such as JA have already achieved this.)

Holding constant Rizzi's characterization of d-linked wh-phrases, I ascribe the possibility of resuming wh-phrases in JA, which are d-linked, to their topic-like nature and to the frequency of topics with respect to other A' constructions. Nothing a priori prevents assuming that wh-phrases carry, in addition to the [wh] feature, a [+Top] feature, and thus can target a topic position in the clause, which is distinct from the Foc/wh- position.

Two pieces of evidence support my analysis. First, the interpretive properties of CLLD wh-questions are different from focus fronted wh-questions. In the case of CLLD questions,

which involve a clause-internal resumptive clitic marked for number and gender, it is easy to imagine a context of utterance in which there is a well-identified/presupposed set of persons/things, and the question concerns the identity of a proper subset of the presupposed set of persons/things: a natural answer to CLLD wh-questions would be a particular person/thing (that matches the number and gender features of the resumptive clitic) out of the set of people/things the addressee knows about.

To simplify a bit, the presence of the resumptive clitic in CLLD wh-questions makes the presuppositional value of the question stronger. The fact that the resumptive clitic marks the number and gender of the questioned entity asserts that the question is associated with a previous context where the number and gender of the questioned entity are shared by the interlocutors, hence the plausibility of construing CLLD wh-phrases as topics. The ban on non-nominal wh-phrases in CLLD questions further supports my analysis. By contrast, the presupposition of a specific number and gender of the questioned person/thing is unlikely in focus fronted questions where a gap is used instead of the resumptive clitic: a focus fronted question is intended for merely asking about a person/thing, but not for the identification of a particular subset of a known set. Unlike in CLLD questions, for example, the number and gender of this subset is not shared by the interlocutors in focus fronted questions (see also section 3.5.2 below).

The second piece of evidence in support of my analysis comes from contexts where CLLD wh-phrases can co-occur with focus fronted elements. Consider the following examples from JA. Example (29a) illustrates focus fronting and example (29b) shows that a CLLD wh-phrase can precede a focus fronted element.

(29) a. [TopP **maha$_i$** [FocP ʔembariH [TP iz-zalameh šaf-**ha$_i$**]]]
      Maha   yesterday   the-man   saw.3MS-**her**
   'Maha, yesterday, the man saw her'.

b. [CP (huwweh)[TopP **mi:n$_i$** [FocP ʔimbariH [TP iz-zalameh šaf-**ha$_i$**?]]]]

　Q 　　　　　　　　　**who** 　　　yesterday 　　　the-man 　　saw.3MS-**her**

'Who is the female person (x) such that the man saw (x) yesterday?'

Unless we recognize that wh-phrases in JA can occur in TopP, the word order in questions such as (29b) will remain unexplained. The suggestion that wh-phrases always originate in FocP then move to TopP thus breaks down upon consideration of such data. If this were the case, the focus fronted element in the above example would have no position in the structure. This evidence asserts that TopP is independently needed to host wh-phrases.

My proposal that CLLD wh-phrases are base-generated in [Spec, TopP] can be challenged by the common assumption that wh-phrases are inherently focused and thus should not be base-generated as topics. However, it should be made clear at this point that the distinction between topics and foci is not always clear-cut in the theory. For example, topics are sometimes argued to be associated with focus and emphasis, and focus can be associated with old contexts in certain cases such as contrastive focus. Rizzi (2011) himself indicates that the featural specification of topics is still in need of refinement. To this effect, I propose that the head Top in JA also carries a [+focus] feature, giving it the featural specification [+Top, +Focus, +wh]. This means that there is indeed something focus-like (contrastive) about topics.

Further evidence for this proposal comes from the contexts in which CLLD wh-questions can be used. They can be used to express a correction to a wrong answer given by the addressee in a particular context. For example, if the speaker asks "who did the man see?" using the typical focus fronting strategy which involves a gap, and the addressee answered saying "the man kissed Maha", the CLLD version will be used to correct the addressee's wrong understanding as follows:

(30) bagol   **mi:n$_i$**   iz-zalameh šaf**-ha$_i$**?

     saying.1S   **who**   the-man   saw.3MS**-her**

     'I am saying who is the female person (x) such that the man saw (x).'

This asserts that CLLD questions are associated with something like "contrastive topicalization". In other words, CLLD can be taken as a last resort strategy to delimit the scope of the already focused wh-phrase, connecting it to a particular previous context/entity as evident in the use of the resumptive clitic. This analysis captures the topical nature of wh-phrases (in the sense of Rizzi 2011) and at the same time maintains their focus properties. Thus, my analysis of CLLD wh-phrases as topics does not contradict the focal nature of wh-phrases, especially with the suggested modification of the features of the head Top.

3.5   The analysis of typical fronted wh-questions

The preceding section examined wh-questions in which the initial wh-phrase is accompanied by a sentence-internal resumptive clitic, i.e. resumptive wh-questions. I turn now to wh-questions in which the sentence-internal position is instead occupied by a gap, i.e. typical fronted wh-questions. In addition to the existence of the gap, typical fronted wh-questions also differ from resumptive wh-questions in that no restriction is imposed on the type of wh-phrase permitted: both argument and adjunct wh-phrases are allowed, as shown in section 3.2 above. One commonality with resumptive wh-questions remains, however: typical fronted wh-constructions can be optionally introduced by the question particle *huwweh*, which occurs sentence-initially before the wh-element. The formation of a fronted wh-question can be summarized as in (28).

(31)   [(Q-particle) wh-phrase$_i$ [TP … trace/gap$_i$]]

Fronted wh-questions are island sensitive: the clause-initial wh-constituent cannot be related to a gap across an island (see examples 7-9 above). The existence of island effects has

led many Arab linguists to posit wh-movement in the derivation of this interrogative construction in different Arabic varieties (see notably Wahba 1991; Aoun & Choueiri 1999; Shlonsky 2002; Aoun & Li 2003; Abu-Jarad 2008; Aoun et al 2010; among others). Under such analyses, the wh-phrase always undergoes overt syntactic movement to [Spec, CP] thus creating the operator-variable configuration needed to interpret the construction as interrogation. However, I will argue that a wh-movement analysis is in fact not appropriate for this type of wh-question in JA.

Three reasons point in this direction. First, an analysis involving movement of the wh-phrase to [Spec, CP] leaves the widely neglected question particle that may appear to the left of the wh-phrase in this interrogative construction unexplained. If the question particle is in the head C, as I have proposed, then the moved wh-phrase must occupy some position lower than C. Second, an entire fronted wh-construction can be embedded after the complementizer *ʔinno* 'that', as will be illustrated below. This again indicates that the moved wh-phrase must be in a position below C. Finally, from a more theoretical perspective, adopting a wh-movement analysis would give rise to a typological problem, in that JA would be simultaneously both a wh-in-situ and a wh-fronting language, an issue to be taken up in further detail later in the chapter.

While an analysis involving some sort of movement is necessary in order to account for the properties of this type of wh-construction, I will show that it can be subsumed under a different type of movement than the wh-movement found in English-type languages. This alternative characterization can provide a unified and non-contradictory account of a language that makes use of a variety of wh-strategies such as JA and its sisters. It will be shown that the seemingly drastic act of abandoning a universally acknowledged approach such as Chomsky's (1977) wh-movement analysis has the positive side-effect of rescuing

another influential framework to which JA previously appeared to constitute a counterexample, namely, Cheng's (1991) Clausal Typing Hypothesis.

My proposed analysis for fronted/gap wh-questions in JA is based upon the strong resemblance they bear to non-wh focalized structures in Arabic. The analysis suggested by this similarity would be to treat such wh-constructions as a species of focus fronting. More precisely, such wh-questions will be analyzed as cases of focalization in which the wh-phrase is the focus fronted element, thus undergoing movement to the specifier of FocP, which occupies a position between CP and TP. The clause-initial wh-phrase, the clause-internal gap, the island sensitivity of the structure, the optional question particle, and the lack of any restriction on the type of wh-element are all consistent with the focus fronting analysis.

The discussion unfolds as follows. In subsection 3.5.1 I introduce the phenomenon of focus fronting in Arabic, showing that the sentence-internal variable position of a focus fronted element is normally marked by a gap. I then compare typical fronted wh-questions in JA to the focus fronting construction (subsection 3.5.2) and show that the two constructions are syntactically parallel, with the only difference boiling down to the nature of the focus fronted element as a lexical element in typical focus fronted constructions and a wh-phrase in fronted wh-questions.

3.5.1   Focus fronting in Arabic

Focus fronting is another left peripheral phenomenon in Arabic in which a syntactic constituent is preposed/fronted for focus considerations, leaving a gap in its corresponding sentence-internal original site (cf. Bakir 1980; Moutaouakil 1989; Ouhalla 1997; Aoun & Benmamoun 1998; Shlonsky 2000; Aoun et al 2010). The following are canonical examples of focus fronting in Arabic.

(32) a. **naadia$_i$** šeef   saami$ø_i$.   Lebanese Arabic

      Nadia   saw.3MS   Sami

      'Nadia, Sami saw.'

   b. **al-kitaab-a$_i$**   wažada   muħammad-un $ø_i$.   Standard Arabic

      The-book-Acc   found.3MS Muhammad-Nom

      'The book, Muhammad found.'   (Aoun et al 2010: 203)

   c. **ʔil-binit$_i$**iz-zalameh šaf $ø_i$ ʔimbariH.   Jordanian Arabic

      The-girl the-man   saw.3MS   yesterday

      'The girl, the man saw yesterday.'

The above focus fronting examples minimally contrast with the CLLD examples discussed in the previous section. This contrast shows that, though both constructions involve a left-peripheral element, the status of the clause-internal variable differs: it is marked by a resumptive clitic in CLLD constructions (see the examples given in 12 above) and by a trace/gap in focus fronting constructions.

Another crucial difference between CLLD and focus fronting involves case marking. The case marking of CLLD'ed elements in SA bears no relation to the syntactic function of the sentence-internal clitic: the CLLD'ed element is always nominative, as shown in (12b) above. Focalized constituents, on the other hand, are obligatorily marked for the case of their sentence-internal corresponding gaps. Focus fronted direct objects in SA, for example, retain their original accusative case marking (32b above); focalized PPs bear genitive case as will be shown shortly. This case marking, however, is visible only in SA; other spoken varieties such as JA lack overt morphological case marking as has previously been made clear.

Notwithstanding the above disparity, focus fronted and CLLD'ed elements behave symmetrically in embedded contexts in the sense that both obligatorily follow the complementizer. This is a straightforward indication that although a focus fronted element

occurs in a position higher than the TP, it is still somewhere lower than the CP. The examples in (33-35) illustrate this observation.

(33) **Focus fronted element follows complementizer in Standard Arabic**

a. ʔaðunnu [ʔanna   [fi **baɣdaad-a_i**   ħaSala   l-ʔittifaaq-u   **ø_i**]].
   Think.1S[that   [in**Baghdad-Acc**   happened.3MS   the-agreement-Nom]]
   'I think that in Baghdad, the agreement took place.'

b. ðanantu   [ʔanna   [**kitaab-an_i**   qaraʔat zaynab-u   **ø_i**]].
   believe.1S   [that   [**book-Acc**   read.3fs Zaynab-Nom   ]]
   'I believe that, a book, Zaynab read.'   (Aoun et al 2010: 203)

(34) **Focus fronted element follows complementizer in Lebanese Arabic**

a. biftikir [ʔənno [**bi-š-šeem_i**   raħ   tleeʔe   ʔimm-ak   šaraašif **ø_i**]].
   think.1S [that   [**in-the-Damascus**   fut.   find.3fs mother-you   sheets   ]]
   'I think that in Damascus, your mother will find sheets.'

b. biftikir [ʔənno [**kariim_i** ʕarrafit   zeina **ø_i** ʕa-l-mʕallme   ]].
   think.1S [that   [**Karim** introduced.3fs   Zeina   to-the-teacher.fs]]
   'I think that Karim, Zeina introduced to the teacher.'   (Aoun et al 2010: 204)

(35) **Focus fronted element follows complementizer in Jordanian Arabic**

a. maha fakkarat   [ʔinno   [**ʔil-binit_i**   iz-zalameh šaf   **ø_i**   ʔimbariH]].
   Maha thought.3MS [that   [**the-girl**   the-man   saw.3MS   yesterday]]
   'Maha thought that the girl, the man saw yesterday.'

b. *maha   fakkarat   [**ʔil-binit_i** [ʔinno   iz-zalameh šaf**ø_i**   ʔimbariH]].
   Maha   thought.3MS [**the-girl**   [that   the-man   saw.3MS yesterday]]

Unlike in CLLD constructions, which can involve only definite NPs (see (16-17) above), both definite and indefinite NPs are fully accepted in focus fronting constructions. Consider the following cases where the focalized elements are indefinite noun phrases; the examples given in (32) above represent focus fronting of definite NPs.

(36) a. **qaSiidat-an_i** ʔallafa ʕomar **ø_i**.　　　　Standard Arabic

　　　poem-Acc　　wrote.3MS Omar

　　　'A poem, Omar wrote.'

　　b. **ʔaSiide_i** ʔallaf ʕomar **ø_i**.　　　　Lebanese Arabic

　　　poem　wrote.3MS Omar

　　　'A poem, Omar wrote.'　　　　　　　　(Aoun et al 2010: 207)

　　c. **binit_i** iz-zalameh šaf**ø_i**　ʔimbariH.　　Jordanian Arabic

　　　Girl the-man　saw.3MS　yesterday

　　　'A girl, the man saw yesterday.'

An additional difference between focus fronting and CLLD is that focus fronting can affect a constituent of any grammatical category whereas CLLD is restricted to noun phrases due to the (pro)nominal nature of resumptive clitics (Aoun et al 2010). The following examples illustrate various non-nominal focus fronted constituents.

(37) **Focus fronted PPs**

　　a. **[baʕd l-ʁada]_i**　rəħna　tmaššayna **ø_i**.　　Lebanese Arabic

　　　[after the-lunch] went.1P walk.1P

　　　'After lunch, we went walking.'

　　b. **ʕinda-ka_i** yanamu　zayd-un　**ø_i**.　　Standard Arabic

　　　at-you.ms sleep.3MS Zayd-Nom

　　　'Zayd sleeps at your house.'　　　　　　(Aoun et al 2010: 207)

(38) **Focus fronted AdjPs**

　　a. **[ħəlwe ktiir]_i**　keenit　l-masraħiyye **ø_i**.　Lebanese Arabic

　　　[Nice.fs very]　was.3fs the-play

　　　'Very nice was the play.'

　　b. **žamiil-an_i**　kaanal-xaatamu **ø_i** ʕala　ʔiSbaʕi-ha.　Standard Arabic

　　　Beautiful-Acc was　　　　　the-ring on finger-her

　　　'Beautiful was the ring on her finger.'　　　(Aoun et al 2010: 208)

(39) **Focus fronted AdvP and PP in Jordanian Arabic**

a. **ʔimbariHᵢ** iz-zalameh šaf   maha ∅ᵢ.
   Yesterday the-man   saw.3MS   Maha
   'It was yesterday that the man saw Maha.'

b. **[la-maha]ᵢ** iz-zalameh ʔa9Ta   ʔil-maSari ∅ᵢ.
   To-Maha the-man   gave.3MS the-money
   'It was to Maha that the man gave the money.'

A final remark worth making about focus fronting is related to island effects. Focalized constructions display island effects in the sense that the focus fronted element cannot be related to a gap within an island. The following examples show that a focused/fronted element cannot be related to a gap in a wh-island (40), a relative clause island (41), or an adjunct clause (42). All the (a) examples are Lebanese sentences taken from Aoun et al (2010), while all the (b) examples are Jordanian sentences and are my own (see also Shlonsky (2000) for further exemplification from SA).

(40) **Focus fronting banned across a wh-island**

a. *sməʕt   ʔənno [**naadiaᵢ**   byaʕrfo   [ʔayya   walad   šeef ∅ᵢ]].
   heard.1S   that   [**Nadia**   know.3P   [which   boy   saw.3MS]]
   '*I heard that Nadia, they know which boy saw.'   (Aoun et al 2010: 208)

b. *smi9it   ʔinno [**ʔil-binitᵢ** bidko   ti9rifo   [mi:n šaf∅ᵢ]].
   Heard.1S   that   [**the-girl**   want.2P know.2P   [who saw.3MS]]
   '*I heard that the girl, you want to know who saw.'

(41) **Focus fronting banned across a relative clause island**

a. *sməʕt   ʔənno [**ha-l-kteebᵢ**   ħkiite   maʕ [z-zalame yalli katab∅ᵢ]].
   heard.1S   that   [**this-the-book** talked.2FS with [the-man   that   wrote.3MS]]
   '*I heard that this book, you talked with the man that wrote.' (Aoun et al 2010: 208)

b. *smi9it   ʔinno [**ʔil-binitᵢ** bti9rifo   [iz-zalamehʔilli šaføᵢ]].

  Heard.1S that [**the-girl** know.2P [the-man that saw.3MS]]

  '*I heard that the girl, you know the man who saw.'

(42) **Focus fronting banned across an adjunct clause island**

a. *sməʕt   ʔənno [**naadiaᵢ**   rəħte   [mən dun ma   tšuufe   øᵢ]].

  heard.1S that   [**Nadia**   left.2FS [without Comp see.2FS]]

  '*I heard that Nadia, you left without seeing.'   (Aoun et al 2010: 208)

b. *smi9it   ʔinno [**ʔil-binitᵢ** rawwaHto [ba9idma iz-zalameh šaf   øᵢ]].

  Heard.1S that [**the-girl** left.2P   [after   the-man   saw.3MS]]

  '*I heard that the girl, you left after the man saw.'

The island effects displayed by focus fronting contrast with CLLD constructions, which freely violate island conditions (see examples 19-21 above).

   The island constraints on focus fronting in Arabic have led many linguists (cf. Farghal 1994; Ouhalla 1997; Aoun & Benmamoun 1998; Shlonsky 2000; Aoun et al 2010) to conclude that such structures are derived via movement. Ouhalla (1997), building on Jackendoff (1972), assumes that focus constructions in Arabic project a Focus phrase (or FP) whose functional head is F. This functional head bears the feature [+F], which is typically satisfied via Spec-head agreement with a focus element that is preposed/moved to [Spec, FP] (see also Choe 1987; Brody 1990; Tsimpli 1990 & 1995). Ouhalla's (1997) movement analysis of focus fronting accounts for the syntactic properties of this construction: the presence of a clause-initial element, the gap, the island sensitivity, and the case correspondence between the focused/fronted element and its sentence-internal gap. The same movement approach is also found in Shlonsky's (2000) and Aoun et al's (2010) analyses of this left-peripheral construction.

3.5.2   Fronted/gap wh-questions are instances of focus fronting

In this subsection I lay out my analysis of typical fronted wh-constructions in JA as a case of focus fronting structures. As discussed above, typical fronted wh-questions share the same syntactic composition as focalized constructions. Both constructions consist of a fronted constituent in a left-peripheral position associated with a gap in its thematic position inside the clause. This parallel can be observed in (43).

(43) a. **Non-wh focus fronting**

    ʔil-binit$_i$ iz-zalameh šaf   ø$_i$ ʔimbariH.

    The-girl   the-man   saw.3MS   yesterday

    'The girl, the man saw yesterday.'

  b. **Typical fronted wh-question**

    (huwweh) **mi:n$_i$**   iz-zalameh šaf   ø$_i$ ʔimbariH?

    Q   **who**   the-man   saw.3MS   yesterday

    'Who did the man see yesterday?'

Fronted wh-questions are also parallel to focus fronting in that the fronted constituent need not be nominal: adverbials and PPs can also be fronted, as shown in (44).

(44) a. (huwweh) **ʔeimta$_i$** iz-zalameh šaf   maha ø$_i$?

    Q   **when**   the-man   saw.3MS   Maha

    'When did the man see Maha?'

  b. (huwweh) **la-mi:n$_i$**   iz-zalameh ʔa9Ta   ʔil-maSari ø$_i$?

    Q   **to-who**   the-man   gave.3MS the-money

    'To whom did the man give the money?'

Island constraints constitute a further parallel between non-wh-focus fronting and fronted wh-questions: both constructions are subject to island constraints, as shown in (40-42) above for non-wh focus fronting constructions and in section 3.2 above (examples 7-9) for fronted wh-questions.

Another parallel between the two constructions lies in their interpretive values. Focus fronting, unlike CLLD, does not presuppose the existence of previous background information about the number or gender properties of the focalized element. The wh-question given in (43b) above, for example, is simply a question about the person(s) expected to have been seen by the man in question, but does not presuppose anything regarding the number or gender of this/these person(s). Such wh-questions thus differ from CLLD wh-questions in that they are not employed to question the identity.

These pragmatic observations receive further support from a grammatical difference between fronted wh-questions and CLLD wh-questions. In a fronted wh-question, the clause-internal variable position of the fronted constituent is marked by a gap and thus lacks phi-features (45a below). By contrast, the clause-internal variable position in a CLLD wh-question is occupied by a pronominal clitic carrying person, number and gender features (e.g. (45b) below, in which the clitic is third person singular feminine). The possibility of specifying these features in a CLLD question but not in a focus fronted question further asserts that CLLD wh-questions are intended to ask about a specific identity that has already been established in previous discourse while focus fronted questions are not.

(45) a. **Typical fronted wh-question:**

(huwweh) **mi:n$_i$**   iz-zalameh šaf   **ø$_i$**   ʔimbariH?
Q   **who**   the-man   saw.3MS   yesterday
'Who did the man see yesterday?'

b. **CLLD wh-question:**

(huwweh) **mi:n$_i$**   iz-zalameh šaf-**ha$_i$**   ʔimbariH?
Q   **who**   the-man   saw.3MS-**her** yesterday
'Who is the female person (x) such that the man saw (x) yesterday?'

Although focus fronted wh-questions still carry presuppositions similar to other wh-questions, the presupposition carried by focus fronted questions is not as strong as that carried by CLLD wh-questions. The stronger contextual presupposition of CLLD questions is a direct result of the occurrence of a resumptive clitic that carries number and gender features. This supports my analysis of CLLD questions as in-situ questions, as both types of questions have strong presuppositional values, as opposed to focus fronted questions. Focus fronted questions carry a presupposition related to the questioned person/thing but without any presupposition about the gender or number of this person/thing; this is consistent with the view that focus involves new, non-presupposed information (Cinque 1993; Zubizarreta 1998).

The final parallel between non-wh focus fronting constructions and typical fronted wh-questions in JA involves their prosody. Both preposed focused phrases and fronted wh-phrases are marked by a special pitch accent/focal stress ('*al-nabra*', using traditional terminology) (cf. Ouhalla 1997). The preceding parallels between focus fronting and fronted wh-questions make the focus analysis a prime candidate for addressing this wh-construction.

Although some Arab linguists have derived this wh-construction via wh-movement to [Spec, CP] (e.g., Wahba 1991; Aoun & Choueiri 1999; Shlonsky 2002; Aoun & Li 2003; Abu-Jarad 2008; Aoun et al 2010; among others), these wh-movement analyses break down upon considerations of two major points. The first point is that fronted wh-phrases can follow the complementizer *ʔinno* 'that', as also discussed for CLLD questions in the previous section. Examples are given in (46). Such examples indicate that the position targeted by the fronted wh-phrase, though clearly above TP, is still somewhere below C.

(46) a. (huwweh) enta golit [ʔinno [**mi:n$_i$** iz-zalameh šaf **ø$_i$** ʔimbariH]]?
     Q   you said.2MS [that   [**who**   the-man saw.3MS   yesterday]]
     'Who did you say that the man saw yesterday?'

b. (huwweh) enta golit [ʔinno **[ʔayya binit$_i$** iz-zalameh šaf **ø$_i$**

Q you said.2MS [that **[which girl** the-man saw.3MS

ʔimbariH]]?

yesterday]]

'Which girl did you say that the man saw yesterday?'

c. (huwweh) enta golit [ʔinno [eiš$_i$ iz-zalameh ištara ø$_i$ ʔimbariH]]?

Q you said.2MS [that [**what** the-man bought.3MS yesterday]]

'What did you say that the man bought yesterday?'

The second point has to do with the optional question particle *huwweh* that can occur in this wh-construction, similar to other wh-constructions in JA. Assuming that the wh-phrase occupies [Spec, CP] via overt syntactic movement is problematic because, under the assumption that the Q-particle is in C, the wh-phrase is preceding the Q-particle, a sequence never attested in the language. The Q-particle must precede the wh-phrase. Even assuming that the Q-particle is in [Spec, CP] is problematic and cannot rescue the wh-movement analysis either. This is because the position [Spec, CP] in this case would be occupied by two elements at the same time: the wh-phrase and the Q-particle. Under my analysis, the question particle is base-generated under the head C, which is higher than the FocP that the wh-phrase targets, thus capturing the fact that the question particle must precede the wh-phrase.

Based on the above-mentioned parallels between focus fronting and fronted wh-questions in JA, I alternatively hypothesize that this type of wh-question is an instance of focalization in which the clause-initial occurrence of the wh-phrase is due to focus fronting to a focus projection rather than wh-movement to [Spec, CP]. Assuming wh-movement as a subclass of focus fronting is not a novel idea; many linguists have proposed that wh-phrases move to a position of (contrastive) focus, which is different from the clause-initial [Spec, CP] position (see, e.g., Horvath (1986) for Hungarian; Rochemont (1986) for Basque; Kiss (1995) for Aghem; Stjepanovic (1995, 1999) and Boskovic (1997) for Serbo-Croatian; Ndayiragije

(1999) for Kirundi; Kahnemuyipour (2001) for Persian; Al-Momani & Al-Saidat (2010) for Jordanian Arabic; Lassadi (2005) and Gad (2011) for Egyptian Arabic; among others). In light of the similarity of wh-phrases to contrastively focussed phrases in respect to interpretations, Horvath (1986) proposes that if a language has a specified position for contrastively focussed phrases, then wh-phrases in this language will also move to this position (see also Brody 1990; Hoh & Chiang 1990; Tsimpli 1990 & 1995; Stjepanovic 1995 & 1999; Zubizarreta 1998; Sabel 2000). Nevertheless, I propose that the insight embodied in existing focus analyses, though on the right track, cannot capture the range of syntactic properties highlighted above. Specifically, I suggest that FocP is not the maximal functional projection in such wh-constructions as is typically proposed in the literature. I instead argue that FocP is dominated by a CP projection which hosts the [+wh/+Q] feature, thus capturing the possibility of a Q-particle in such interrogative constructions.

The analysis that I propose for fronted wh-questions follows the same framework adopted for CLLD wh-questions in the previous section, namely, the Fine Structure of the Left Periphery or Split-CP (Rizzi 1997; Shlonsky 2000; Aoun et al 2010). I propose that fronted wh-questions involve a structure in which FocP occurs in a position between CP and TP. The focus-fronted wh-phrase targets the specifier position of this FocP leaving a gap in its TP-internal original site. Since wh-phrases are moved to a functional category other than, and below, C, the set of data given in (46) above can be straightforwardly accounted for. This analysis is illustrated in detail by the tree diagram in (47).

(47) a. (huwweh) **mi:n_i** iz-zalameh šaf   ø_i ʔimbariH?
     Q   **who**   the-man   saw.3MS   yesterday
     'Who did the man see yesterday?'

b.

```
                        CP
                   ┌─────┴─────┐
                 Spec          C'
                          ┌─────┴─────┐
                          C          FocP
                          │      ┌─────┴─────┐
                   huwweh/OPᵢ    DP          Foc'
                                 │      ┌─────┴─────┐
                               mi:nᵢ   Foc          TP
                               Who     [+F]    ┌─────┴─────┐
                                               DP          T'
                                               │      ┌─────┴─────┐
                                          Iz-zalamehⱼ   T          VP
                                          The-man         ┌────────┴────────┐
                                                          DP                V'
                                                          tⱼ          ┌──────┴──────┐
                                                                      V'            AdvP
                                                                 ┌────┴────┐         △
                                                                 V        NP
                                                                 │         │
                                                                Šaf       -tᵢ    ʔimbariH?
                                                               saw.3MS            yesterday?
```
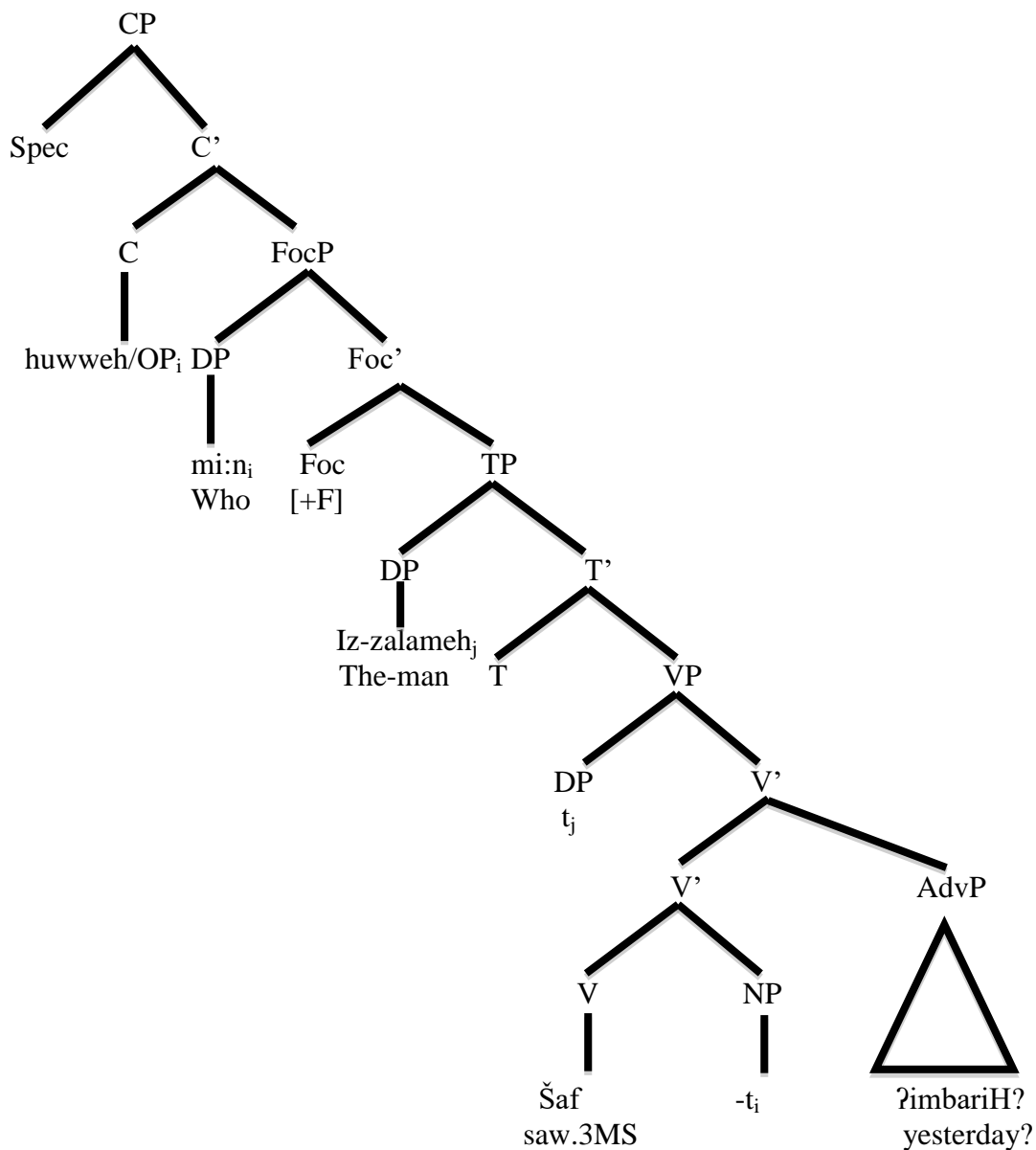
The above structure involves the following assumptions. First, the wh-phrase is moved to [Spec, FocP] as a focalized element, satisfying the [+F] feature borne by the functional head Foc. Second, the moved wh-phrase leaves a gap in the clause-internal thematic position as a result of this movement. Finally, the focus fronted wh-phrase is unselectively bound by a null interrogative operator base-generated in C in the sense of Pesetsky (1987). This interrogative operator, which takes care of checking the [+wh] feature borne by the matrix C, can be overtly lexicalized as the Q-particle *huwweh*.

This analysis leads to an interesting conclusion: although fronted wh-questions in JA manifest the defining properties of wh-movement such as island sensitivity, they do not cluster with wh-fronted constructions of the English type. The sentence-initial position of the wh-phrase in this interrogative construction is not the result of the classical wh-movement to [Spec, CP], as in English (Chomsky 1977). Rather, it is the result of another type of movement, namely, focus movement. The focus movement analysis is necessary in order to account for the aforementioned symmetries between this interrogative construction and focus fronted structures. Also, the optional question particle *huwweh*, which has been widely disregarded in previous studies, can be neatly accommodated in this analysis but not in an analysis in which the wh-phrase itself moves to [Spec, CP]. Finally, this analysis offers a uniform treatment for the two wh-constructions surfacing with clause-initial wh-elements in JA, namely, CLLD and focus fronted wh-questions. Both question types involve a pragmatic prominence construction embedded under an interrogative CP layer; the difference lies in whether this construction is a TopP (CLLD questions) or a FocP (fronted questions).

3.6   Implications of my proposal

In this section, I discuss some of the implications of the analysis proposed above for resumptive wh-questions and typical fronted wh-questions.

3.6.1   CLLD wh-questions are in-situ wh-questions

Recall that resumptive wh-questions were shown to instantiate a subclass of CLLD structures based on the set of parallels between the two constructions, such as the presence of a left-peripheral nominal element, the presence of a clause-internal resumptive clitic, island insensitivity, and the ban on adjuncts and PPs. My examination of what has been perceived as resumptive wh-questions in Arabic (Aoun & Choueiri 1999; Aoun et al 2010; Abdel Razaq 2011) has revealed that they are merely the interrogative counterpart of standard CLLD

constructions. In the specific implementation pursued here, the crucial distinction between non-wh CLLD constructions and CLLD wh-questions boils down to the status of the left-dislocated element as a lexical constituent in declarative CLLD constructions and a wh-phrase in CLLD interrogatives. My proposal entails that the following statements hold in JA:

(48) a. Wh-phrases in the so-called resumptive wh-questions, being CLLD structures, are topics (or left-dislocated objects) which are base-generated in their surface clause-initial position.

b. The position that hosts the base-generated wh-phrase is [Spec, TopP], not [Spec, CP].

c. The question particle that can optionally introduce this wh-construction is the lexical realization of the null interrogative operator in C. In other words, there is always a CP dominating a TopP in CLLD wh-questions.

d. There is no syntactic wh-movement involved in the derivation of CLLD wh-questions.

e. The interpretation of the whole structure as interrogation is taken care of via unselective binding.

f. Resumption is not an interrogative strategy in its own. Rather, it is merely a side-effect of the underlying CLLD construction that feeds this type of wh-question.

g. CLLD wh-questions instantiate a case of pseudo wh-fronting or, for that matter, a case of in-situ wh-questions.

Although CLLD wh-interrogatives involve an apparently fronted wh-phrase, it can be generalized by now that they represent a concealed base-generated construction. The clause-initial position of the wh-phrase is predestined by virtue of being a member in a topic-comment (CLLD) structure and is thus not the result of any wh-movement. The only way for a CLLD wh-question to converge is for its initial numeration to include a base-generated operator and variable, because movement to [Spec, CP] is not only unnecessary, but

impossible, as is evident from the question particle, the absence of island effects, and the resumptive clitic.

The above reasoning yields the following conclusions. First, CLLD wh-interrogatives instantiate a concealed version of in-situ wh-interrogatives of the type discussed in the previous chapter. Since CLLD interrogatives are derived from a left-dislocation source, the sentence-initial position of the wh-phrase is its canonical in-situ position as a topic. Otherwise put, the wh-phrase remains in-situ (i.e., in its first-Merge position), which happens to be a clause-initial position by virtue of being a CLLD'ed element. Second, it can be generalized, granting this characterization, that the initial position of wh-phrases reduces to reasons other than overt syntactic wh-movement.

3.6.1.1 Movement of wh-phrases is not always a wh-movement in the conventional sense

Pursuing a similar line of reasoning, I have subsumed typical fronted wh-questions under focus fronting/focalization due to the similar properties they both share. Such properties include the involvement of clause-initial elements and gaps, island sensitivity and the lack of any restriction on the type of fronted elements. Also, both constructions involve movement for the sake of feature-checking considerations (i.e., satisfying the [+F] feature on Foc under my proposal). Accordingly, fronted wh-questions in JA are construed as a species of focus fronting. In the specific implementation pursued here, the difference between non-wh focus fronting constructions and typical fronted wh-questions is reduced to the nature of the focus-fronted element. My analysis of typical fronted wh-questions in JA entails the following statements:

(49) a. Wh-phrases in typical fronted wh-questions represent cases of focus fronting/focalization whereby they are moved to their surface clause-initial position.

b. The wh-phrase in such wh-questions is moved to [Spec, FocP], not to [Spec, CP].

c. The question particle that can optionally precede the clause-initial wh-phrase is the lexical realization of the null interrogative operator which is base-generated in C. In other words, there is a CP dominating a FocP in fronted wh-questions.

d. The interpretation of the whole structure as interrogation is taken care of via unselective binding.

e. This type of wh-question instantiates another case of pseudo wh-fronting.

Though typical fronted wh-questions in JA clearly involve movement, I have argued that this is ordinary focus movement to [Spec, FocP] rather than wh-movement to [Spec, CP]. This characterization leads to the generalization that even wh-constructions that exhibit overt syntactic movement in JA do not cluster with moved wh-questions found in English-type languages. The movement in this Jordanian wh-construction targets a different level in the CP domain (Foc rather than C) and satisfies a different feature ([+F] rather than [+wh]). A consequence of this analysis is that in JA, there is no wh-movement of the English type, even in wh-constructions that exhibit the apparent hallmarks of this wh-movement.

A more general conclusion that follows from this line of reasoning is that not every case of clause-initial wh-phrases necessarily involves a bona fide instance of wh-movement in the traditional sense. The clause-initial position of the wh-phrase could in fact be the canonical/first-Merge position of the wh-phrase, as in CLLD wh-questions, or it could be the result of focus movement rather than bona fide wh-movement. In JA, both CLLD'ed and focalized wh-questions instantiate cases of pseudo wh-fronting, i.e. wh-phrases that are fronted for reasons other than wh-movement.

3.6.2   Other broader consequences of my analysis

One further interesting consequence of the current analysis has to do with the apparent optionality of resumptive clitics in wh-questions surfacing with clause-initial wh-phrases. The bottom line of the present characterization is that there is not, in fact, any optionality.

Rather, there are two distinct constructions: a base-generated/CLLD structure and a movement/focalized construction. Resumptive clitics are precluded whenever movement is possible and are obligatorily included when movement is not possible. This means that pronominal clitics are only available when and where they must appear.

Allowing interrogative phrases to occupy CLLD'ed and focalized positions removes from the analysis any potential optionality involving the choice of base-generation vs. movement or of gaps vs. resumption. It also provides a straightforward account of the clause-initial position of the wh-phrase as well as the question particle in these constructions. Thus, it can be generalized that the mapping of the left periphery in Arabic, which was first proposed by Shlonsky (2000) for declarative constructions, can be extended to wh-interrogative constructions in the language and can provide a straightforward account for their different syntactic properties.

The wh-constructions examined so far pose a serious challenge to the assumption that JA is a wh-movement language (Abdel Razaq 2011). I argue throughout this study that JA is not a wh-movement language of the English type. Recall from the previous chapter that the in-situ strategy is productively used in the formation of wh-questions in JA (see also Al-Momani & Al-Saidat 2010). In this chapter, evidence has been presented that wh-movement plays no role in the derivation of certain instances of clause-initial wh-phrases. The examination of two further types of wh-question with clause-initial wh-phrases in the next two chapters will further develop this line of reasoning.

It has also been shown in this chapter that what has been widely viewed as a typical wh-moved construction can, on closer inspection, be analyzed otherwise. The major corollary of this analysis is that JA, though it at first appears to be a wh-movement language of the English type, is a concealed in-situ wh-language of the Chinese type, contra the putative wh-movement classification (Abdel Razaq 2011). My overall analysis is also consistent with the

well-known typological generalization that in-situ languages make use of question particles (cf. Baker 1970; Cheng 1991). More precisely, classifying JA as an in-situ language is congruent with the existence of the Q-particle *huwweh* in the various wh-constructions in the language while the wh-movement classification is at odds with this fact.

3.6.3 The Clausal Typing Hypothesis converges

A broader consequence of my analysis is the convergence with an existing hypothesis with considerable empirical coverage, namely, Cheng's (1991) Clausal Typing Hypothesis. In her dissertation "On the Typology of Wh-questions", Cheng (1991) advances an account of the various strategies that languages employ for deriving wh-questions. Cheng proposes the "Clausal Typing Hypothesis", according to which "every clause needs to be typed. In the case of typing a wh-question, either a wh-particle in C is used or else fronting of a wh-word to the Spec of C is used, thereby typing a clause through C by Spec-head agreement" (p. 29). This hypothesis means that languages that have syntactic wh-movement, English for example, use it to type a sentence as interrogative. Languages that do not have syntactic wh-movement, such as Mandarin Chinese, use another strategy to type a clause as interrogative, i.e., by using question particles. Based on the principle of Economy of Derivation, Cheng (1991) further proposes that no language has the option of using either a wh-particle or syntactic wh-movement to type a sentence as a wh-question. This entails that no language has both wh-particles and also syntactic wh-movement: the two clause-typing strategies are in complementary distribution.

The Jordanian facts presented so far, as well as parallel facts from other Arabic varieties, may seem to be a counterexample to Cheng's (1991) Clausal Typing Hypothesis, as JA appears to employ both options: in-situ wh-questions (see chapter 2) and fronted wh-questions (this chapter and subsequent chapters). Even within a single sentence, the question

particle *huwweh* can co-occur with wh-questions that exhibit overt movement. However, my proposed analysis resolves these apparent typological contradictions and, consequently, allows us to maintain Cheng's (1991) hypothesis. Under my analysis, JA is not an optional wh-fronting language: the movement that occurs in typical fronted wh-constructions is focus fronting that targets a position other than [Spec, CP] and satisfies a feature other than [+wh], while the apparent fronting of wh-arguments in resumptive wh-questions involves an in-situ CLLD construction in which the wh-argument is base-generated as a left-dislocated topic in [Spec, TopP] and thus does not undergo any movement,

If wh-movement does not take place in these wh-constructions, how is interrogative clause typing accomplished? I propose that it is done via the null interrogative morpheme (or its optional overt realization as the Q-particle *huwweh*) rather than by wh-movement to [Spec, CP]. The recognition of this null interrogative particle (Baker 1970; Pesetsky 1987) as the locus of interrogative clause typing in all JA wh-questions entails that JA does employ just one unique strategy to type a clause as a wh-question, as predicted by Cheng's Clausal Typing Hypothesis, regardless of whether the wh-phrase surfaces clause-initially or clause-internally.

3.6.4   Summary of implications

The proposed approach to JA questions and its major implications are summarized in (50).

(50) a. If the wh-phrase remains in its base position in the lexical domain where it originates, the output will be the typical in-situ wh-question of the type discussed in the previous chapter.

b. The in-situ wh-phrase can undergo overt focus movement to [Spec, FocP], but not to [Spec, CP], giving rise to a focalized version of the typical in-situ wh-construction.

c. The clause-initial position of wh-phrases in JA is not always the result of this focus fronting operation. When the initial wh-phrase is resumed by a clitic, this initial

position is the result of base-generation in [Spec, TopP] as part of a CLLD construction, which is thus another manifestation of the in-situ strategy.

d. JA is an in-situ wh-language of the Chinese type, though it looks as if it were a wh-movement language of the English type. No case of clause-initial wh-phrases in JA can be construed as a bona fide wh-movement in the traditional sense (i.e., movement of the wh-phrase to [Spec, CP]).

e. While adjunct and prepositional wh-phrases can be focus fronted, they cannot be CLLD'ed.

f. Resumption is not an interrogative strategy on its own. It is a mere side-effect of the CLLD phenomenon.

The analysis proposed, besides successfully avoiding the infelicitous putative generalization that JA is a wh-movement language, explains all the facts surrounding the asymmetries observed so far between different wh-constructions in the language. Simultaneously, it provides a uniform framework that can accommodate the distinct wh-constructions discussed so far, and others to be dealt with in the coming chapters. Finally, this analysis helps maintain Cheng's (1991) Clausal Typing Hypothesis.

3.7   Conclusions

The main goal of this chapter was to provide a syntactic analysis that accounts for the derivation of both resumptive wh-questions and fronted wh-questions in JA. The chapter began, in section 3.2, with a reaffirmation of the distinction between the two wh-constructions, as discussed by Aoun & Choueiri (1999) and Aoun et al (2010). I showed that, though superficially similar, the two wh-constructions differ with respect to island effects and the type of wh-phrase allowed, and thus they cannot be subsumed under a single type of question as might appear possible. I then argued that the existing base-generation vs. movement analyses for resumptive vs. fronted wh-questions, respectively, cannot account for

some neglected syntactic aspects of these interrogative constructions in JA: the use of an optional question particle and the possibility of embedding both types of wh-question after a complementizer. These properties do not follow from an analysis in which the wh-phrase occupies [Spec, CP] on a par with English-type questions.

A more nuanced proposal was consequently advanced, making use of the split CP analysis of the left periphery (Rizzi 1997) and extending the arguments of Shlonsky (2000) from the relevant declarative structures that he investigates to the wh-constructions that I am examining. The proposed analysis enables wh-phrases to be interpreted in their clause-initial position without moving to [Spec, CP]. The parallels between resumptive wh-questions and CLLD constructions on one hand, and between fronted wh-questions and focus fronting on the other hand, were embraced in support of the proposed analysis. Simultaneously, it was shown that the proposed analysis can make available a uniform analysis of distinct wh-constructions in a principled manner. A major upshot of this line of reasoning is that resumption does not form an interrogative strategy on its own (contra Aoun & Choueiri 1999; Aoun et al 2010). Rather, it is just an epiphenomenon of CLLD; resumption and CLLD are found always in tandem.

The proposed analysis has a suite of consequences, the most immediate of which is that a wh-movement analysis cannot be maintained for JA, a language that productively employs the in-situ strategy. Despite the fact that several types of wh-question involve clause-initial wh-phrases in JA, I propose that JA is essentially an in-situ wh-language and that clause-initial wh-phrases, if not disguised in-situ cases, can be accounted for by processes other than wh-movement.

Another consequence of the proposed analysis is the convergence of Cheng's (1991) Clausal Typing Hypothesis. Though JA makes available in-situ and movement wh-constructions, it was shown that this does not jeopardize the standard typological division

between in-situ and wh-movement languages. Under the proposed analysis, this classification can be maintained by adopting a focus fronting approach, rather than a wh-fronting analysis, for wh-constructions that exhibit the defining properties of movement.

All of the observed facts were shown to follow from the proposed analysis. I contend that a distinction between island-sensitive and island-insensitive A'-dependencies must be maintained. As was shown, resumptive and gap constructions behave contrastively in this regard. I also contend, as in Chapter 2, that unselective binding must be available as a question-marking strategy. Taking this approach to its logical conclusion can bring a number of other wh-constructions that have been previously analyzed as instances of wh-fronting into the fold as concealed in-situ structures, an issue I expand on in the next two chapters.

Endnotes

1. The so-called "resumptive wh-questions" have not received as much attention as the typical fronted/moved ones in the literature. They have been briefly discussed only in Lebanese Arabic (Aoun & Choueiri 1999; Aoun et al 2010) and in Jordanian Arabic (Abdel Razaq 2011). However, Abdel Razaq (2011) does not provide a comprehensive analysis of this wh-construction. Rather, he was only concerned with investigating the internal morphosyntax of the wh-phrase *šu* 'what', which is disallowed in this wh-construction in Lebanese Arabic.

2. It is noteworthy here that prepositional stranding is prohibited in Arabic, hence the pied-piping of the preposition *la* 'to' in example (3h); the wh-phrase *mi:n* 'who' in this example serves as the complement/object of the preposition *la* 'to'.

3. The examples given in (2) clearly show that only wh-arguments can be involved in CLLD questions. However, it should be made clear that not all wh-arguments can be CLLD'ed in such wh-constructions. A case in point is the wh-arguments of ditransitive verbs such as "put," "send" and "give." Consider the following examples:

(i) a.   HaTeit   l-ktaab   9-aT-Tawleh.
         Put.1S   the-book   on-the-table
         'I put the book on the table.'

    b.   *[(huwweh)   **wein$_i$**   HaTeit   l-ktaab-**uh$_i$**?]
         Q   **where** put.1S   the-book-**it**
         'Where did you put the book?'

(ii) a. **waddeit/a9Teit**   **l-ktaab**   **la-ma**ha.
         Sent.1S/gave.1S   the-book   to-Maha
         'I sent/gave the book to Maha.'

    b.   *[(huwweh)   **la-mi:n$_i$** $_w$**addeit/a9Teit**   **l-ktaab-uh$_i$**?]
         Q   **to-whom** sent.1S/gave.1S   the-book-**it**
         'To whom did you send/give the book?'

The above examples show that not all arguments can be CLLD'ed: Argument PPs in ditransitive contexts, for example, are disallowed. Thus, it can be said that the contrast is between NP arguments and non-NP argumentss, but not between arguments and adjuncts. This contrast can be explained in light of the resumptive clitic involved in the structure which is of category D, so its antecedent should be of the same category. This condition is met when CLLD-ing NP arguments, but not non-NP arguments which do not belong to category D. The bottomline then is that while nominal arguments can be CLLD'ed, non-nominal arguments (such as prepositional arguments) cannot. Although not all arguments are NPs, I will continue using the terms "nominal/argument" versus "non-nominal/adjunct/adverbial" wh-phrases interchangeably throughout this study because ditransitive verbs (where such non-nominal arguments are typically found) are not employed in my data.

4. I have noticed that there is a confusing inconsistency in the use of the term "topicalization" in the literature on Arabic syntax. Some scholars (e.g. Bakir 1980; Moore 1988; Shlonsky 2000) use the term "topicalization" to refer to what I am calling clitic-left dislocation. Other researchers, following the steps of Chomsky (1977), use the term "topicalization" to refer to

what I am referring to as focalization/focus fronting. Such researchers include Cheng (1991), Farghal (1994), Lalami (1996) and Aoun & Benmamoun (1998). Wahba (1984) uses the term "topicalization" very loosely to refer to both (clitic-) left-dislocation and focus fronting/focalization. To avoid any potential confusion, I will use "clitic-left dislocation" (CLLD) to refer to structures involving left-peripheral NPs related to an IP-internal clitic. As for structures with left-peripheral constituents related to an IP-internal gap, I will stick to the term "focalization/focus fronting", following many scholars (Ouhalla 1997; Shlonsky 2000; Aoun et al 2010). I am thus dispensing with the term "topicalization" throughout.

5. The left-dislocated noun phrase is always marked with nominative case in Standard Arabic (12b). However, it is assigned accusative case in embedded contexts (14a) by the case-assigning complementizer (Aoun & Benmamoun 1998; Shlonsky 2000; Aoun et al 2010).

6. The base-generation analysis of CLLD is adopted by almost all Arab researchers. There is, however, an ongoing debate as to where the CLLD'ed NP sits. While some researchers (e.g. Farghal 1994; Lalami 1996; Ouhalla 1997) adopt an adjunction analysis wherein the CLLD'ed element is adjoined to CP, others (e.g. Shlonsky 2000; Aoun et al 2010) adopt a base-generation analysis where CLLD'ed elements occur in a designated position, i.e., [Spec, TopP]. I do not adopt an adjunction analysis, be it to IP or CP, because it is problematic on both theoretical and empirical grounds. From a theoretical perspective, adjunction analyses (such as those advocated by McCloskey (1992) and Ouhalla (1997)) are unappealing because adjunction is a relatively unconstrained operation. Empirically, they are inadequate to capture the set of cross-linguistic variation exhibited in terms of the relative ordering of left-peripheral XPs (see also Shlonsky 2000; Aoun et al 2010).

7. Although left-dislocated noun phrases in SA (but not JA and other spoken varieties) always bear overt morphological nominative case marking, wh-phrases in SA do not have case forms. In JA, however, neither lexical noun phrases nor argument wh-phrases have case forms. As was shown earlier, a salient aspect of JA, similar to other spoken varieties, is the impoverishment of morphological case marking (see also chapter 1).

Chapter 4
Subject wh-questions in JA

4.1 Introduction

This chapter discusses subject wh-questions in JA in both their verbal and verbless forms. Since I will conclude in this chapter that subject wh-questions in JA are properly considered as wh-in-situ questions, they could have well been incorporated into Chapter 2 where I first discuss typical non-subject in-situ questions in JA. However, I discuss subject wh-questions separately for two reasons. The first reason involves clarity and ease of reference. The discussion of subject wh-questions in this chapter, for example, leads naturally to an overview of verbless copular constructions in JA, which is a topic worthy of discussion in its own right. Equally important, the analysis of non-verbal subject wh-questions to be established in this chapter will play a vital role in setting the stage for analyzing another complex wh-construction to be discussed in the next chapter, namely, *ʔilli* wh-questions.

The second reason for the separate discussion of subject wh-questions involves the clause-initial position of subjects more generally, which has brought controversy to the analysis of subject wh-questions in the formal literature. Subject wh-questions have always been problematic in theoretical work on wh-fronting languages such as English, as it is more difficult to determine whether movement happens. Even though I am arguing that JA is not a wh-fronting language, it still has many constructions with clause-initial wh-phrases, among which are subject wh-questions. Therefore, subject wh-questions could still potentially be difficult to deal with, and it is useful to consider them on their own so that their particular issues can be addressed fully.

A fundamental property of subject-predicate structures in Arabic is that predication is not restricted to verbal constructions. Certain types of predication in Arabic lack any verbal element and consist only of a subject NP followed immediately by another nominal,

adjectival or prepositional phrase giving rise to what is known as verbless/non-verbal/nominal sentences (see Bakir 1980; Jelinek 1981; Eid 1983, 1991 & 1992; Farghal 1986; Fassi-Fehri 1993; Bahloul 1993; Shlonsky 1997 & 2002; Benmamoun 2000 & 2008; Al-Horais 2006; Edwards 2006; Aoun et al 2010; Abdel Razaq 2011). In other words, subject phrases can surface in two types of sentence in JA: verbal sentences (1) and non-verbal/verbless sentences (2).

(1) Ɂil-walad   kasar   iš-šubbak.
     The-boy   broke.3MS   the-window
     'The boy broke the window.'

(2) Ɂil-binit   modarriseh.
     The-girl   teacher.F
     'The girl is a teacher.'

Both verbal and non-verbal sentences express a proposition. The only difference is that there is a verb inflected for a particular tense in the former, whereas no verb is overtly realized in the latter (cf. Bahloul 1993; Shlonsky & Ouhalla 2002; inter alia).

Both verbal and non-verbal sentences can feed subject wh-questions in JA, as shown in the (3-4) (compare with the declarative sentences in (1-2) above).

(3) (huwweh)   mi:n   kasar   iš-šubbak?
     Q   who   broke.3MS   the-window
     'Who broke the window?'

(4) (huwweh)   mi:n   modarriseh?
     Q   who   teacher.F
     'Who is a teacher?'

This chapter explores the interaction of verbal and non-verbal sentences with the structure and derivation of subject wh-questions in JA, which have received little

investigation in the literature compared to non-subject wh-questions of the type discussed in the previous two chapters.

To account for the syntax of subjects in verbal sentences of the type in (1), I adopt Koopman & Sportiche's (1991) VP-internal subject hypothesis. The analysis adopted for such declarative verbal sentences will be extended to their interrogative counterparts such as the one given in (3). A similar approach will then be developed for verbless copular subject wh-questions. I start with an overview of previous analyses of present tense verbless copular sentences in Arabic. Showing that they have fallen short of accounting for the full range of facts in the language, as observed in subsequent work, I propose an alternative analysis building mainly upon the promising features of two successful analyses available in the literature, namely, Benmamoun's (2000) and Baker's (2003) analyses. The analysis that I propose for verbless copular sentences of the type in (2) will be directly adopted for verbless copular wh-questions such as (4). I argue that verbless copular wh-questions are simply the interrogative versions of the declarative verbless sentences and, thus, are structurally identical to them.

The analysis advanced for subject wh-questions in this chapter is consistent with the approach that I have developed for other wh-questions with clause-initial wh-elements discussed in the previous chapter (i.e., CLLD and focus fronted wh-questions), and others to be presented in the next chapter. Under this analysis, the clause initial surfacing of subject wh-elements in JA does not entail the application of wh-movement in the sense of Chomsky (1977, 1995). Rather, it is simply a result of the underlying structure of subject interrogative constructions. More precisely, the clause initiality of subject wh-phrases in JA is due to the syntactic function they fulfill; they represent the canonical subject of the structure whose default position happens to be clause initial in the language. As for the CP layer in subject wh-questions in JA, unselective binding is adopted, as in chapters 2 and 3. This analysis

offers further support to the overall conclusion that, though the clause-initial position of wh-phrases can potentially be the result of wh-movement, it sometimes instantiates concealed non-movement constructions, especially when their syntactic properties are precisely that of in-situ ones.

This chapter is organised as follows. Section 4.2 introduces the verbal environment where subject phrases can surface alongside the standard analysis available in the literature. Section 4.3 introduces the structure and syntactic properties of verbal subject wh-questions in JA, showing that they parallel the verbal declarative sentences. In section 4.4, I briefly discuss the analysis outlined in Chomsky (1986) in which subject wh-questions in English involve LF movement to an A'-position, i.e., the Vacuous Movement Hypothesis. Though I maintain the basic assumption of the Vacuous Movement Hypothesis regarding the surface position of the subject wh-phrase, I abandon the assumption that the subject wh-phrase undergoes movement at LF on empirical grounds. The unselective binding analysis (Pesetsky 1987) is instead adopted showing that it is more revealing as far as the Jordanian facts are concerned.

In sections 4.5 and 4.6, I turn to a broader discussion of the structure of verbless copular sentences in Arabic, ultimately proposing that the best analysis consists of a blend of two existing analyses. My proposal for declarative verbless copular structures in Arabic is put forward in section 4.6 and is extended to the corresponding interrogative construction in section 4.7, where I explore how this proposed analysis can account for verbless subject wh-questions in JA. Section 4.8 addresses a number of questions that are raised by the treatment of subject wh-questions as being in-situ constructions, namely, whether wh-subjects can appear in left-dislocated constructions and whether they can undergo focus movement. Section 4.9 concludes the chapter, recapitulating its central proposal that both verbal and non-

verbal subject wh-questions lack wh-movement and hence instantiate another manifestation of the in-situ wh-question construction discussed in chapter 2.

4.2   Verbal sentences in JA

This section introduces the properties of subject phrases in JA verbal sentences, which consist of a subject NP followed by a verb (5a), plus an object NP if the verb is transitive (5b).

(5) a. ʔil-walad   iǰa.
     The-boy came.3MS
     'The boy came.'

   b. ʔil-walad   kasar   iš-šubbak.
     The-boy   broke.3MS   the-window
     'The boy broke the window.'

Recall from chapter 1 that JA makes use of both SVO and VSO word orders, with a tendency towards SVO order (El-Yasin 1985; Al-Momani & Al-Saidaat 2010). The VSO sentences that correspond to the above SVO sentences are given in (6).

(6)   a. iǰa   ʔil-walad.
         came.3MS   the-boy
         'The boy came.'

      b. kasar   ʔil-walad   iš-šubbak.
         broke.3MS   the-boy   the-window
         'The boy broke the window.'

To account for the structure and derivation of such verbal sentences in JA, I will follow the steps of most Arab linguists and adopt Koopman & Sportiche's (1991) VP-internal subject hypothesis (see e.g., Ouhalla 1991; Plunkett 1993; Fassi-Fehri 1993; Aoun et al 1994; Aoun & Benmamoun 1999; Benmamoun 2000; Lassadi 2005; Aoun et al 2010; Gad 2011;

Alotaibi 2013; among many others). According to the VP-internal subject hypothesis, the subject is generated inside the lexical domain VP, particularly in [Spec, VP]. After that, the verb raises to T and the subject undergoes overt movement to [Spec, TP] giving rise to the SVO word order. [1] As for the VSO word order, I will adopt the traditional analysis in which the VSO word order is taken to be derived via raising the verb from V to T leaving the subject in [Spec, VP], which is its first merge position (Koopman & Sportiche 1991; see also Fassi-Fehri 1993, Aoun et al 1994, Benmamoun 2000, Soltan 2007, and Aoun et al 2010). Accordingly, the following two simplified structures represent the derivation of the SVO sentence in (5b) and its corresponding VSO sentence in (6b) respectively.

(7)a. SVO in JA
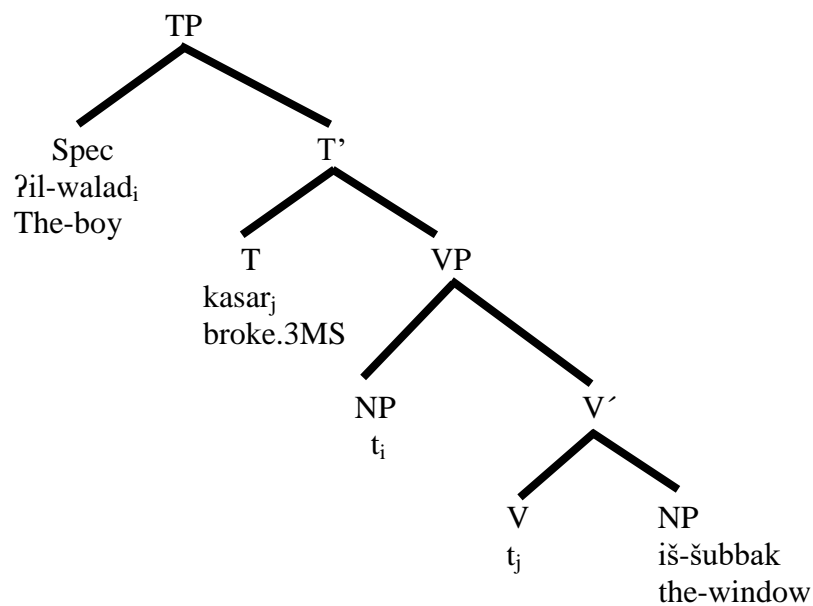
b. VSO in JA
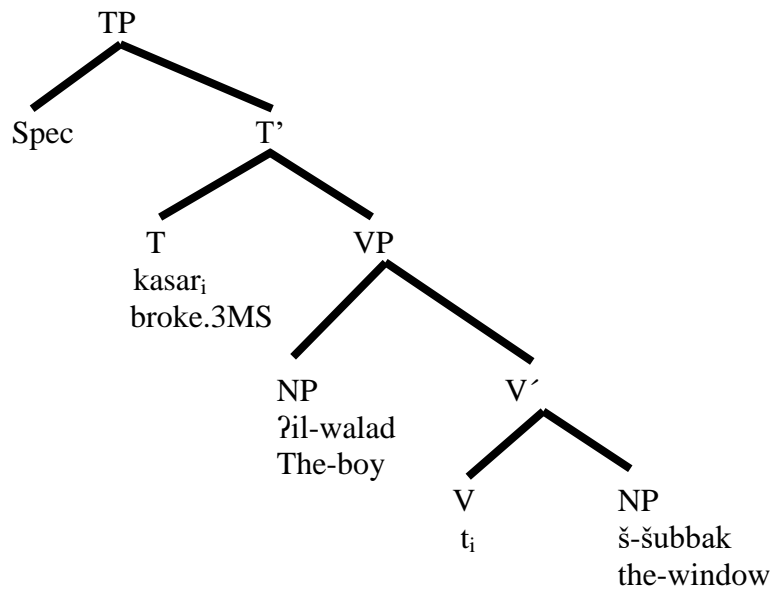
```
                          TP
                    ╱           ╲
                Spec             T'
                          ╱           ╲
                        T               VP
                      kasarᵢ       ╱        ╲
                      broke.3MS  NP          V´
                               ʔil-walad  ╱      ╲
                               The-boy   V        NP
                                         tᵢ      š-šubbak
                                                 the-window
```

The above structures show that the verb undergoes raising to T regardless of the word order. The distinction between the two word orders reduces to the raising of the subject. While it raises to [Spec, TP] in the SVO word order, it remains in [Spec, VP] in VSO word order. In both cases, the subject receives its thematic role in its first-merge position in the lexical domain (i.e., in [Spec, VP]). Raising the subject to [Spec, TP] in the SVO word order is triggered by the need to receive case from T and to satisfy the Extended Projection Principle (EPP) in the sense of Chomsky (1981, 1995 and 2000), which requires TP to have a specifier. Raising the subject to [Spec, TP] in the SVO word order results in nominative case assignment under Spec-Head agreement with T (cf. Ouhalla 1991; Plunkett 1993). Thus, T gets its EPP and agreement features checked by the subject NP, and the latter gets its case feature checked/assigned by T. (For a full discussion of satisfying the EPP feature and nominative case assignment in VSO sentences, see chapter 1.)

Since the SVO word order is the most prevailing order in JA, the examples to be discussed in this chapter, similar to other chapters, will only make use of this word order. More crucially, it was shown in chapter 1 that the absence of overt morphological case marking in JA can lead to ambiguity in certain cases when forming wh-questions using the

VSO word order (see section 1.6 for exemplification). The absence of such ambiguity in SVO sentences makes this word order the preferred option when it comes to wh-question formation. Therefore, I will employ examples that only use the SVO word order to avoid any potential ambiguity. However, it should be made clear that employing only SVO sentences in this study has no implications for the analysis I am proposing. The proposed analysis works the same regardless of whether the question is VSO or SVO. Sticking to the SVO word order is only intended for the purpose of clarity. Finally, whatever the difference between SVO and VSO sentences turns out to be, it will have no effect on the proposed analysis for subject wh-questions in JA. As will be shown shortly, subject wh-questions in JA represent another subclass of the in-situ strategy discussed in chapter 2. Whether or not the subject raises to [Spec, TP], the structure will remain compatible with the analysis to be proposed, as raising to [Spec, TP] is not an A'-movement.

In the following section, I turn to subject wh-questions that can be derived from such verbal sentences. It will be shown that the structure assigned for declarative verbal sentences in the language can be extended to their interrogative counterparts, with the only difference being a further CP projection to accommodate the question particle.

4.3   Verbal subject wh-questions

In a verbal subject wh-question, the wh-phrase represents the subject in the corresponding verbal declarative structure. Examples of verbal subject wh-questions and corresponding declaratives are given in (8-11).

(8)   a. (huwweh)   mi:n kasar   iš-šubbak?
          Q   who   broke.3MS   the-window
          'Who broke the window?'

b. ʔil-walad   kasar   iš-šubbak.

the-boy   broke.3MS   the-window

'The boy broke the window.'

(9)   a. (huwweh) ʔayya   walad   kasar   iš-šubbak?

Q   which   boy   broke.3MS   the-window

'Which boy broke the window?'

b. ʔil-walad   ʔiT-Taweel   kasar   iš-šubbak.

the-boy   the-tall.MS   broke.3MS   the-window

'The tall boy broke the window.'

(10) a. (huwweh) mi:n iǰa?

Q   who came.3MS

'Who came?'

b. ʔil-walad   iǰa.

the-boy   came.3MS

'The boy came.'

(11) a. (huwweh) ʔayya   walad iǰa?

Q   which   boy came.3MS

'Which boy came?'

b. ʔil-walad   ʔiT-Taweel iǰa.

the-boy   the-tall.MS came.3MS

'The tall boy came.'

The above data show that the subject wh-questions under investigation bear a complete structural resemblance to declarative verbal sentences. Both constructions consist of a clause-initial DP followed by a verbal predicate. The difference between the two constructions lies solely in whether the subject is a lexical DP or a wh-argument DP. I thus propose that the structure of subject verbal wh-questions in JA is parallel to that of their declarative counterparts. The subject wh-phrase originates as the thematic subject in [Spec, VP], then

undergoes movement to [Spec, TP] to satisfy the EPP feature of T and to receive case. The following representations illustrate the derivation of such questions.

(12) a. (huwweh) [TP [DP mi:n_i T [VP t_i [V' kasar iš-šubbak]]]?

       Q   who   broke.3MS   the-window

       'Who broke the window?'

b. (huwweh) [TP [DP ʔayya walad_i T [VP t_i [V' kasar iš-šubbak]]]?

       Q   which   boy   broke.3MS the-window

       'Which boy broke the window?'

c. (huwweh) [TP [DP eiš_i T [VP t_i [V' Sar ʔimbariH]]]?

       Q   what   happened.3MS   yesterday

       'What happened yesterday?'

Bearing in mind the structure advanced in the previous section for non-wh verbal sentences in Arabic, the following abstract syntactic representation can be given for the underlying structure of verbal subject wh-questions.

(13) (Q) [TP [DP wh-phrase_i T [VP t_i [V' …]]]

Under this analysis, the clause-initial position of the wh-phrase simply reflects its syntactic function in the A-domain. This proposal naturally raises the following question: do subject wh-phrases in JA proceed to move to an A'-position higher than their A-position [Spec, TP] or do they remain in [Spec, TP]? I take up this question in the next section after introducing an existing analysis for the corresponding interrogative construction in English, namely, the Vacuous Movement Hypothesis (George 1980; Chomsky 1986; Agbayani 2000). I will argue that [Spec, TP] is the final destination for the subject wh-phrase in JA; contra the Vacuous Movement Hypothesis, no further movement to an A'-position is needed, nor is it possible.

4.4   The Vacuous Movement Hypothesis (VMH)

The application of overt wh-movement in non-subject wh-questions in English is tangible from the visible displacement of the wh-phrase and from subject-auxiliary inversion (Agbayani 2000), as in the following examples:

(14)   a. [$_{CP}$ What$_2$ has$_1$ [$_{IP}$ John t$_1$ bought t$_2$]]?

   b. [$_{CP}$ How$_2$ has$_1$ [$_{IP}$ Mary t$_1$ fixed the car t$_2$]]?   (Agbayani 2000: 703)

In these examples, it is clear that the non-subject wh-phrases *what* and *how* and the auxiliary verb *have* have undergone inversion. In subject wh-questions, however, the surface string does not clearly indicate whether wh-movement or subject-auxiliary inversion occurs. In examples such as (15), the surface word order is consistent with either a movement analysis or a non-movement analysis.

(15) Who has fixed the car?   (Agbayani 2000: 703)

   a. Movement: [$_{CP}$ who$_1$ has$_2$ [$_{IP}$ t$_1$ t$_2$ fixed the car]]

   b. Non-movement: [$_{CP}$ [$_{IP}$ who has fixed the car]]

Accordingly, it has been hypothesized in the literature that subject wh-questions in English are excluded from overt wh-movement (George 1980; Chomsky 1986; Agbayani 2000). This analysis is referred to as the Vacuous Movement Hypothesis (VMH, henceforward), according to which the subject wh-phrase does not overtly raise to [Spec, CP], as in (16).

(16)   [$_{CP}$ C [$_{IP}$ who has fixed the car]]?   (Agbayani 2000: 704)

The VMH does, however, consider the subject wh-phrase to move covertly to [Spec, CP] at LF. In other words, under the VMH, subject wh-phrases cluster with in-situ wh-phrases in the sense that they remain in situ in the narrow syntax but move to [Spec, CP] at LF.

Agbayani (2000) takes Lasnik & Saito's (1992) observation about the impossibility of subject local topicalization in English as evidence in favour of the VMH analysis for subject wh-questions. Consider the following examples that illustrate the phenomenon of topicalization in English.

(17) a. John, I like t.

     b. *John, t left.   (Agbayani 2000: 704)

Agbayani (2000) argues that topicalization of non-subject DPs (as in (17a)) involves movement of a DP into [Spec, CP], as schematized in (18).

(18) $[_{CP}$ John$_i$, C $[_{IP}$ I like t$_i$]   (Agbayani 2000: 704)

The ungrammaticality of (17b), according to Agbayani, is the result of a ban on subject topicalization in English. More particularly, English subject NPs cannot move to [Spec, CP]; they must remain in [Spec, IP]. This generalization is then taken to argue in favour of the VMH: since the topicalization facts indicate that A'-movement of subjects is banned in English, no such movement should be posited in subject wh-questions.

The analysis that I propose for subject wh-questions in JA is consistent with the major premise of the VMH in that subject wh-phrases in JA do not undergo overt wh-movement; the only overt movement they undergo is A-movement from [Spec, VP] to [Spec, TP]. However, I do not adopt the assumption that the wh-phrase undergoes movement at LF (in the sense of Chomsky 1986). I instead adopt unselective binding (Pesetsky 1987) for the interpretation of subject wh-questions in JA. The unselective binding analysis eliminates the need for any further raising of the wh-phrase, whether overtly or covertly; this is because, under this analysis, wh-phrases are interpreted in a bindee-binder fashion due to a binding relationship between a wh-operator in the CP layer and the wh-phrase in its TP-internal position. Wh-phrases in JA can thus be interpreted in their A-position and attain broad scope

over the whole structure without undergoing overt or covert movement to an A'-position. Accordingly, the abstract representation in (19a) can be given for the structure of such wh-interrogatives in JA; (19b) shows the application of this analysis to the example from (12a) above.

(19) a. $[_{CP}$ C Op$_i$ $[_{TP}$ wh-phrase$_i$ T $[_{VP}$ t$_i$ $[_{v'}$ …]]]]]

  b. $[_{CP}$ C Op$_i$ $[_{TP}$ mi:n$_i$ T $[_{VP}$ t$_i$ $[_{v'}$ kasar iš-šubbak]]]]
           who   broke.3MS the-window

Further evidence that the subject wh-phrase in JA remains in [Spec, TP] comes from the fact that the whole wh-construction can be embedded after the complementizer *ʔinno* 'that', as in (20). The post-complementizer position of the wh-phrase indicates that the wh-phrase must be located somewhere below C.

(20) (huwweh) golto   ʔinno   mi:n   kasar   iš-šubbak?
     Q   said.2P   that   who   broke.3MS   the-window
     'Who did you say broke the window?'

As might seem intuitive by now, the question particle *huwweh* can optionally appear before the wh-phrase in subject wh-constructions; as in previous chapters, I take this particle to be an overt lexicalization of the interrogative operator in C (see also Baker 1970; Soltan 2011). Granting this analysis, the derivation of the wh-question in (12a) above can be diagrammatically represented as in (21).

(21)

```
                    CP
                   /    \
                Spec     C'
                        /   \
                       C     TP
                       |    /   \
               Huwweh/Opᵢ  DP    T'
                           |    /   \
                         Mi:nᵢ  T    VP
                         who       /   \
                               DP       V'
                               tᵢ      /    \
                                      V      NP
                                      |      |
                                    kasar   iš-šubbak
                                  broke.3MS the-window
```
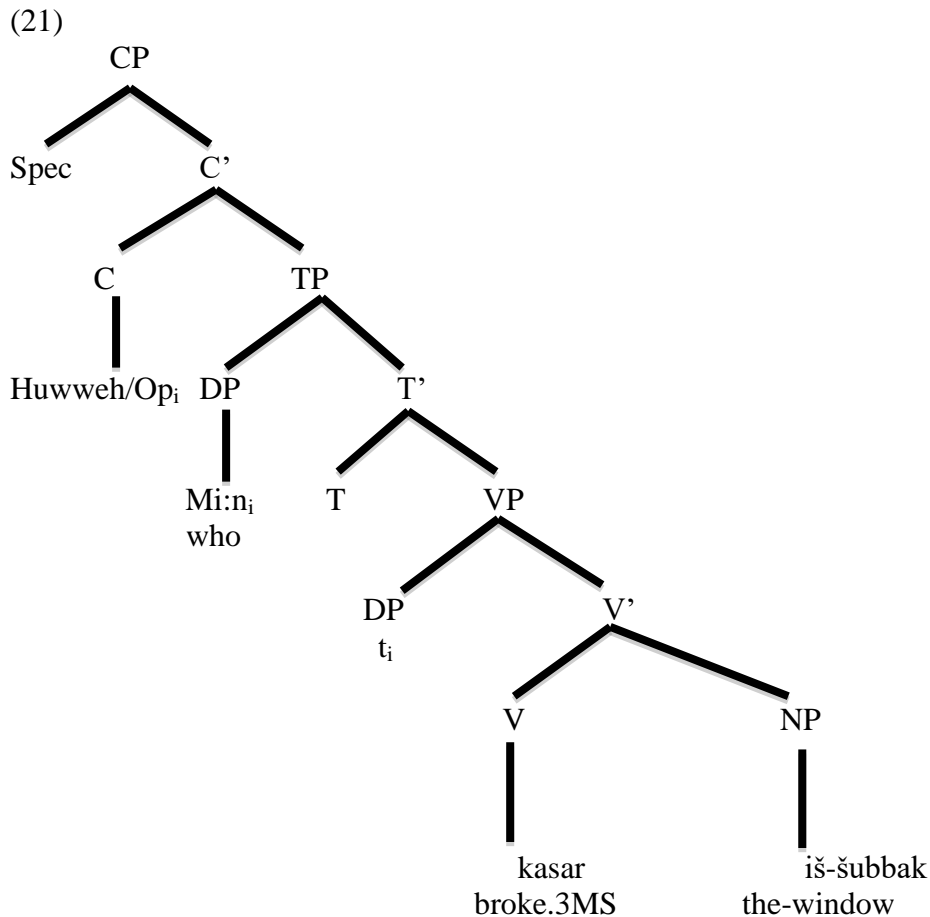
Under this analysis, no TP-external movement is needed to derive the clause-initial position of the wh-phrase: it occupies this position simply by virtue of being a subject. This analysis entails that subject wh-questions in JA are another manifestation of in-situ wh-questions in the language. This is because the movement of the wh-phrase is not a wh-movement of the Chomskyan (1977) type. It is an A-movement triggered by the need to check a feature other than the [+wh] feature borne by the matrix C, namely, the EPP feature of T and the case feature on the wh-phrase. Thus, this movement does not target [Spec, CP]. The [+wh] feature of C is checked by a null interrogative operator.

This analysis is in line with the conclusion in the previous chapter that not all clause-initial wh-phrases are necessarily derived via wh-movement to [Spec, CP]. The previous chapter showed that initial wh-phrases can be the result of CLLD or focus fronting. This

chapter has added another possibility to the list: an initial wh-phrase may simply result from typical A-movement of subjects.

In the remainder of this chapter, I investigate the second type of construction in JA in which subject wh-phrases occur, namely, verbless copular sentences. The investigation will begin with declarative verbless copular sentences before turning to their interrogative counterparts.

4.5 Non-verbal copular sentences in Arabic

A prominent characteristic of Arabic syntax is the use of non-verbal/verbless copular structures in the present tense. Using the terminology of early Arab grammarians, such verbless constructions are also known as "*ʔal-ǰumal ʔal-ʔismiyyah*" (lit., the Nominal Sentences) (Sibawayh 796 AD/1977; see also Fassi-Fehri 1993; Shlonsky 1997; Shlonsky & Ouhalla 2002; Al-Horais 2006). Verbless copular structures are documented in different Arabic varieties (see, notably, Bakir 1980; Jelinek 1981; Eid 1983, 1991 & 1992; Farghal 1986; Fassi-Fehri 1993; Bahloul 1993; Shlonsky 1997 & 2002; Benmamoun 2000 & 2008; Al-Horais 2006; Edwards 2006; Aoun et al 2010; Abdel Razaq 2011).[2] JA is not an exception in this regard; it makes a productive use of present tense sentences that lack a verbal predicate. Such sentences consist of a definite nominal argument DP, functioning as the subject of predication, followed immediately by a non-verbal predicate. The predicate can be a noun phrase, an adjective phrase or a prepositional phrase, as illustrated in the following JA examples.

(22) a. ʔil-binit momaθileh.
        the-girl actress
        'The girl is an actress.'

    b. Ɂil-binit mašGoleh.

      the-girl busy.F

      'The girl is busy.'

    c. Ɂil-binit bi-l-mostašfa.

      the-girl in-the-hospital

      'The girl is in the hospital.'

When the non-verbal predicate in such Arabic constructions is a nominal, it is usually indefinite. However, Abdel Razaq (2011), drawing on facts from different Arabic dialects and on an early observation by Cowell (1964) from Syrian Arabic, shows that the nominal predicate can in fact be either definite or indefinite (see also Heggie 1988). Abdel Razaq's view regarding this point is adopted here as there is abundant cross-dialectal evidence supporting it and it is congruent with the JA facts that I am dealing with.[3]

    Abdel Razaq (2011) further shows that verbless copular sentences consisting of two lexical definite DPs (i.e. a definite DP subject and a definite DP predicate) require an intonational break between the two DPs, as indicated by the use of the commas in the following JA examples.

(23) a. Ɂil-binit, Ɂil-momaθileh.

      the-girl, the-actress

      'The girl is the actress.'

    b. Ɂil-binit, Ɂil-mašGoleh.

      the-girl, the-busy.F

      'The girl is the busy one.'

If the verbless sentences in (23) lacked this prosodic break, they could only be interpreted as complex noun phrases, so that the appropriate English translation for (23a) would be "the girl, who is the actress," and the translation of (23b) would be "the busy girl" (see also Eid 1983, 1991 & 1992 for a similar observation on Egyptian Arabic).[4] This prosodic

requirement is restricted, however, to structures involving two definite lexical DPs. If the initial DP is, for example, a pronominal element such as a demonstrative pronoun or personal pronoun, as in (24), the sentential interpretation obtains without the need for an intonational pause; no phrasal interpretation is possible in such cases.

(24) a. hiyyeh   ʔil-momaθileh.
          she   the-actress
          'She is the actress.'

      b. hai   ʔil-momaθileh.
          this.F   the-actress
          'This is the actress.'

Although there is no overt verbal copula in the present tense copular sentences shown so far, a verbal copula obligatorily appears in past tense and future tense copular structures (Bakir 1980; Fassi-Fehri 1993; Benmamoun 2000 & 2008; Al-Horais 2006; Aoun et al 2010; among others). If the copula is omitted in such structures, ungrammaticality ensues:

(25) a. ʔil-binit **kanat**   mašGoleh ʔimbariH.
          the-girl   **was.F**   busy.F   yesterday
          'The girl was busy yesterday.'

      b. *ʔil-binit   mašGoleh ʔimbariH.
          the-girl   busy.F   yesterday
          '*The girl is busy yesterday.'

(26) a. ʔil-binit   **raH t-koon**   mašGoleh bokra.
          the-girl   **will 3-be**   busy.F   tomorrow
          'The girl will be busy tomorrow.'

      b. *ʔil-binit   mašGoleh bokra.
          the-girl   busy.F   tomorrow
          'The girl is busy tomorrow.'

Based on this observation, I will assume that past tense and future tense copular sentences cluster with typical verbal sentences of the type discussed in section 4.2, and, consequently, will be assigned the same structure. That is to say, they are typical TPs that contain a VP layer (see below). I will have nothing to add for these structures, hence they will be put aside henceforward. The ensuing discussion in the chapter will be confined to present tense copular sentences that lack an overt verbal predicate, to which I turn next.

4.6   The structure and derivation of non-verbal copular sentences

The structure and derivation of non-verbal copular sentences is controversial. The central issue is whether such sentences indeed lack a verbal predicate or whether they have one that is phonetically null (see e.g. Ouhalla 1991; Shlonsky 1997; Benmamoun 2000; Al-Horais 2006; and Aoun et al 2010). Various approaches exist: some linguists argue that such sentences contain a verbal copula that undergoes a deletion process (Bakir 1980; Abdul-Ghany 1981; Farghal 1986) while others posit a verbal copula that is simply phonetically null (Fassi-Fehri 1993).

A different path has been pursued in works such as Bahloul (1993), where the presence versus absence of the verbal copula in past tense versus present tense sentences respectively is ascribed to the selectional properties of the functional head INFL. Specifically, it is argued that INFL can take any phrasal category as a complement depending on its featural composition: when the head INFL carries features such as TNS, it selects for a verb, which moves into INFL to support its features. By contrast, when INFL has no features, it selects for a non-verbal complement such as NP, AP, or PP. This proposal is sketched in (27).

(27)   a.   b.   (Bahloul 1993: 214)

```
            IP                              IP
          /    \                         /    \
       Spec    I'                     Spec    I'
              /   \                          /   \
        I[+TNS]   VP                   I[-TNS]   NP/AP/PP
```
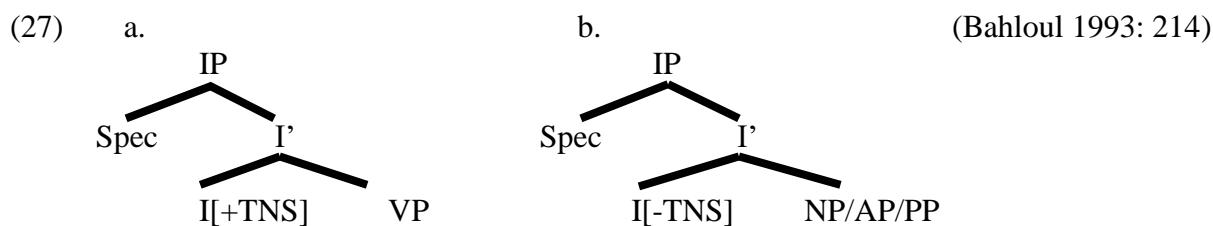
A full discussion of the debates regarding verbless copular constructions would take us too far afield of the issue of wh-questions. However, it should be noted that the approaches outlined above have been challenged by several empirical issues (see Benmamoun 2000; Al-horais 2006; Aoun et al 2010).[5] In the remainder of this section I focus on two major recent analyses that, when taken together, will lead to my proposed analysis of verbless subject wh-questions, namely, Benmamoun's (2000, 2008) and Baker's (2003) analyses.

The discussion will be split over four parts. Subsection 4.6.1 presents Benmamoun's (2000, 2008) analysis of present and past tense copular sentences in Arabic (which was also duplicated in Aoun et al 2010). Subsection 4.6.2 gives an overview of the major assumptions of Baker's (2003) analysis of the same constructions. Section 4.6.3 returns to Benmamoun's (2008) study and draws on his argumentation against Baker's (2003) analysis. Subsection 4.6.4 offers a blended analysis of verbless copular sentences in Arabic building on aspects of these two analyses.

4.6.1   Benmamoun (2000, 2008)/Aoun et al (2010)

The first analysis is advocated in Benmamoun (2000, 2008) and Aoun et al (2010), who argue that verbless sentences are full-fledged clauses with a tense projection, but without a verbal predicate. In Minimalist terms, verbless sentences are TPs that lack a VP.[6]

Benmamoun (2000) argues that the best way to account for the obligatoriness of the verbal copula in past and future tense sentences, as opposed to its absence from present tense sentences, is to abandon the idea that verbless sentences contain a verbal copula (contra

Bakir 1980 and Fassi-Fehri 1993). Benmamoun (2000) also rejects the proposal that it is the tense that determines the presence or absence of the copula, contra Bahloul 1993. This is because, under Bahloul's (1993) analysis, it is not clear why the present tense cannot force the insertion of a copula. If the present tense heads a tense projection, there is no clear reason as to why the verbal head must be absent in the present tense.

Benmamoun (2000, 2008) and Aoun et al (2010) account for the contrast in the distribution of the verbal copula in the present tense sentences versus past and future tense sentences in light of the difference between the tenses in terms of their categorical features. Specifically, they abandon the idea that all tenses are specified as [+V] and [+D] (contra Chomsky 1995). It is instead proposed that only the past tense and future tense in Arabic are specified as [+V] and [+D], hence the obligatoriness of a verbal head to check the [+V] feature of the past and future tense. By contrast, the present tense in Arabic is specified as [+D] only, hence no need to have a verbal head. Put differently, the absence of a verbal copula from present tense sentences is due to the absence of a [+V] feature to be checked. This analysis assigns present tense and past tense copular sentences in Arabic the representations shown in (28a) and (28b) respectively (Aoun et al 2010: 34).

(28) a.

```
              TP
            /    \
          NP      T'
                /    \
               T      AP/ PP/NP
        [+Present, +D]     |
                         A /P/N
```

b.
```
                    TP
                  /    \
                NP      T'
                       /   \
                      T      VP
              [+Past, +D, +V]  /  \
                             V    AP/PP/NP
                             |
                            kan
                            was
```
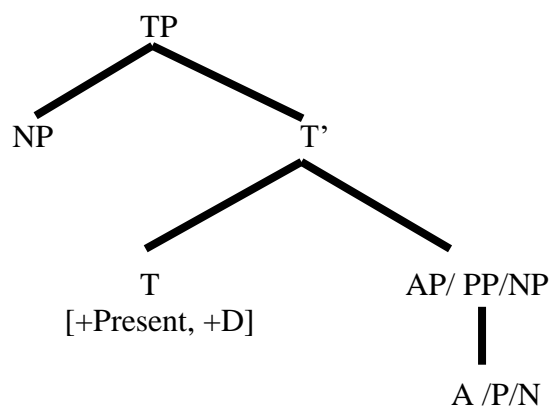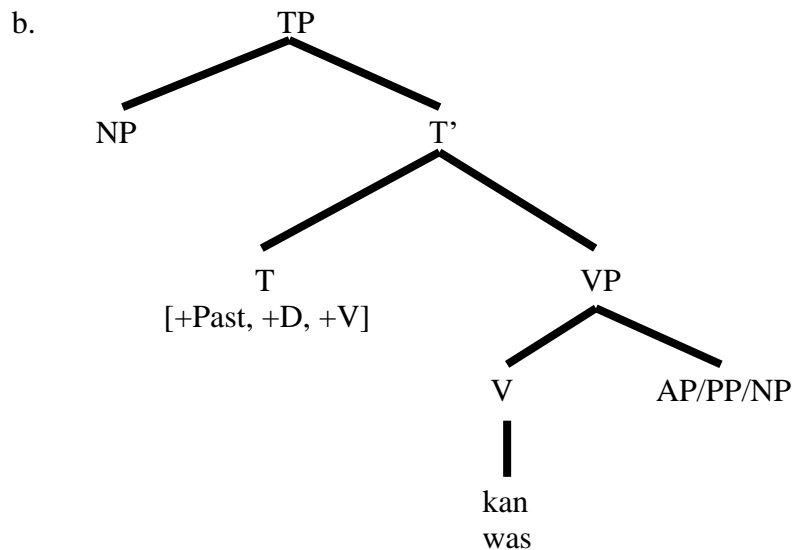
Under this analysis, present tense verbless sentences are TP projections that do not contain a VP projection. The non-verbal predicate is merged as a complement of T and the subject is moved to [Spec, TP] to check the [+D] feature.

Although Benmamoun's (2000) analysis is influential, it has not gone unchallenged. In the following subsection, I discuss an alternative account for copular constructions in Arabic, which was put forward by Baker (2003).

4.6.2 Baker (2003)

Baker (2003) is unsatisfied with Benmamoun's (2000) categorial feature analysis and provides an alternative analysis of verbless copular structures in Arabic as well as other languages. Baker advances a theory of lexical categories in order to explain whether or not tense requires a verbal codependent. His theory does not depend on categorial features; rather, it hinges upon the morpho-phonological status of tense. Baker (2003) assumes that the past tense is an affix and thus requires or must be supported by a lexical head. By contrast, the present-tense head is not an affix and thus does not need a lexical host.

A key component of Baker's approach is his proposal that verbs take subjects directly while nouns and adjectives do not. The subject of a verb is generated inside the lexical

projection of the verb and is assigned a thematic role within that projection. The subject of a non-verbal predication, on the other hand, is not a full-fledged argument in the same sense: it is not generated inside the nominal or adjectival projection and hence cannot be assigned a thematic role in the lexical domain. This poses a challenge for Benmamoun's (2000) analysis: how is the subject assigned its theta role in verbless copular sentences (28a above)?

To address this challenge, Baker introduces a head Pred heading a projection PredP, similar to the PredP of Bowers (1993). The Pred head dominates the nonverbal predicate and takes care of the assignment of a thematic role to its subject, which originates in [Spec, PredP]. Baker takes Pred to occur with predicate nouns and predicate adjectives in all languages. Under Baker's analysis, the structure of verbless sentences in Arabic is as in (29).

(29)

```
              TP
            /    \
        Omar      T'
                /    \
              T       PredP
                    /      \
                  NP        Pred' <Th>
                          /      \
                       Pred       AP/NP
                                  sick/teacher
```
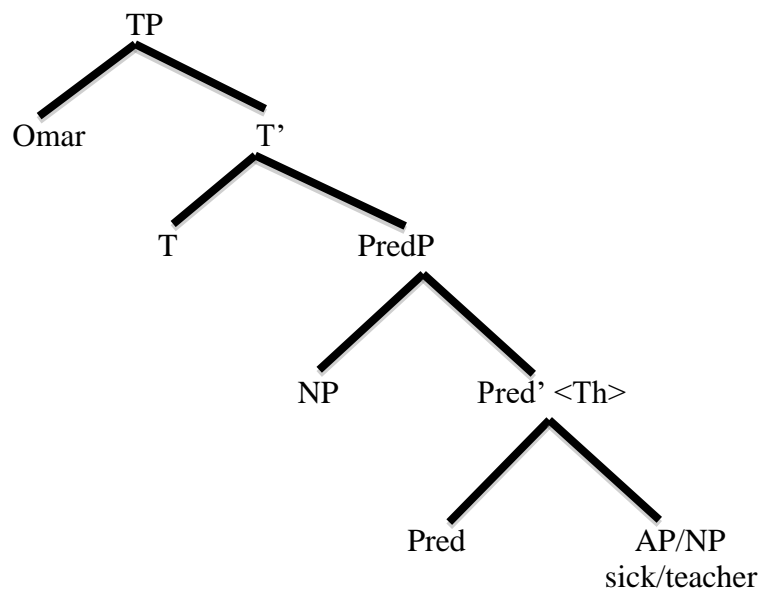
Benmamoun's analysis assumes that the subject originates in the specifier of the projection of the thematic predicate (NP/AP/PP) where it is assigned thematic role. For example, the NP *Omar* in the above example is generated in the Spec of the lexical projection (i.e., AP) where it gets its thematic role. It then undergoes movement to [Spec, TP] in order to check the EPP ([+D]) feature of tense (Benmamoun 2000: 66; see also Aoun et al 2010: 69-70). However, according to Baker (2003: 43), non-verbal predicates such as nouns and adjectives are not

theta markers. This proposal, if accepted, constitutes a major challenge for Benmamoun's (2000) analysis, as it means that the subject phrases would be left un-theta-marked.

Along the same lines, Baker (2003) proposes that past-tense copular sentences whose main predicates are nonverbal also project a Pred head (similar to present-tense verbless sentences) to license the subject. Under Baker's (2003) analysis, the verbal copula is needed to support the past-tense affix. To this effect, the past-tense copular sentence from Moroccan Arabic in (30a) is assigned the structure in (30b) (Baker 2003).

(30)   a. ʕumar   kan   mriiḍ/muʕallim
            Omar   was   sick/teacher
            'Omar was sick/a teacher.'

        b.
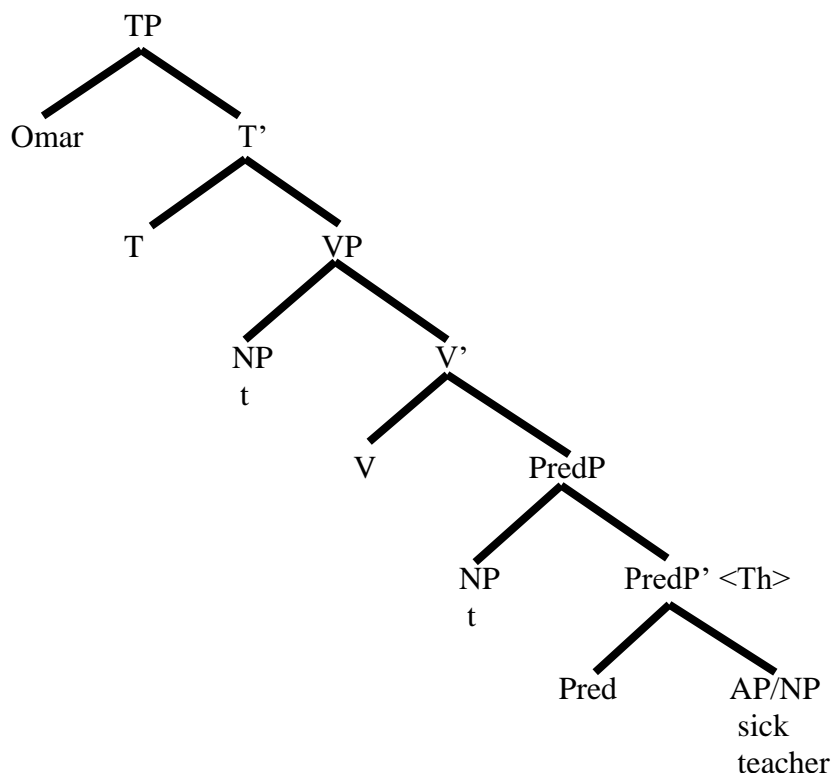
Baker (2003) explains the obligatoriness of a verbal copula in Arabic past-tense copular sentences (30b above) as follows: Since past tense is an affix that must be supported by a

lexical head, the verbal copula is needed to do this job. Nonverbal predicates, which could in principle support tense, do not do so because their movement across the Pred head in this case would violate minimality. As for the absence of a verbal copula in present-tense verbless copular sentences in Arabic (29 above), by contrast, Baker (2003) explains it as follows: since the present-tense head is not an affix, it does not require a host and does not need to be supported. Therefore, the lack of a verbal copula in present-tense copular sentences is driven by economy considerations. The verbal copula in this case would be superfluousin the sense that any sentence containing it is superseded by a sentence that does not contain it.

In sum, according to Baker (2003), Pred is present with predicate nouns and predicate adjectives in all languages. The Pred which dominates the NP or AP in non-verbal/copular sentences is needed to provide a thematic role for the subject. As was just shown, the PredP can be the immediate complement of T in the case of verbless present-tense copular sentences (29 above), or the complement of an auxiliary verb (which is itself the complement ofT) in the case of past-tense copular sentences (30b above).

4.6.3   Benmamoun (2008)

Benmamoun (2008) counters Baker's (2003) morpho-phonological analysis of tense drawing mainly on negation-related facts in different Arabic dialects. He argues that the negation facts are best and most straightforwardly accounted for in terms of a categorical verbal feature analysis rather than an affixation analysis.[7] Benmamoun (2008) takes the clear demarcation between present-tense verbless sentences and present-tense verbal sentences on the one hand, and past-tense sentences on the other hand, to support his hypothesis regarding the distinction between past tense and present tense in terms of their feature composition. To illustrate Benmamoun's (2008) argument, let's first consider the following sentences:

(31) a. ʕumar   ma-kan-š   muʕəllim   Moroccon Arabic

      Omar   NEG-was-NEG   teacher

      'Omar was not a teacher.'   (Benmamoun 2008: 111)

      b. Omar   ma-katab-š   ig-gawaab   Egyptian Arabic

      Omar   NEG-wrote-NEG   the-letter

      'Omar didn't write the letter.'   (Benmamoun 2008: 117)

      c. *Omar   mi-š   katab   ig-gawaab   Egyptian Arabic

      Omar   NEG-NEG   wrote   the-letter   (Benmamoun 2008: 117)

(32) a. ʕumar   ma-ši   muʕəllim   Moroccon Arabic

      Omar   NEG-NEG   teacher

      'Omar is not a teacher.'   (Benmamoun 2008: 112)

      b. ʔana mi-š   ṭaalib   Egyptian Arabic

      I   NEG-NEG   student

      'I am not a student.'   (Benmamoun 2008: 116)

      c. mi-š   biyiktib   Egyptian Arabic

      NEG-NEG   writing

      'He isn't writing.'   (Benmamoun 2008: 118)

According to Benmamoun (2008), sentential negation in many Arabic dialects consists of two parts: a proclitic *ma* and an enclitic *s*. In past-tense sentences, *ma* is realized as a proclitic whereas *s* is realized as an enclitic (31a and b). The two negative particles cannot cliticize onto each other in past-tense sentences as shown by the ungrammaticality of (31c). By contrast, in present-tense sentences, whether verbless (32a and b) or verbal (32c), the two negative particles cliticize onto each other.

Building on the assumption that sentential negation in Arabic heads its own projection between TP and the predicate, Benmamoun (2008) argues that these negation patterns receive straightforward explanation under his categorial-feature analysis of tense. More precisely, the negation facts in (31) are best explained in light of the [+V] feature of the past tense,

which must be overtly paired with a verb. As a result, the verb obligatorily raises from the VP to T through the negative rather than across it (for minimality considerations), thus surfacing with the two negative particles. In the verbless and verbal present-tense sentences in (32), by contrast, the negative particles end up cliticizing onto each other due to the fact that present-tense is not [+V] and thus does not need to be paired with a verbal head. Accordingly, the two negative particles are not separated by a verbal head and cliticize onto each other as a result. The Egyptian sentence in (32c), for example, shows that the present-tense verb does not merge with negation. This asserts that the verb does not raise past the negative projection to tense, which in turn asserts that the latter does not have a verbal feature that needs to be checked by a verbal head (Benmamoun 2008).

Furthermore, Benmamoun (2008) counters Baker (2003) arguing that there is no morpho-phonological difference between the past tense and present tense in Arabic; both are abstract morphemes with no phonological matrix. Benmamoun (2008) reduces the difference between them to their agreement affixation patterns. While person agreement is realized as a prefix in the present tense, it is realized as a suffix in the past tense. Number, by contrast, is always realized as a suffix in both present and past tense. Consider the following contrast:

(33)   a.   ya-ktub-uu   SA
            3-write-MP
            'They write.'

       b.   katab-uu
            wrote-3MP
            'They wrote.'   (Benmamoun 2008: 122)

Benmamoun 2000) gives the distribution of person agreement a historical explanation in which person agreement is shown to have evolved out of a pronominal clitic. Benmamoun (2008) argues that these agreement patterns follow from his categorical-feature analysis of

tense. More specifically, in the past tense, the pronominal subject remains in [Spec, VP] after the verb obligatorily raises to T in order to check the [+V] feature. This makes the pronominal subject surfaces as an enclitic suffixed to the verb. The diagram in (34) (from Benmamoun 2008: 122) illustrates this assumption.

(34)

```
                    TP
                  /    \
              Spec      T'
                      /    \
                     T      VP
                  katab_i  /  \
                       Spec    V'
                     pronoun   t_i
                        -t
```
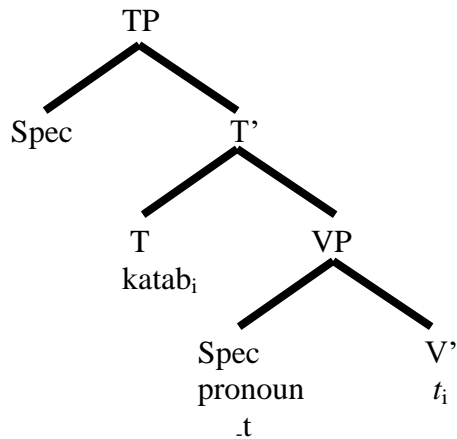
The categorial feature of the present tense, according to Benmamoun (2008), is also responsible for the prefixation pattern of the present tense. Since the present tense is not specified as [+V], the verb does not need to raise to T. Rather, the verb stays in situ and the pronominal subject appears as proclitic as a result. The diagram in (35) (from Benmamoun 2008: 123) illustrates this assumption.

(35)

```
                    TP
                   /  \
                 /      \
              Spec      T'
                       /  \
                     /      \
                    T        VP
                            /  \
                          /      \
                       Spec      V'
                      pronoun    ktub
                        ta
```
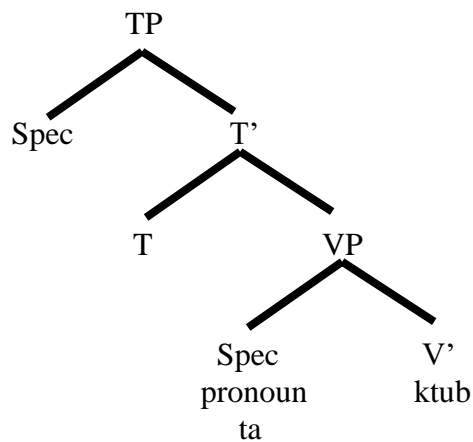
4.6.4   A blended analysis

I consider both Baker (2003) and Benmamoun (2000, 2008) to make valid points regarding the structure of verbless copular sentences in Arabic. Their arguments against each other's analysis are compelling. I conclude that in neither of these proposals are all the relevant aspects of verbless structures fully captured. Therefore, rather than adopting either proposal wholesale, I suggest that a blend of the two proposals may best equip us to account for all the facts at hand.

I will follow Benmamoun (2000, 2008) in assuming that tense enters into a dependency relation with a verb depending on its categorial features but not on its morphological status as an affix (contra Baker 2003), as I consider there to be abundant evidence in Arabic that this proposal is on the right track. Since verbless sentences in Arabic have a present tense interpretation, I assume that the tense head is not specified for a verbal [+V] feature in such structures; it is only specified for a nominal [+D] feature. Concurrently, I follow Baker (2003) in adopting a PredP for the assignment of the subject's thematic role in verbless copular structures, thereby avoiding the theta-marking problem that arises in Benmamoun's (2000, 2008) analysis. The resulting structure is shown in (36).

(36)

```
                        TP
                   ┌─────┴─────┐
                  DP           T'
                   │       ┌────┴────┐
              ʔil-biniti   T         PredP
               the-girl  [+D,+Present] ┌──┴──┐
                                      DP      Pred' <Th>
                                      ti    ┌───┴───┐
                                           Pred   DP/AdjP/PP
                                      (ʔil-)momaθileh/mašGoleh/bi-l-mostašfa.
                                       (the-)actress/busy/in-the-hospital.
```
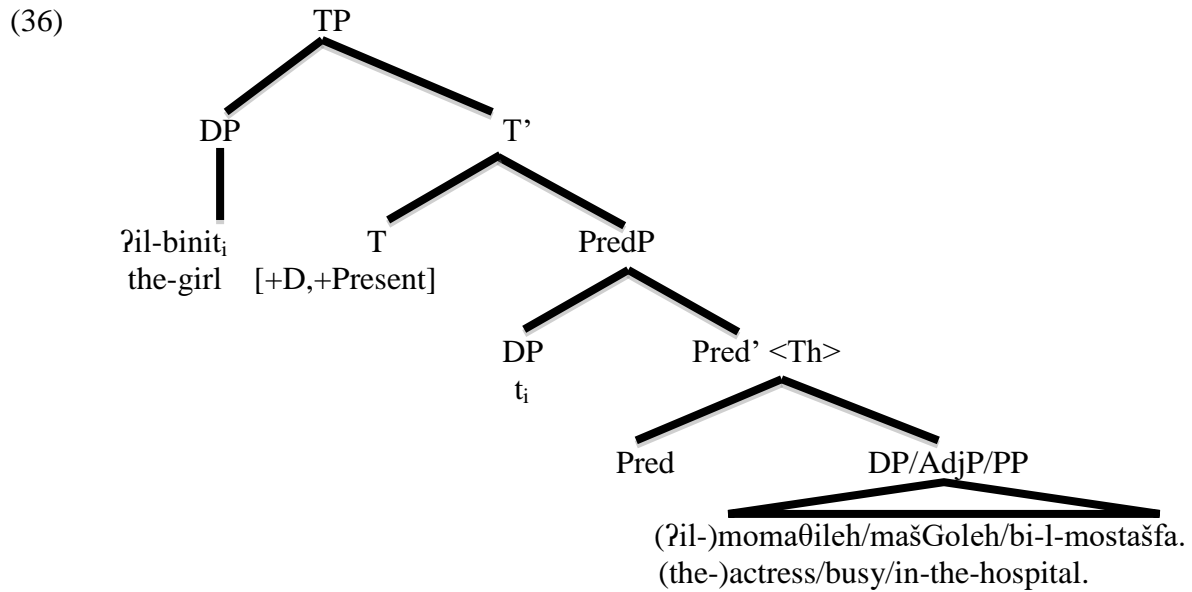
This analysis is in some way similar to that proposed by Makkawi (2014) for non-verbal sentences in Makkan Arabic. Following the steps of Benmamoun (2000) and Aoun et al (2010), Makkawi considers nonverbal sentences TPs that lack a VP projection. Since non-verbal predicates following the subject in such structures in Arabic serve the function of providing information about the subject, Makkawi (2014) employs Bowers' (1993) PredP in the analysis of such non-verbal sentences in Makkan Arabic.

Although I adopt Baker's (2003) PredP framework for present-tense sentences, I abandon his analysis for past-tense copular sentences (which is given in (30b) above). Alternatively, following the steps of Benmamoun (2000, 2008) and Aoun et al (2010), I will continue treating past and future tense copular sentences on a par with ordinary verbal sentences and assume that such sentences have an ordinary verbal projection embedded directly under T, but with no PredP (i.e., the structure given in (28b) above). I abandon the Pred head for such structures because I assume that the auxiliary assigns a thematic role to the subject. I also assume that Baker's structure for past-tense copular sentences in Arabic (30b above) is blocked by Benmamoun's structure (28b above) on economy considerations: Benmamoun's representation captures the same interpretation as that of Baker's representation with less syntactic structure.

4.6.5   Interim summary

In the preceding subsections, I have taken closer look at Benmamoun's (2000, 2008) and Baker's (2003) analyses and their arguments against each other. I conclude that both analyses have merit but are still in need of revision. Consequently, I have offered a new analysis that builds on the promising aspects of these two analyses and avoids their objections against each other. This blended analysis will lead to an account of verbless copular subject wh-questions in JA (as well as another type of wh-question to be taken up in the next chapter). It remains, however, to be shown how this approach to verbless copular constructions applies to verbless copular subject wh-questions in JA. I take up this issue next.

4.7   Verbless copular wh-questions

A verbless copular wh-question in JA consists of an initial nominal/argument wh-phrase followed immediately by a non-verbal predicate; there is no overt verbal copula. As in other JA wh-constructions, verbless copular wh-questions can be optionally introduced by the question particle *huwweh*. The following are illustrative examples.

(37) a. (huwweh) mi:n momaθileh/ʔil-momaθileh?[8]
         Q   who actress/the-actress
      'Who is an actress/the actress?'

    b. (huwweh) mi:n mašGoleh?
         Q   who busy.F
      'Who is busy?'

    c. (huwweh) mi:n bi-l-mostašfa?
         Q   who in-the-hospital
      'Who is in the hospital?'

Applying the analysis proposed in the previous subsection yields the structures schematized in (38), in which the subject originates in [Spec, PredP] and receives its theta role before moving to [Spec, TP] to check the [+D] feature of T.

(38) a. [TP ʔil-binit_i T [PredP t_i Pred [DP momaθileh/ʔil-momaθileh]]].
          the-girl   actress/the-actress
      'The girl is an actress/the actress.'

      b. [TP ʔil-binit_i T [PredP t_i Pred [AdjP   mašGoleh]]].
          the-girl   busy.F
      'The girl is busy.'

      c. [TP ʔil-binit_i T [PredP t_i Pred [PP bi-l-mostašfa]]].
          the-girl   in-the-hospital
      'The girl is in the hospital.'

Under this analysis, the structure of verbless copular wh-questions matches that of their declarative counterparts: the only difference is that the subject in [Spec, TP] is a wh-phrase. In other words, I propose that such wh-questions represent a simple predicational relation between the clause-initial subject DP (i.e., the wh-expression DP) and the non-verbal predicate. The following abstract syntactic representation can be given for the underlying structure of verbless copular subject wh-questions:

(39) [TP wh-phrase_i T [PredP t_i Pred [DP/AdjP/PP]]]

The structures that underlie the wh-questions in (37) above would thus be as follows:

(40) a. (huwweh) [TP mi:n_i T [PredP t_i Pred [DP momaθileh/ʔil-momaθileh]]]?
          Q   who   actress/the-actress
      'Who is an actress/the actress?'

      b. (huwweh) [TP mi:n_i T [PredP t_i Pred [AdjP   mašGoleh]]]?
          Q   who   busy.F
      'Who is busy?'

c. (huwweh)   [$_{TP}$ mi:n$_i$ T [$_{PredP}$ t$_i$ Pred [$_{PP}$ bi-l-mostašfa]]]?

     Q   who   in-the-hospital

     'Who is in the hospital?'

As with the verbal subject wh-questions discussed in section 4.4 above, I take [Spec, TP] to be the final destination for the subject wh-phrase; no further movement to an A'-position is needed, nor is it possible, as indicated by the optional appearance of the Q-particle *huwweh* and the possibility of embedding the verbless copular wh-question after the complementizer *ʔinno* 'that', as exemplified in (41).
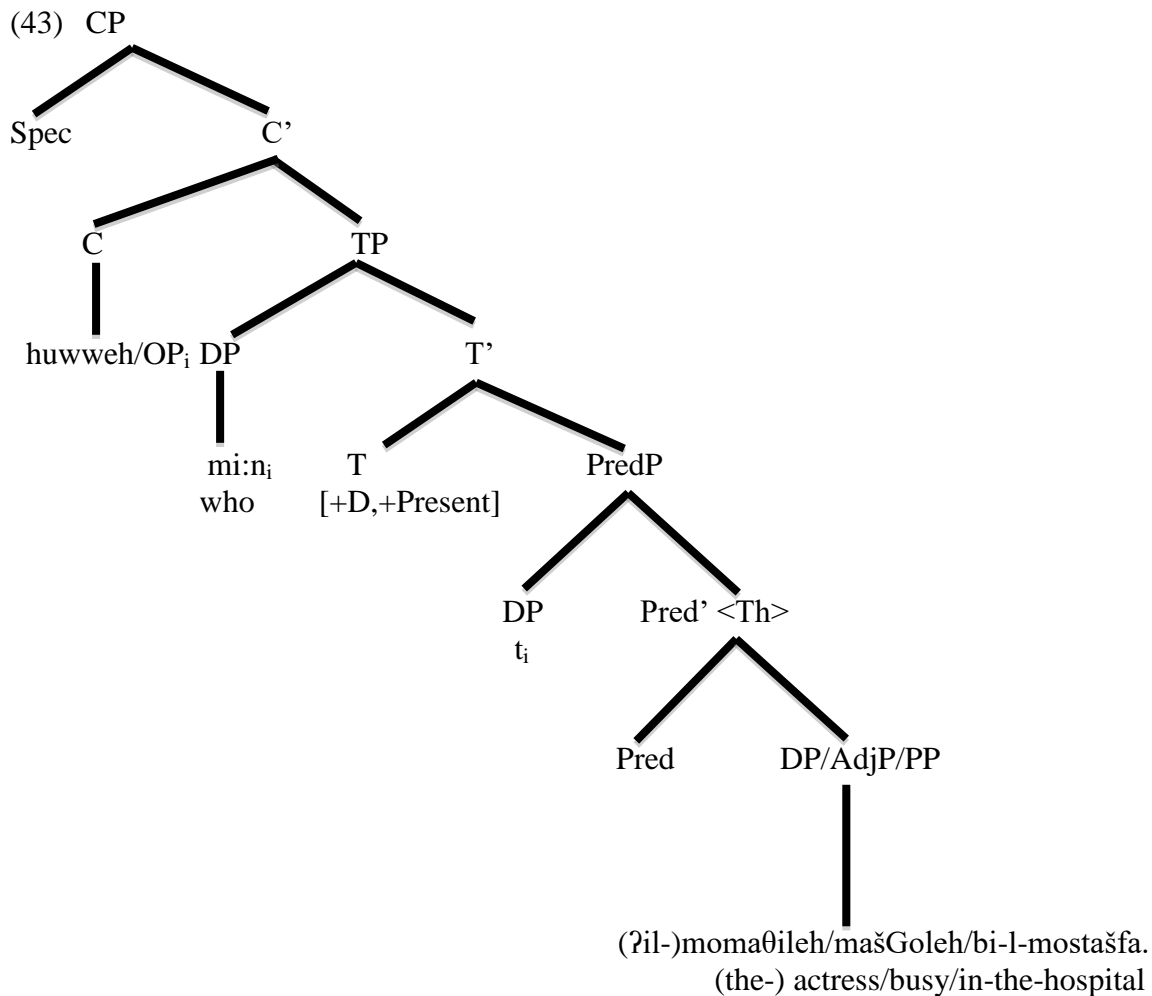
(41) a. (huwweh) golto **ʔinno** mi:n ʔil-momaθileh/momaθileh?

      Q   said.2P **that**   who   the-actress/actress

      'Who did you say is the actress/an actress?'

    b. (huwweh) golto **ʔinno** mi:n mašGoleh?

      Q   said.2P **that**   who   busy.F

      'Who did you say is busy?'

    c. (huwweh) golto **ʔinno** mi:n bi-l-mostašfa?

      Q   said.2P **that**   who   in-the-hospital

      'Who did you say is in the hospital?'

As for the CP domain, I assume that it is the same as that of verbal subject wh-questions: an interrogative operator, optionally realized as the Q-particle *huwweh*, unselectively binds the initial wh-phrase in [Spec, TP]. In the end, then, the structure of a verbless copular wh-question is as schematized in (42).

(42)   [$_{CP}$ C Op$_i$ [$_{TP}$ wh-phrase$_i$ T [$_{PredP}$ t$_i$ Pred [DP/AdjP/PP]]]

A tree diagram for the wh-questions in (40) is given in (43).

(43) CP

```
              CP
            /    \
         Spec     C'
                /    \
               C      TP
               |     /  \
      huwweh/OP_i DP      T'
                   |      /  \
                 mi:n_i  T    PredP
                 who  [+D,+Present]  /  \
                              DP      Pred' <Th>
                              t_i     /      \
                                   Pred     DP/AdjP/PP
                                              |
                            (Ɂil-)momaθileh/mašGoleh/bi-l-mostašfa.
                                   (the-) actress/busy/in-the-hospital
```

The overall conclusion is that the sentence-initial position of wh-phrases in verbless copular questions is derived without any wh-movement to an A'-position. The wh-element in a copular interrogative is the subject of a simple copular structure, hence its initial position. It can thus be generalized that verbless copular wh-questions are another class of in-situ wh-interrogatives in JA in the sense that the wh-phrase surfaces in its A-position inside TP.

To recap this section, drawing on the structural parallel between typical verbless subject-predicate clauses and verbless subject wh-questions, it was proposed that the latter derives from a subject-predicate source. It was also shown that wh-movement is not involved in the derivation of this type of wh-question. The clause-initiality of the wh-phrase is explained by virtue of its syntactic function as a subject and the only movement manifested in its derivation is A-movement, as with all subjects.

4.8   Subject wh-phrases as left-dislocated and focus fronted constituents

Recall that the discussion in chapter 3 was limited to non-subject wh-phrases. This raises the question of whether subject wh-phrases can undergo left-dislocation and focus fronting, an issue that I briefly discuss in this section.

Though the subject in Arabic SVO sentences surfaces clause-initially at the left-most peripheral position of the sentence, there is no reason why it cannot, in principle, be further left-dislocated. Left-dislocation of subjects in SVO sentences in Arabic, though not common, is possible (see also Eid 1991: fn. 8). In such cases, left-dislocated subjects appear associated with a resumptive pronoun in its TP-internal thematic position, similar to clitic-left-dislocated objects discussed in chapter 3. The difference between left-dislocating subjects and objects boils down to the nature of the resumptive pronoun that resumes the left-dislocated phrase. While the resumptive pronoun that appears TP-internally in the case of left-dislocating an object takes the form of a clitic attached to a preceding head, the one that appears in the case of left-dislocating a subject takes the form of a strong (free-standing) subject pronoun. This strong resumptive subject pronoun (or PRON) appears in the thematic subject position inside the TP (i.e., in [Spec, TP]). The Jordanian sentence given in (44b) and the wh-question given in (45b) represent the subject left-dislocated versions of (44a) and (45a) respectively.

(44) a. Ɂil-walad   kasar   iš-šubbak.
          The-boy   broke.3MS   the-window
          'The boy broke the window.'

      b. Ɂil-walad$_i$ huwweh$_i$ kasar   iš-šubbak.
          The-boy   PRON.he   broke.3MS   the-window
          'The boy is the one who broke the window.'

(45) a. (huwweh) mi:n   kasar   iš-šubbak?
          Q   who   broke.3MS   the-window
          'Who broke the window?'

b. (huwweh) mi:n$_i$ huwweh$_i$ kasar   iš-šubbak?[9]

Q   who   PRON.he   broke.3MS   the-window

'Who is the male person (x) such that (x) broke the window?'

It should be pointed out that subject left-dislocation in verbal structures of the type found in (44b) and (45b) is not so common and is highly restricted to specific pragmatic/contextual settings. The left-dislocated sentence in (44b) above, for example, can be used in a context where the speaker might think their addressees are confused about the doer of the action "breaking". Let us assume that the speaker has uttered the sentence in (44a) and one of the addressees has denied the proposition embodied in this statement while the speaker is one hundred percent sure that this proposition is true. The natural reaction of the speaker in this case would be to emphasize the proposition "it is the boy, not the girl, say, who broke the window" by employing subject left-dislocation.

Arabic is a null-subject language (Shlonsky 2000; Soltan 2007; Aoun et al 2010; Abdel Razaq 2011): the pronoun in subject position is normally covert and is overtly lexicalized only when required for emphasis, disambiguation, or contrastive focus (Soltan 2007). Since JA, similar to SA, is a null subject language, overtness of the pronominal subject in verbal sentences is marked and is always associated with emphasis/contrastive focus effects. Soltan (2007) ascribes the overtness of the pronominal subject to a lexicalization requirement at the interface that prohibits focus/emphasis features from being associated with null elements. In other words, the overtness of pronominal subjects in verbal sentences is forced by interface conditions, such as the requirement that emphasis/focus features be represented on a phonologically overt element.

As has just been shown above, left-dislocating the subject, whether in declarative (44b) or interrogative (45b) contexts, entails the occurrence of a resumptive subject pronoun in its TP-internal thematic position (i.e., in [Spec, TP]). This causes the comment part of the resulting topic-comment structure to surface with an overt subject pronoun, a structure

normally prohibited by the null-subject parameter which is operative in verbal sentences in Arabic (except for emphasis and contrastive focus considerations). This may help to explain the uncommon use of subject left-dislocation in verbal structures in general (except in limited contexts).

When we turn to verbless structures, however, the facts are a bit different. Verbless sentences, whether in declarative or interrogative contexts, commonly display left-dislocation of the subject, with a subject pronominal element (PRON) surfacing in the original subject position (i.e., in [Spec, TP]) as a result. The sentences in (46b, 47b) and the wh-questions in (46c, 47c) are the subject left-dislocated versions of the respective (a) verbless sentences.

(46) a. ʔil-binit   momaθileh/mašGoleh.
          the-girl   actress/busy.F
          'The girl is an actress/busy.'

      b. ʔil-binit$_i$ hiyyeh$_i$ momaθileh/mašGoleh[10]
          the-girl   PRON.she actress/busy.F
          'The girl is the one who is an actress/busy.'

      c. (huwweh) mi:n$_i$ hiyyeh$_i$ momaθileh/mašGoleh?
          Q   who PRON.she actress/busy.F
          'Who is the female person (x) such that (x) is an actress/busy?'

(47) a. ʔil-binit, ʔil-momaθileh/ʔil-mašGoleh.
          the-girl, the-actress/the-busy.F
          'The girl is the actress/the busy person.'

      b. ʔil-binit$_i$ hiyyeh$_i$ ʔil-momaθileh/ʔil-mašGoleh.
          the-girl   PRON.she the-actress/the-busy.F
          'The girl is the one who is the actress/the busy person.'

      c. (huwweh) mi:n$_i$ hiyyeh$_i$ ʔil-momaθileh/ʔil-mašGoleh?
          Q   who PRON.she the-actress/the-busy.F
          'Who is the female person (x) such that (x) is the actress/the busy person?'

I ascribe the frequent occurrence of subject left-dislocation in both declarative and interrogative verbless sentences, compared to its uncommon occurrence in verbal contexts, to the fact that the null-subject parameter is not operative in verblesss sentences in Arabic. Left-dislocating the subject in both declarative and interrogative verbless structures is common because the occurrence of a subject pronoun in [Spec, TP] as a result of this left-dislocation does not violate any constraint: unlike in verbal sentences, the null subject parameter is not operative. (In chapter 5, I will show that *ʔilli* wh-questions with PRON represent another instance of such left-dislocated verbless sentences.)

As for why the null subject parameter is operative in verbal sentences but not in verrbless sentences, the rich agreement morphology on the verb in verbal sentences versus the absence of any verbal element in verbless sentences can provide a straightforward explanation for this contrast. Specifically, the rich agreement inflection on the verb in verbal sentences is sufficient to identify the person, number and gender features of any subject pronoun, hence subject pronouns are redundant in such structures and Arabic is a pro-drop language. Verbless sentences, by contrast, lack a verbal element to carry such agreement features. Unless an overt subject, whether lexical or pronominal, is used in verbless structures, the resulting structure is not a complete sentence but rather just an NP, AP or PP. Thus, the occurrence of the subject, even if it was a pronominal subject, is obligatory in verbless sentences in Arabic (unlike verbal sentences), which explains why the null subject parameter cannot be operative in verbless sentences even though Arabic is a null pro language.

Recall also from chapter 3 that any phrase can receive a focus interpretation via preposing/fronting to a designated focus position in the sentence, which is sentence-initial in Arabic. It can thus be said that focus in Arabic is a function of a given position in the sentence. Though all the examples of focus fronting discussed in chapter 3 involved instances

of non-subject constituents, Ouhalla (1997) indicates that focusing categories other than objects, adjuncts and PPs is still possible. He argues that "virtually any category can be (focused and) focus-moved" (p. 18). Thus, according to Ouhalla (1997, subject phrases can be focused in Arabic. The following example from SA illustrates a focus-movement of a subject whereby the subject, presumably, occupies the same position as the preposed/fronted direct object and/or adjunct, i.e., [Spec, FP].

(48) ZAYNAB-U   ʔallafat   l-qasiidat-a   (laa   LAYLAA)
      Zaynab-NOM   wrote.3FS   the-novel-ACC   not   Laylaa
      'It was ZAYNAB who wrote the poem (not LAYLAA)'.   (Ouhalla 1997: 13)

Ouhalla (1997) adds that the focus-assignment and movement applies to nominal sentences as well. The subject in the following example has a focus interpretation, implying that it occurs in [Spec, FP].

(49) ZAYNAB-U   fii   l-bayt-I   (laa   LAYLAA)
     Zaynab-NOM   in   the-house-GEN   not   Laylaa
     'It is ZAYNAB who is in the house (not LAYLAA)'.   (Ouhalla 1997: 20)

The above examples show that there is a pitch accent/focal stress (which is indicated by the capital letters) associated with focused subject phrases. There is also a negative continuation that adds a contrastive reading to the structure. However, such contrastive negative continuations are not restricted to contexts where subjects are focused; they can also appear in contexts of focusing non-subject phrases (see Ouhalla (1997) for exemplification from SA).

With regard to whether subject wh-phrases can undergo focus-movement, I propose that they can with the proviso that they receive a focal stress and carry a contrastive interpretation, on a par with their declarative counterparts. Following the reasoning of Ouhalla (1997) with regard to focusing lexical subjects in SA, it can be said that subject wh-questions can

correspond to a focus fronting structure as well. Specifically, subject wh-phrases, whether in verbal or verbless questions, can receive a focus interpretation, and thus undergo focus-movement to [Spec, FocP], similar tolexical subjects in declarative sentences. Nothing rules out generating focus-fronted subject wh-phrases.

To sum up, in this section I have discussed the possibility of left-dislocating and focus fronting subject phrases. It was shown that, though nothing in principle prevents left-dislocating and focalizing the subject similar to non-subject constituents discussed in the previous chapter, other factors are at play in the contexts of subject left-dislocation. While left-dislocating the subject, whether declarative or interrogative, in verbal structures is possible, it is not common. This was explained in light of the fact that the null subject parameter is operative in verbal sentences in Arabic. Left-dislocating the subject results in having a pronominal element (PRON) in the TP-internal subject position in violation of the null subject parameter. However, it was shown that such violations can occur for pragmatic/contextual motivations such as emphasis, disambiguation and contrastive focus. In verbless contexts, by contrast, the null subject parameter is not operative. Therefore, left-dislocating the subject is not only fully acceptable but also common in both declarative and interrogative structures as it does not lead to the violation of any constraint, as opposed to verbal sentences.

4.9   Conclusion

This chapter has shown that subject wh-questions, whether in verbal or verbless contexts, are merely the interrogative versions of their declarative counterparts. An analysis was proposed in which the wh-phrase is the thematic subject and thus originates in [Spec, VP] in verbal contexts or in [Spec, PredP] in verbless contexts. Although the clause-initial position of the wh-phrase in JA subject wh-constructions could potentially be derived via wh-

movement of the wh-phrase to [Spec, CP], I have shown that such constructions are in fact concealed non-wh-movement constructions. I argue against the application of any wh-movement, be it overt or covert, and instead propose that the initial position of wh-phrases in such questions follows simply from the fact that the wh-phrase is the structural subject, bound by a wh-operator in CP. I divert from the assumption that subject wh-phrases undergo covert movement at LF (Chomsky 1986) as there is no evidence for such movement in JA.

JA subject wh-questions are thus another wh-construction whose derivation does not involve wh-movement. The two types of subject wh-question, verbal and verbless, thus add further evidence to the conclusion drawn from the discussion of CLLD and focus fronted wh-questions in the previous chapter: clause-initial surfacing of a wh-element does not necessarily entail the application of wh-movement, but can rather be the result of an independently-attested underlying structure. Subject wh-questions, for example, involve clause initial wh-elements because these elements represent the thematic subject of the structure, which is canonically clause-initial.

The proposed analysis, as noted above, also makes it clear that subject wh-questions cluster with the typical in-situ wh-questions discussed in chapter 2 and, thus, represent another manifestation of the in-situ strategy in JA. Although the clause-initial position of wh-phrases can potentially suggest that several JA wh-constructions involve wh-fronting, closer scrutiny reveals their syntactic properties to be precisely those of in-situ wh-constructions.

The analysis advanced in this chapter for verbless copular subject wh-questions will have crucial implications for the analysis of the internal structure of a more complex type of wh-question in the language, namely, *ʔilli* wh-questions, which I take up in the next chapter.

Endnotes

1. In pre-minimalist accounts, the head T was referred to as I. Likewise, [Spec, IP] is now taken to be [Spec, TP].

2. Verbless copular sentences are found in languages such as Hebrew (Berman & Grosu 1976; Doron 1983 & 1986; Borer 1986; Rapoport 1987; Heggie 1988; Eid 1991; Falk 2004), Russian (Babby 1980), spoken Sinhala (Sumangala 1991), some African-American English varieties (Labov 1995), and various other languages (Baker 2003).

3. The view that a definite DP in Arabic, besides being referential, can be predicative is traced back to an early observation by Cowell (1964) on Syrian Arabic. Similarly, Heggie (1988), building on evidence from English, French and Hebrew, proposes that definite descriptors are predicative.

4. Eid (1983, 1991 & 1992) argues that copular verbless sentences with two lexical definite DPs have a phrasal, but not sentential interpretation. However, Abdel Razaq (2011) counters her showing that an intonational/prosodic break can warrant the sentential interpretation of such constructions. Specifically, Abdel Razaq (2011) argues that copular sentences with two definite DPs can have a sentential interpretation if pronounced with a short pause between the two DPs, together with a rising intonation at the end of the initial DP; the initial DP is usually drawled (see also Cowell 1964 for a similar observation in Syrian Arabic). The lack of this prosodic break in such sentences would render them complex noun phrases (see also Eid 1983, 1991 & 1992).

5. For a full discussion of the in adequacy of these analyses, see Benmamoun (2000: 37-50). For further argument against the null copula hypothesis, the reader is referred to Shlonsky (1997), Al-Horais (2006), Benmamoun (2008), and Aoun et al (2010). For more on the problems of Bahloul's (1993) analysis, see Benmamoun (2000) and Al-Horais (2006).

6. This analysis is based on the proposal first advanced in Jelinek (1981) for Egyptian Arabic.

7. Earlier analyses assume that the dependency between tense and the verb is essentially morphological; this dependency is motivated by the need of tense to have a lexical host. Baker (2003) adopts this assumption and considers the past tense to be an affix that requires a lexical host, while the present tense is not an affix hence not requiring a lexical host. Chomsky 1995, however, abandons this idea and takes the dependency between tense and the verb to be triggered by a categorial verbal feature of tense which necessitates tense to be paired with the verb. Benmamoun's (2008) analysis is based upon Chomsky's (1995) categorial feature analysis.

8. It is worth noting here that verbless/nominal sentences are not just about subjects. They involve a predicate which can also be questioned, especially if it is a PP. The following examples show that the PP in the (a) sentence can be questioned either in-situ as in (b) or in a focus fronting wh-question as in (c). Though such wh-questions are still verbless, they are clearly not subject wh-questions: they seek information about something other than the subject of the predication. Subject wh-questions invariably involve argument wh-phrases (but not locative adjunct wh-phrases as in these examples).

(i) a. ʔil-binit bi-l-mostašfa.
     the-girl   in-the-hospital
     'The girl is in the hospital.'

   b. (huwweh)   ʔil-binit **wein**?
      Q   the-girl **where**
      'Where is the girl?'

   c. (huwweh) **wein**   ʔil-binit?
      Q   **where**   the-girl
      'Where is the girl?'

However, wh-questioning nominal and adjectival predicates is typically done in a different structure, usually a verbal structure. This means that such wh-questions are no longer verbless wh-questions nor subject wh-questions. The following examples illustrate how nominal predicates are typically questioned in JA.

(ii)   a. ʔil-binit momaθileh.
       the-girl   actress
       'The girl is an actress.'

     b. (huwweh) **eiš**   ʔil-binit b-tištaGil?
       Q   **what**   the-girl   is-working.3FS
       'What does the girl work?'

     c. *[(huwweh) **eiš**   ʔil-binit?]
       Q   **what**   the-girl
       '*What is the girl?'

9. Though I myself find left-dislocating subject wh-phrases in such verbal contexts marginal, all my informants have asserted that it is fully acceptable to them. More interestingly, some of my informants consider left-dislocating subject wh-phrases to be very common and even the default strategy for questioning subjects in certain Jordanian dialects, particularly the Rural Jordanian dialect spoken in the Northern part of Jordan. They provided the following examples from Rural Jordanian Arabic. (PRON in this dialect can also be attached to the preceding wh-phrase with the initial /h/ sound of PRON being phonologically reduced/deleted.)

(i)   a. (huwweh) man   hu   kasar   iš-šubbak?
       Q   who   PRON.he broke.3MS   the-window
       'Who is the male person (x) such that (x) broke the window?'

     b. (huwweh) man   hi   kasrat   iš-šubbak?
       Q   who   PRON.she broke.3FS   the-window
       'Who is the female person (x) such that (x) broke the window?'

10. Abdel Razaq (2011, chapter 1) provides similar examples from different Arabic dialects, asserting that left-dislocating the subject in such Arabic verbless sentences is possible. However, he indicates that this subject left-dislocation is more common when the predicate DP is definite (as in (47a, b)) than when the predicate is indefinite (as in (46a, b)). He explains the more common use of subject left-dislocation in verbless sentences consisting of a subject DP and a definite predicate DP in light of the observation that such constructions are ambiguous between a phrasal and a sentential interpretation. The sentence in (47a), for example, has a phrasal interpretation unless it is marked by a prosodic break (as shown by the comma in this example) separating the subject from the definite predicate DP. More specifically, if pronounced without a prosodic pause, the sentence in (47a) is interpreted as a modified/relative noun phrase: 'The girl who is the actress/busy …'. According to Abdel Razaq (2011), left-dislocation removes the need of this prosodic break (as shown in (47b)) and makes the sentential interpretation the only possible interpretation. Thus, it can be said that left-dislocation is needed when the predicate DP is definite in such verbless contexts to identify the predicate and to remove the potential ambiguity (see also Cowell 1964 for a similar observation in Syrian Arabic; see also endnotes 3 and 4 above).

Chapter 5
***ʔilli*-Interrogatives in Jordanian Arabic**

5.1 Introduction

Despite the widespread adoption of Chomsky's (1977) wh-movement hypothesis, problems arise for Cheng's (1991) Clausal Typing Hypothesis (CTH) as some in-situ wh-languages (e.g., Egyptian Arabic, Bahasa Indonesia and Palauan) have been found to exhibit optionality in terms of whether their wh-operators remain in-situ or are fronted to Comp. Such "optional wh-fronting" languages seem to contradict the predictions made by the Clausal Typing Hypothesis. Cheng (1991) devotes the third chapter of her dissertation to address this challenge and proposes a novel analysis for "optional-wh-fronting" languages, which has since come to be known as the "wh-cleft" analysis. In a nutshell, the wh-cleft analysis assumes that not every case of apparent fronting really involves movement of the wh-word to Spec of C^0. Rather, and based upon her observation of a striking resemblance between fronting of wh-words in these languages with clefts, Cheng hypothesizes that the apparent fronting of wh-arguments in such languages is an instance of clefting.

Jordanian Arabic, similar to other Arabic dialects, avails itself of a wh-construction of the type discussed in Cheng's (1991) wh-cleft schema. Due to the inconsistent terms used for this wh-construction in the literature, I will adopt a theory-neutral term to label it throughout this chapter, namely, "*ʔilli*-interrogatives". This term primarily reflects the invariable manifestation of the relative complementizer *ʔilli* 'that' in this interrogative construction.[1] Alternative labels for similar wh-constructions in other Arabic varieties will be highlighted when necessary.

ʔilli-interrogatives in JA consist of a wh-phrase surfacing sentence-initially (at the left-most peripheral position of the clause) followed by a free relative clause headed by the relative complementizer *ʔilli* 'that'. Both subject and object wh-phrases are possible in this

wh-construction. Nevertheless, while there is always a resumptive pronoun inside the free relative clause when object wh-phrases are employed, this resumptive pronoun is not there when subject wh-phrases are used. The resumptive pronoun appearing inside the free relative clause when employing object wh-phrases is normally a weak pronoun of the type used in non-subject argument positions; it appears as a clitic attached to the preceding head (i.e., Noun, Verb or Preposition). The relative complementizer *ʔilli* 'that' is obligatorily used directly after the wh-element. A "pronominal copula" or "PRON" (in the sense of Eid 1983, 1991 & 1992; Doron 1983 & 1986; Ouhalla 1999; Shlonsky 2002; Edwards 2006; Abdel Razaq 2011) can be optionally inserted between the wh-element and the relative complementizer *ʔilli* 'that'. This pronominal copula, which is typically a third person strong subject pronoun, agrees in number and gender with the resumptive clitic inside the free relative clause when object wh-phrases are used; it matches the agreement features on the verb when subject wh-phrases are employed. Similar to other wh-interrogative constructions in JA, *ʔilli*-interrogatives can be optionally introduced by the question particle *huwweh*, which occurs sentence-initially before the wh-element, and is homophonous with the third person singular masculine subject pronoun. Only argument wh-phrases, but not adjunct ones, can appear in this wh-construction in JA.

The following paradigm puts the above description in concrete terms. I have chosen English translations for this type of wh-question that can reflect the actual structural properties of the Arabic sentence as closely as possible. The result of this choice is sometimes a quite wordy English translation, but this is the most effective way to convey the actual grammatical relations involved in this complex Arabic structure, especially the gender and number features borne by the resumpptive clitic and PRON. Examples (1a-e) illustrate the full acceptability of this interrogative construction with argument/nominal wh-phrases,

whereas examples (1f-j) illustrate its ungrammaticality with adjunct and prepositional wh-elements.

(1)   a. **Wh-phrase as animate subject**

(huwweh) **mi:n** (**hiyyeh**)   *ʔilli* šafat   iz-zalameh ʔimbariH?

Q   who (**PRON.she**) **that** saw.3FS the-man yesterday

'Who is she such that she is the one that saw the man yesterday?'

b. **Wh-phrase as inanimate subject**

(huwweh) **eiš**(**huwweh**)   *ʔilli* Saar   ʔimbariH?

Q   what (**PRON.it**) **that** happened.3S yesterday

'What is it such that it is the thing that happened yesterday?'

c. **Wh-phrase as animate direct object**

(huwweh) **mi:n$_i$** (**hiyyeh**)   *ʔilli* iz-zalameh šaf-**ha$_i$**   ʔimbariH?

Q   who (**PRON.she**) **that** the-man   saw.3MS-**her** yesterday

'Who is she such that she is the one that the man saw her yesterday?'

d. **Wh-word as determiner**

(huwweh) **ʔayya binit$_i$** (**hiyyeh**)   *ʔilli* iz-zalameh šaf-**ha$_i$**   ʔimbariH?

Q   which girl   (**PRON.she**) **that** the-man   saw.3MS-**her** yesterday

'Which girl is she such that she is the one that the man saw her yesterday?'

e. **Wh-phrase as inanimate direct object**

(huwweh) **eiš$_i$**   (**huwweh**) *ʔilli* iz-zalameh ištar-**ah$_i$**   ʔimbariH?

Q   what (**PRON.it**) **that** the-man   bought.3MS-**it**   yesterday

'What is it such that it is the thing that the man bought it yesterday?'

f. **Wh-phrase as locative adjunct**

*[(huwweh) **wein$_i$** (**huwweh**)   *ʔilli* iz-zalameh šaf-**uh$_i$**   maha?]

Q   where (**PRON.it**) **that** the-man   saw.3MS-**it**   Maha

'Where did the man see Maha?'

g. **Wh-phrase as temporal adjunct**

*[(huwweh)   **ʔeimtaᵢ** (**huwweh**) *ʔilli* iz-zalameh šaf-**uhᵢ**   maha?]

 Q   **when**   (**PRON.it**) **that** the-man   saw.3MS-**it**   Maha

‘When did the man see Maha?’

h. **Wh-phrase as purpose adjunct**

*[(huwwweh) **leišₗ** (**huwweh**) *ʔilli*   iz-zalameh raH-**uhᵢ**   9-as-soog?]

 Q   **why** (**PRON.it**) **that** the-man   went.3MS-**it** on-the-market

‘Why did the man go to the market?’

i. **Wh-phrase as manner adjunct**

*[(huwweh)   **Keifᵢ** (**huwweh**) *ʔilli*   iz-zalameh rij9-**uhᵢ**   min   is-soog?]

 Q   **how** (**PRON.it**) **that** the-man   returned.3MS-**it** from the-market

‘How did the man come back from the market?’

j. **Wh-phrase as object of preposition**

*[(huwweh)   **la-mi:nᵢ**   [**huwweh**) *ʔilli* iz-zalameh ʔa9Ta-**uhᵢ**   ʔil-maSari?]

 Q   **to-who**   (**PRON.it**) **that** the-man   gave.3MS-**it**   the-money

‘To whom did the man give the money?’

This Jordanian wh-interrogative construction has been addressed in terms of Chomsky’s (1977) wh-movement analysis by Al-Momani & Al-Saidat (2010). The same wh-structure in Egyptian Arabic has also been addressed under the framework of wh-movement (Wahba 1984; Lassadi 2005; El-Touny 2011), as well as under Cheng’s (1991) wh-cleft proposal (Soltan 2012). The wh-cleft analysis was also adopted for different Arabic dialects by Abdel Razaq (2011). The goal of the current chapter is to provide a thorough investigation of *ʔilli*-interrogatives in JA and to provide a syntactic analysis that best captures the conflicting, as well as the neglected, properties of this wh-construction.

As a starting point, I will call into question the wh-movement analysis (i.e., Al-Momani & Al-Saidat 2010) for *ʔilli*-interrogatives in JA. Evidence from island effects (Ross 1967; Chomsky 1973; inter alia) as well as resumption casts doubt upon the derivation of such wh-questions via wh-movement. However, a wh-cleft analysis along the lines of Cheng (1991)

will not be deemed an appropriate alternative analysis, as I will show that such an analysis also does not adequately capture the syntactic properties of this Jordanian wh-construction.

The alternative analysis to be advanced for *ʔilli*-interrogatives in JA takes as its departure point the abandonment of the widely held view that *ʔilli*-interrogatives contain an optional pronominal copula (following the steps of Abdel Razaq 2011), with the corollary that such wh-constructions transpire to be derived from two distinct underlying structures. In other words, a split analysis, similar to that advanced for wh-questions with and without sentence-internal clitics in chapter 3, is adopted for *ʔilli*-interrogatives as well. The proposed analysis thus entails the presence of two different wh-constructions that can surface with almost the same PF realization, one with a pronominal copula (PRON) and one without. Furthermore, what has been widely analyzed as an optional "pronominal copula" (Soltan 2012) or "agreement features" under INFL (Shlonsky 2002; Aoun et al 2010) will be shown to be simply what it appears on the surface to be, i.e., a subject pronoun (along the lines of Edwards (2006) and Abdel Razaq (2011)).

The details of the alternative analysis will unfold as follows. Based on the verbless/copular subject-predicate nature of non-PRON *ʔilli*-interrogatives (cf. Shlonsky 2002; Aoun et al 2010; Abdel Razaq 2011), the blended analysis advanced for verbless copular subject wh-questions in the previous chapter is extended to *ʔilli*-interrogatives lacking PRON. As for *ʔilli*-interrogatives that involve PRON, I build on the parallelisms they share with left-dislocated (or topic-comment) structures in Arabic to develop an analysis based upon the same framework adopted for CLLD wh-questions in chapter 3. Under this split analysis, the wh-phrase is predestined by the initial numeration and configuration to be either a typical subject surfacing in [Spec, TP] when PRON is absent or a left-dislocated subject surfacing in a higher position in the structure (i.e., [Spec, TopP]) when PRON is involved. In the latter case, the wh-construction represents a topic-comment structure with

PRON, being a subject pronoun (rather than a pronominal copula or agreement feature), serving as the subject of the comment portion. The interrogative CP thus dominates a typical TP when PRON is absent and dominates a TopP when PRON is involved. It is this difference that underlies the apparent optionality of the pronominal copula.

This chapter brings together the various strands developed in the study so far, demonstrating how the same approach can provide a uniform analysis for various different wh-constructions in the language. Besides showing that the analyses developed for verbless copular subject wh-questions and CLLD wh-questions can straightforwardly be extended to derive *ʔilli*-interrogatives lacking PRON and those involving PRON respectively, this chapter offers further support to the proposal that wh-questions with clause-initial wh-elements might disguise in-situ wh-constructions.

In terms of presentation, the chapter is organized as follows. Section 5.2 questions the validity of positing wh-movement as the underlying mechanism for deriving *ʔilli*-interrogatives in JA. Section 5.3 revisits Cheng's (1991) wh-cleft analysis for Egyptian Arabic, showing that crucial asymmetries between JA *ʔilli*-interrogatives and typical clefts remove the possibility of adopting a cleft analysis for this wh-construction in JA. Section 5.4 establishes the rationale for the alternative analysis I am proposing. In this section, I consider the symmetries between *ʔilli*-interrogatives lacking the "pronominal copula" and verbless copular subject-predicate constructions in Arabic on one hand, and between *ʔilli*-interrogatives involving the "pronominal copula" and left-dislocated structures in Arabic on the other hand. My final proposal is put forward in sections 5.5 and 5.6, in which I argue that the pronominal copula is a subject pronoun (along the lines of Edwards (2006) and Abdel Razaq (2011)) and that the presence of this subject pronoun entails the presence of a CP dominating a TopP, while its absence entails the presence of a CP dominating a typical TP. Section 5.7 highlights the major implications of my proposal. An alternative analysis for the

structure of cleft sentences is put forward in section 5.8. Section 5.9 summarizes and concludes the chapter.

5.2 *ʔilli*-interrogatives in JA are not fronted wh-questions

In this section, I review the wh-movement analysis for *ʔilli*-interrogatives in JA (Al-Momani & Al-Saidat 2010) and highlight some theoretical and empirical problems that this analysis faces. Al-Momani & Al-Saidat argue that *ʔilli*-interrogatives in JA are derived via an obligatory movement of the wh-phrase to [Spec, FP] in the left periphery of the clause. This obligatory movement is triggered by the features of a contrastive focus morpheme, and the insertion of the particle *ʔilli* 'that' is taken to be triggered by the movement itself. In order to make this proposal more tangible, the following illustrative examples are provided.[2]

(2)   a. **mɪːn *ʔilli***   ʔaħmad ʃaːf-**u**?

        Who that   Ahmad   saw-**him**

        'Who did Ahmed see?'

   b. **ʃuː**   ***ʔilli***   ʔaħmad ʃaːf-**u**?
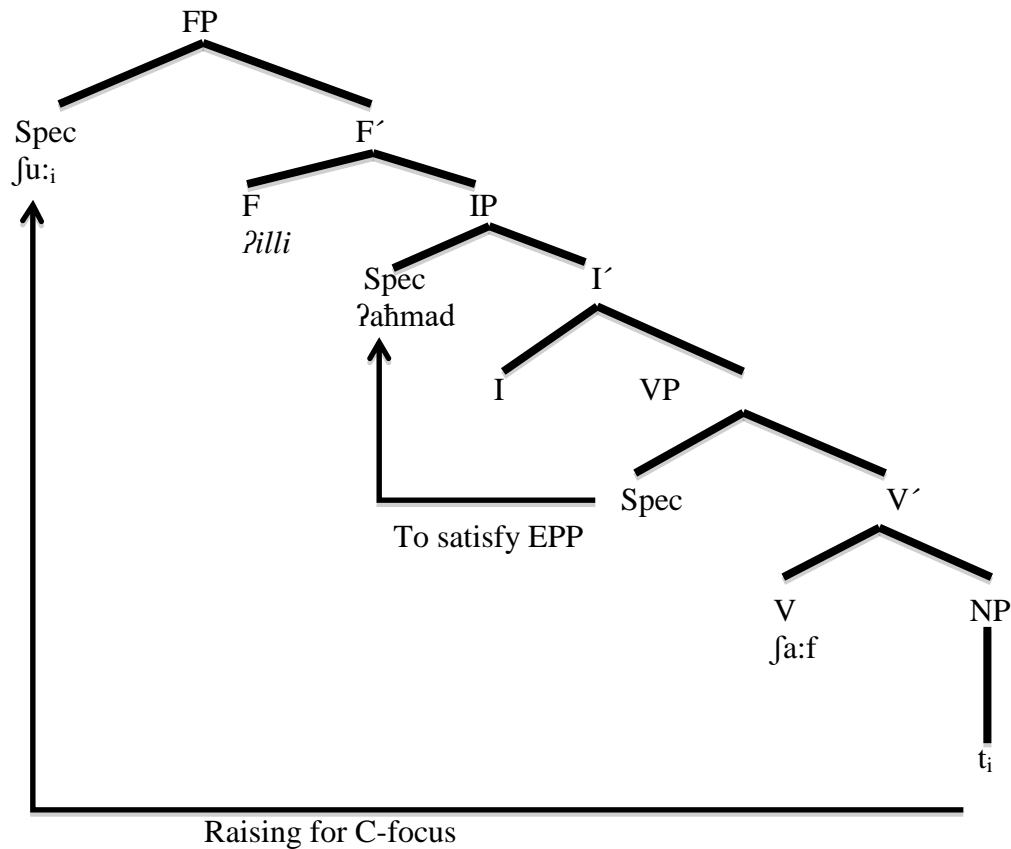
        What that Ahmad   saw-**it**

        'What did Ahmed see?'   (Al-Momani & Al-Saidat 2010: 623-624)

Al-Momani & Al-Saidat (2010) represent example (2b) diagrammatically as follows.

(3)

```
                        FP
                ┌───────┴───────┐
              Spec              F´
              ʃuːᵢ        ┌──────┴──────┐
                          F            IP
                        ʔilli     ┌─────┴─────┐
                                 Spec         I´
                                ʔaħmad   ┌─────┴─────┐
                                         I          VP
                                              ┌──────┴──────┐
                                             Spec          V´
                                                      ┌─────┴─────┐
                                                      V          NP
                                                     ʃaːf
                                                                 tᵢ
```

To satisfy EPP

Raising for C-focus

(Al-Momani & Al-Saidat 2010: 625)

It appears that the movement analysis has been adopted solely due to the clause-initial surfacing of the wh-constituent. However, this analysis faces several theoretical and empirical problems. The first problem is that there is no clear evidence for the occurrence of movement such as island sensitivity (Ross 1967; Chomsky 1977; Wahba 1984; Ouhalla 1996; Aoun & Choueiri 1999; Richards 2001; Shlonsky 2002; Aoun & Li 2003; Aoun et al 2010; Soltan 2012; inter alia). Rather, close inspection of *ʔilli*-interrogatives in JA reveals that they are island insensitive, as shown through the full acceptability of questioning into wh-islands, as in the examples in (4).

(4)   *ʔilli*-interrogatives in wh-island contexts

    a. **Wh-phrase as animate subject**

(huwweh) [**mi:n**   (**hiyyeh**)   *ʔilli* saʔalto   [ʔiða

Q   [**who**   (**PRON.she**) **that** asked.2P   [whether

šafat   iz-zalameh ʔimbariH]]?

saw.3FS the-man   yesterday]]

'Who is she such that she is the one that you asked whether she saw the man yesterday?'

    b. **Wh-phrase as animate direct object**

(huwweh) [**mi:n$_i$**   (**hiyyeh**)   *ʔilli* saʔalto   [ʔiða

Q   [**who**   (**PRON.she**) **that** asked.2P   [whether

iz-zalameh šaf-**ha$_i$**   ʔimbariH]]?

the-man   saw.3MS-**her** yesterday]]

'Who is she such that she is the one that you asked whether the man saw her yesterday?'

    c. **Wh-word as determiner**

(huwweh) [**ʔayya binit$_i$**   (**hiyyeh**)   *ʔilli* saʔalto

Q   [**which girl**   (**PRON.she**) **that** asked.2P

[ʔiða   iz-zalameh šaf-**ha$_i$**   ʔimbariH]]?

[whether the-man   saw.3MS-**her** yesterday]]

'Which girl is she such that she is the one that you asked whether the man saw her yesterday?'

    d. **Wh-phrase as inanimate direct object**

(huwweh) [**eiš$_i$**   (**huwweh**) *ʔilli* saʔalto   [ʔiða

Q   [**what** (**PRON.it**) **that** asked.2P   [whether

iz-zalameh ištar-**ah$_i$**   ʔimbariH]]?

the-man   bought.3MS-**it**   yesterday]]

'What is it such that it is the thing that you asked whether the man bought it yesterday?'

The same observation obtains when questioning into complex NP islands. The examples given in (5) below are grammatical even though a complex NP island exists.

(5)   *ʔilli*-interrogatives in complex NP island contexts

    a. **Wh-phrase as animate subject**

(huwweh) [**mi:n** (**hiyyeh**) *ʔilli* smi9to ʔiša9it [ʔinno šafat

Q   [**who** (**PRON.she**) **that** heard.2Prumor [that saw.3FS

iz-zalameh ʔimbariH]]?

the-man Yesterday]]

'Who is she such that she is the one that you heard the rumor that she saw the man yesterday?'

    b. **Wh-phrase as animate direct object**

(huwweh) [**mi:n$_i$** (**hiyyeh**) *ʔilli* smi9to ʔiša9it [ʔinno iz-zalameh

Q   [**who** (**PRON.she**) **that** heard.2Prumor [that the-man

šaf-**ha$_i$** ʔimbariH]]?

saw.3MS-**her** Yesterday]]

'Who is she such that she is the one that you heard the rumor that the man saw her yesterday?'

    c. **Wh-word as determiner**

(huwweh) [**ʔayya binit$_i$** (**hiyyeh**) *ʔilli* smi9to ʔiša9it [ʔinno

Q   [**which girl** (**PRON.she**) **that** heard.2Prumor [that

iz-zalameh šaf-**ha$_i$** ʔimbariH]]?

the-man saw.3MS-**her** yesterday]]

'Which girl is she such that she is the one that you heard the rumor that the man saw her yesterday?'

d. **Wh-phrase as inanimate direct object**

(huwweh) [eiš_i   (**huwweh**) *Ɂilli* smi9to Ɂiša9it [Ɂinno   iz-zalameh

Q   [**what** (**PRON.it**) **that** heard.2Prumor [that   the-man

ištar-**ah_i**   ɁimbariH]]?

bought.3MS-**it**   yesterday]]

'What is it such that it is the thing that you heard the rumor that the man bought it

yesterday?'

Island insensitivity is also displayed across adjunct clauses, as shown in (6).

(6)   *Ɂilli*-interrogatives in adjunct island contexts

a. **Wh-phrase as animate subject**

(huwweh) [**mi:n**   (**hiyyeh**)   *Ɂilli* rawwaHto [ba9idma

Q   [**who**   (**PRON.she**) **that** left.2P   [after

šafat   iz-zalameh]]?

saw.3FS the-man**]]**

'Who is she such that she is the one that you left after she saw the man?'

b. **Wh-phrase as animate direct object**

(huwweh) [**mi:n_i** (**hiyyeh**)   *Ɂilli* rawwaHto [ba9idma   iz-zalameh

Q   [**who**   (**PRON.she**) **that** left.2P   [after   the-man

šaf-**ha_i**]]?

saw.3MS-**her]]**

'Who is she such that she is the one that you left after the man saw her?'

c. **Wh-word as determiner**

(huwweh) [**Ɂayya binit_i** (**hiyyeh**)   *Ɂilli* rawwaHto [ba9idma   iz-zalameh

Q   [**which girl** (**PRON.she**) **that** left.2P   [after   the-man

šaf-**ha_i**]]?

saw.3MS-**her]]**

'Which girl is she such that she is the one that you left after the man saw her?'

d. **Wh-phrase as inanimate direct object**

(huwweh) [eiš$_i$ (**huwweh**) *ʔilli* rawwaHto [ba9idma iz-zalameh

Q   [**what** (**PRON.it**) **that** left.2P   [after   the-man

ištar-**ah$_i$**]]?

bought.3MS-**it]]**

'What is it such that it is the thing that you left after the man bought it?'

The island insensitivity of *ʔilli*-interrogatives casts doubt upon the involvement of movement in their derivation.

A second flaw in this analysis is the fact that the diagrammatic representations of this wh-construction (see 3 above as an example) involve a trace that the "fronted/moved" object wh-phrase corefers with, contra the surface structure which involves a resumptive clitic in this respective position. Al-Momani & Al-Saidat's analysis does not account for the occurrence of this resumptive clitic in this wh-construction.[3]

A third downside of Al-Momani & Al-Saidat's (2010) analysis is the absence of a clear motivation for their obligatory movement. Although they explain that this movement is triggered by the features of the contrastive focus morpheme and the features of the particle *ʔilli* 'that', it is not clear what contrastive reading is associated with this wh-construction. *ʔilli*-interrogatives in JA are typically used to seek information about identity, though with a presuppositional value. Specifically, such wh-questions presuppose that the interlocutors have shared background information about the identity of the person/thing being questioned, but do not have any contrastive interpretation (see also Shlonsky (2002) and Aoun et al (2010) for a similar observation in Palestinian and Lebanese Arabic respectively). More surprisingly, after clearly spelling out that this "obligatory movement" is triggered by the features of the particle *ʔilli*, Al-Momani & Al-Saidat state that the movement of the wh-phrase is what "triggers the insertion of the particle *ʔilli*" (pp. 623 & 625). I find this proposal difficult to accept for several reasons. First, it results in a circular analysis: the

particle *ʔilli* triggers wh-movement and, at the same time, wh-movement triggers the insertion of *ʔilli*. Second, if it was the wh-movement which triggers the insertion of the particle *ʔilli*, then it would naturally follow that the movement of adjunct wh-phrases should also trigger the insertion of the particle *ʔilli*, which is not the case as is instantiated in their own examples.

(7)   a.   ***mata *ʔilli***   ʔɪl walad   bɪdʒɪ?

         When   **that**   the   boy   comes

         'When does the boy come?'

     b.   ***keɪf *ʔilli***   dʒiːt hɔːn?

         How   **that**   came here

         'How did you come here?'

     c.   ***leɪʃ *ʔilli***   ʔɪnta jɪːt?

         Why that   you   came

         'Why did you come?'   (Al-Momani & Al-Saidat 2010: 627)

The ungrammaticality of the above wh-questions ensues as a result of the occurrence of the particle *ʔilli*. Removing the particle *ʔilli* will render such sentences grammatical. This observation provides evidence that the particle *ʔilli* is not triggered by the movement itself as is claimed; otherwise, the wh-constructions in (7a-c) should have been acceptable. Put differently, if it is the movement of the argument wh-phrases per se that triggers the insertion of the particle *ʔilli*, then what prevents the movement of adjunct wh-phrases from behaving likewise? More generally, Al-Momani & Al-Saidat's analysis does not present anything about the inadmissibility of adjunct wh-phrases in such wh-constructions (see sections 5.5 & 5.6 below for an account for this issue).

To further elaborate, if it is the movement that triggers the insertion of the particle *ʔilli*, we might legitimately wonder why the particle *ʔilli* does not appear as a result of the

movement in typical moved wh-questions (which were analyzed as instances of focus fronting in chapter 3). The following are illustrative examples.

(8)   a. **mɪ:nᵢ** ʔaħmad ʃa:f **øᵢ**?

    Who Ahmad saw

    'Who did Ahmed see?'

    b. **ʃu:ᵢ**   ʔaħmad gara **øᵢ**?

    What   Ahmad read

    'What did Ahmed read?'

    c. **weɪnᵢ**   ʔaħmad ra:ħ **øᵢ**?

    Where Ahmad went

    'Where did Ahmed go?'

    d. **mataᵢ**   ʔɪl walad   bɪdʒɪ **øᵢ**?

    When   the   boy   comes

    'When does the boy come?'

    e. **keɪfᵢ**   dʒɪ:t   hɔ:n **øᵢ**?

    How   came(you, s. m.) here

    'How did you come here?'

    f. **leɪʃᵢ**   ʔɪnta dʒɪ:t **øᵢ**?

    Why   you   came

    'Why did you come?'   (Al-Momani & Al-saidat 2010: 621-627)

Finally, Al-Momani & Al-Saidat's analysis leaves several syntactic aspects of this wh-construction unexplained. For example, besides the inadmissibility of PPs and adverbial/adjunct wh-phrases in *ʔilli*-interrogatives as noted above, the optional question particle and pronominal copula (PRON) are both neglected, and it seems impossible to accommodate these two optional elements in their analysis. Equally important, Al-Momani & Al-Saidat have no explanation as to why it should be the particular lexical item *ʔilli* that appears in this wh-construction.

Based on the above shortcomings, I conclude that in terms of descriptive adequacy, Al-Momani & Al-Saidat's (2010) analysis lacks empirical support. More generally, any analysis involving movement should be reconsidered, as many pieces of evidence go against its application. Despite the sentence-initial position of wh-phrases in this wh-construction, its island insensitivity and its involvement of resumption make any wh-movement analysis susceptible to doubt. In the next section, I present another widely-held analysis for *ʔilli*-interrogatives in Arabic, demonstrating that it also cannot be maintained.

5.3 *ʔilli*-interrogatives in JA are not cleft structures

Along with Cheng's (1991) Clausal Typing Hypothesis (CTH)[4] comes a proposal that is commonly referred to in the literature as the "wh-cleft" analysis, under which "optional wh-fronting" languages do not employ the mechanism of wh-movement for deriving their fronted wh-questions. Rather, Cheng assimilates such fronted interrogative constructions to cleft constructions.

Amongst the optional wh-fronting languages that Cheng (1991) discusses is Egyptian Arabic. She proposes that wh-fronting in Egyptian Arabic is an instance of a reduced cleft construction in the sense of McCloskey (1979). This analysis was triggered by Cheng's observation of a parallelism between wh-fronting and clefts in Egyptian Arabic (EA, henceforward): fronted wh-questions (or *ʔilli*-interrogatives) and cleft sentences in EA share the use of the complementizer *ʔilli* and the resumptive clitic. The following data illustrate Cheng's (1991) observation on EA fronted wh-questions (9) and cleft sentences (10).[5]

(9)　a.　**miin illi**　Mona darabit-**uh**?
　　　　Who that　Mona hit-**him**
　　　　'Who did Mona hit?'

b. **eeh illi** Monaʔarit-**uh**?

   What that Monaread-**it**

   'What did Mona read?'   (Cheng 1991: 54)

(10) dah **Ali illi**Monadarabit-**uh**.

   This **Ali that** Monahit-**him**

   'It is Ali that Mona hit.'   (Cheng 1991: 59)

The above examples show that both *ʔilli*-interrogatives (or "fronted wh-questions" in Cheng's terminology) and cleft structures in EA involve the complementizer *ʔilli* and a resumptive clitic inside the clause. The absence of an expletive pronoun and copular verb from both cleft sentences and *ʔilli*-interrogatives in EA leads Cheng to analyze this construction as a "reduced cleft" structure in the sense of McClosky (1979), as schematized in (11).

(11) [CP [DP **miin**$_i$] [CP OP$_i$ **illi** [IP Mona shaafit-**uh**$_i$]]

              Who   **that** Mona saw-**him**

   'Who did Mona see?'   (Cheng 1991: 64)

According to this analysis, the wh-word in *ʔilli*-interrogatives (or "wh-clefts") in EA is base-generated in its S-structure position as the subject of a predicate clause (but see below); no wh-movement of the wh-word is involved in such wh-constructions at all. The use of *ʔilli*, according to Cheng, is motivated by the presence of a predicate sentence: wh-clefts in EA involve a subject-predicate relationship in which the wh-phrase *miin* 'who' in (11) functions as the syntactic subject of the predicate *illi Mona shaafit-uh* 'that Mona saw him'. Moreover, Cheng's analysis involves the additional assumption that the predicate clause involves an empty/null operator in the Spec of C^0 (i.e., [Spec, *ʔilli*]), which binds the resumptive pronoun inside the predicate clause; this empty operator is co-indexed with the clefted constituent.

Cheng's wh-cleft analysis for *ʔilli*-interrogatives in EA is the first analysis to capture several properties of this wh-construction, such as the subject-predicate relationship involved in such structures as well as the base-generation of the wh-phrase as the syntactic subject of

the predicate clause in the structure. However, the structural representation given by Cheng for this type of wh-question (11 above) does not adequately capture its underlying subject-predicate nature. For example, it is not clear how the wh-word can be a subject as it doesn't appear to be in a structural subject position; rather, it appears as if it were adjoined to CP. More importantly, it is not clear in Cheng's structural representation how the subject-predicate relationship between the wh-phrase and the predicate clause (the *ʔilli*-clause/the CP) is captured; the subject-predicate relationship is not mediated by any functional head in this structure. Such verbless subject-predicate structures in Arabic are copular structures that project Tense and, thus, are TP projections (cf. Jelinek 1981; Bahloul 1993; Benmamoun 2000 & 2008; Aoun et al 2010). I conclude that, although Cheng's analysis does evoke the copular-like property of this wh-construction, it does not represent it correctly. Finally, Cheng's analysis is challenged by the fact that it does not consider the optional appearance of both a pronominal copula (PRON) and a question particle in such wh-interrogatives in EA (see Soltan 2011 & 2012).

It bears mentioning here that the wh-cleft analysis was also adopted by Soltan (2012) for *ʔilli*-interrogatives in EA (or "ex-situ" questions in Soltan's terminology) and by Abdel Razaq (2011) for "wh-clefts" (in his terminology) in different Arabic dialects. These analyses are motivated by the fact that both *ʔilli*-interrogatives and typical clefts consist of an initial nominal element, a pronominal copula and a free relative clause headed by the relative complementizer *ʔilli*. The free relative clause in both constructions can also involve a resumptive clitic coreferrential with the initial nominal element. However, despite these parallels, a more complete comparison of *ʔilli*-interrogatives and typical clefts reveals crucial asymmetries that militate against a shared analysis. In what follows I highlight some of these asymmetries exemplifying with data from JA.

First, while the pronominal copula (PRON) is obligatory in standard cleft constructions in JA (12a), it is not obligatory in *ʔilli*-interrogatives (12b).[6]

(12) a. **ʔil-binit$_i$** *(hiyyeh)   *ʔilli*   iz-zalameh   šaf-**ha$_i$**   ʔimbariH.

   The-girl *(PRON.she) **that** the-man   saw.3MS-**her** yesterday

   'It is the girl that the man saw her yesterday.'

   b. **mi:n$_i$** (hiyyeh)   *ʔilli*   iz-zalameh   šaf-**ha$_i$**   ʔimbariH?

   Who (PRON.she) **that** the-man   saw.3MS-**her** yesterday

   'Who is she such that she is the one that the man saw her yesterday?'

Second, canonical cleft structures in JA are unmarkedly pseudo-cleftable in the sense that the free/headless relative clause, which constitutes the predicate of such structures, can enter into an equational relationship with the subject DP. Notice that the subject DP and relative clause can be reversed in typical cleft sentences; (13a) is the reversed equivalent of (12a). This reveals the equative nature of clefts in Arabic (see also Ouhalla 1999; Abdel Razaq 2011; Soltan 2012) as reversing the two DPs does not affect the propositional content of the structure (see section 5.8 for an account for this syntactic property of cleft sentences). Pseudo-clefts are widely analyzed in the literature as equative copular structures (cf. Higgins 1979; Declerck 1988; Harris & Campbell 1995; Ouhalla 1999; Heycock & Kroch 1999; Paul 2001). Nonetheless, this pseudo-cleftability (or perhaps reversibility) is at best marginal in *ʔilli*-interrogatives in JA (13b). Post-posing the wh-element to the final position of the structure is not acceptable (except under an echo-question reading). The rather marked status of the reversed wh-expression and the free/headless relative clause in this type of construction casts doubt on its equative cleft nature (contra Abdel Razaq 2011 and Soltan 2012). This indicates that *ʔilli*-interrogatives are not equative structures, unlike cleft structures.

(13) a. *ʔilli*   iz-zalameh šaf-ha$_i$ ʔimbariH *(hiyyeh)   ʔil-binit$_i$.

     That   the-man   saw.3MS-her yesterday *(PRON.she) the-girl

     'The one that the man saw her yesterday is the girl.'

   b. ?? *ʔilli* iz-zalameh šaf-ha$_i$ ʔimbariH (hiyyeh)   mi:n$_i$?

      That the-man   saw.3MS-her yesterday (PRON.she) who

    ?? '?? The one that the man saw her yesterday is who?'

A third challenge for the wh-cleft analysis lies in what has been deemed a parallelism between typical clefts and *ʔilli*-interrogatives with respect to the definiteness of their initial DPs. Abdel Razaq (2011) assumes that both constructions are parallel in the sense that they both contain definite DPs in their initial positions. However, this parallelism conceals a significant difference between the two constructions in this regard. Though I am not sure if I agree with Abdel Razaq regarding the definiteness of argument wh-phrases in Arabic, I disagree with his assumption that only definite DPs can undergo clefting in Arabic. It is true that the clefted DP in (12a) above is definite, but this is not the whole story. Both indefinite bare noun phrases (14a) and modified/specified indefinite noun phrases (14b) can undergo clefting in JA (see also Cheng (1991) for a similar observation in EA). Thus, whether argument wh-phrases are definite or indefinite does not warrant a parallelism between the two structures. In other words, the definiteness of the initial argument is not a shared feature between the two constructions as Abdel Razaq assumes.

(14) a. **binit**$_i$ hiyyeh   *ʔilli* iz-zalameh šaf-**ha**$_i$ ʔimbariH.

    Girl PRON.she **that** the-man   saw.3MS-**her** yesterday

    'It is a girl that the man saw her yesterday.'

   b. **binit Taweeleh**$_i$ hiyyeh   *ʔilli* iz-zalameh šaf-**ha**$_i$ ʔimbariH.

    Girl tall.F   PRON.she **that** the-man   saw.3MS-**her** yesterday

    'It is a tall girl that the man saw her yesterday.'

A fourth difference between typical clefts and *ʔilli*-interrogatives has to do with the possibility of co-occurring with adverbs like *ʔakeed* 'certainly', *ʔiHtimal* 'probably' and *momkin* 'possibly'. While clefted arguments can co-occur with such adverbs (15a), *ʔilli*-interrogatives disallow them (15b).

(15) a. **ʔil-binitᵢ ʔakeed**   *(hiyyeh)   ***ʔilli***   iz-zalameh šaf-**haᵢ**   ʔimbariH.
       The-girl certainly   *(PRON.she) **that**   the-man   saw.3MS-**her** yesterday
       'It is certainly the girl that the man saw her yesterday.'

    b. ***mi:nᵢ   ʔakeed**   (hiyyeh)   ***ʔilli***   iz-zalameh šaf-**haᵢ**   ʔimbariH.
       Who   certainly   (PRON.she)   **that**   the-man   saw.3MS-**her** yesterday

A final distinction between typical clefts and *ʔilli*-interrogatives in JA can be drawn from the prosodic pattern associated with each structure. Clefted arguments in Arabic are always marked with a focal stress or pitch accent ("*ʔal-nabra*" using traditional terminology), hence clefts are analyzed as a species of focus constructions (see also Ouhalla 1999). *ʔilli*-interrogatives, by contrast, are not designated with such a focal stress. This prosodic asymmetry calls the cleft reading of this wh-construction (Cheng 1991; Abdel Razaq 2011; Soltan 2012) into question. The fact that no such focal stress or pitch accent is required to mark the wh-phrase in *ʔilli*-interrogatives suggests that such wh-constructions should not be analyzed on a par with cleft structures.

This section has shown that although *ʔilli*-interrogatives in Arabic display a degree of resemblance with cleft structures, especially in terms of the involvement of PRON and the free relative clause, crucial asymmetries prevent a shared analysis. The non-obligatoriness of PRON and the inadmissibility of adverbs are amongst such crucial asymmetries, as well as the absence of the focal stress (or pitch accent) and the marginality of reversing the two DPs in *ʔilli*-interrogatives. I conclude that the wh-cleft analysis of *ʔilli*-interrogatives cannot be maintained and an alternative analysis, other than clefting, is needed. This alternative analysis

is taken up in the next section. (For an analysis of cleft sentences that can capture the above-mentioned symmetries and asymmetries, see section 5.8 below).

5.4   An alternative analysis

In this section, I further evaluate the syntactic properties of *ʔilli*-interrogatives in JA with the aim of identifying the appropriate syntactic mechanisms underlying their derivation.

As illustrated in section 5.1 above, this type of wh-question involves the occurrence of a nominal/argument wh-phrase surfacing initially at the left-most peripheral position of the sentence, followed by a free relative clause (FRC) headed by the relative complementizer *ʔilli* 'that'. There is also a pronominal resumptive clitic inside the free relative clause when object wh-phrases are employed, but no such a resumptive clitic appears with subject wh-phrases. A copula-like pronominal element (PRON), which is homophonous with the third person subject pronoun, is optionally used between the wh-phrase and the free relative clause. This wh-construction can optionally be introduced by the Q-particle *huwweh*, and it disallows adjunct wh-phrases and PPs (see the examples given in (1) above). The linear structure of *ʔilli*-interrogatives can be schematized as follows:

(16)   [(Q-particle) wh-phrase (PRON) FRC]]

It is worth indicating here that there are two types of definite relative clause in Arabic: full/headed relatives and free/headless relatives.[7] Definite full/headed relatives modify an overt lexical DP while definite free/headless relatives modify a null head (cf. Aoun & Choueiri 1997; Alsayed 1998; Shlonsky 2002; Galal 2004; Al-Momani 2010; Abdel Razaq 2011). The recurrent feature of definite relative clauses, whether headed or headless, is the use of the relative complementizer *ʔilli* and, with the exclusion of subject relatives, a resumptive pronoun in the corresponding sentence-internal relativization site of the head DP. Filling the relativized position with a resumptive pronoun co-indexed with the head DP is

obligatory regardless of the overtness of the relativized DP. The following examples illustrate the various positions to which relativized DPs, be they overt or covert, may correspond. Such positions include direct object, indirect object, prepositional object, genitive (possessor) and subject.

(17) **Relativized direct object DP**

    a. sami baas   **ʔil-binit_i** *ʔilli* iz-zalameh šaf-*(**ha_i**).
    Sami kissed.3MS **the-girl**   **that** the-man   saw.3MS-*(**her**)
    'Sami kissed the girl that the man saw.'

    b. sami baas   **pro** *ʔilli* iz-zalameh šaf-*(**ha_i**).
    Sami kissed.3MS **pro** **that** the-man   saw.3MS-*(**her**)
    'Sami kissed the one that the man saw.'

(18) **Relativized indirect object DP**

    a. sami   baas   **ʔil-binit_i** *ʔilli* iz-zalameh ʔa9Ta-*(**ha_i**)   l-ktab.
    Sami   kissed.3MS **the-girl**   **that** the-man   gave.3MS-*(**her**)   the-book
    'Sami kissed the girl that the man gave her the book.'

    b. sami baas   **pro** *ʔilli* iz-zalameh ʔa9Ta-*(**ha_i**)   l-ktab.
    Sami kissed.3MS **pro** **that** the-man   gave.3MS-*(**her**)   the-book
    'Sami kissed the one that the man gave her the book.'

(19) **Relativized prepositional object DP**

    a. sami baas   **ʔil-binit_i** *ʔilli* iz-zalameh wada-l-*(**ha_i**)   l-ktab.
    Sami kissed.3MS **the-girl**   **that** the-man   sent.3MS-to-*(**her**) the-book
    'Sami kissed the girl that the man sent the book to.'

    b. sami baas   **pro** *ʔilli* iz-zalameh wada-l-*(**ha_i**)   -ktab.
    Sami kissed.3MS **pro** **that** the-man   sent.3MS-to-*(**her**) the-book
    'Sami kissed the one that the man sent the book to.'

(20) **Relativized genitive/possessor DP**

    a. sami baas   **ʔil-binit$_i$**   *ʔilli* ktab-*(**ha$_i$**)   nsarag.

       Sami kissed.3MS   **the-girl**   **that** book-*(**her**) was.stolen

       'Sami kissed the girl whose book was stolen.'

    b. sami baas   **pro** *ʔilli* ktab-*(**ha$_i$**)   nsarag.

       Sami kissed.3MS   **pro** **that** book-*(**her**) was.stolen

       'Sami kissed the one whose book was stolen.'

(21) **Relativized subject DP**

    a. sami baas   **ʔil-binit** *ʔilli* (***hiyyeh**) kasrat   iš-šubbak.

       Sami kissed.3MS **the-girl that** (***she**)   broke.3FS the-window

       'Sami kissed the girl that broke the window.'

    b. sami baas   **pro** *ʔilli* (***hiyyeh**) kasrat   iš-šubbak.

       Sami kissed.3MS **pro** **that** (***she**)   broke.3FS the-window

   'Sami kissed the one that broke the window.'

The head of the full relative clauses in the above (a) examples is the definite noun 'the girl', which is an overt lexical DP. The head of the free relative clauses in the (b) examples, on the other hand, is empty (i.e., a null pro). Such relatives are referred to as free/headless relatives because they start with the relative complementizer *ʔilli* right away without being preceded by an antecedent head DP (Al-Momani 2010). The null pro head characterization is traced back to earlier works on relative clauses (cf. Chomsky 1973; Groos & van Riemsdijk 1981; Suffer 1984; Borer 1984; Grosu 1989; Harbert 1992).

    The first observation that can be inferred from the above paradigm is that the relative complementizer *ʔilli* is a sure sign of both full and free relative clauses, regardless of the relativization site (see also endnote 1). The above paradigm also shows that direct object relatives, indirect object relatives, prepositional object relatives and genitive relatives invariably involve an obligatory resumptive clitic, whether the noun head DP is overt or

covert. In all these cases, the relativized DP is always co-indexed with a resumptive clitic occurring in its corresponding sentence-internal site. This resumptive clitic is suffixed to the preceding head (verb, preposition or noun). It also carries number and gender features that match those on the head of the relative clause, whether an overt lexical DP (in the case of full relatives) or a null DP (in the case of free relatives). However, this resumptive element is disallowed in the relativization site of subject DPs in both full and free relatives (see also Shlonsky 2002; Al-Momani 2010). The ban on resumptive pronouns in the subject position is ascribed to McCloskey's (1990) Highest Subject Restriction which prohibits the occurrence of a resumptive pronoun in the highest subject position inside the relative clause (Shlonsky 2002).

This presentation clearly shows that definite full relatives and free relatives share the same syntactic properties: they both invariably involve the relative complementizer *ʔilli* 'that' and display the same resumption characteristics in different relativization contexts. The only difference between definite full relative clauses and free relative clauses is reduced to the covertness of the latter's antecedent DP. While definite full relatives modify an overt lexical head DP, free relatives modify a null DP head (i.e., a null pronominal head/pro). Accordingly, headless/free relatives are analyzed in the literature on Arabic syntax as definite relative clauses (cf. Aoun & Choueiri 1997; Alsayed 1998; Shlonsky 2002; Galal 2004; Al-Momani 2010; Abdel Razaq 2011).

Worth mentioning also is the fact that most studies on Arabic relatives adopt a DP analysis for both full and free relative clauses (cf. Ouhalla 1999 & 2004; Shlonsky 2002; Galal 2004; Aoun et al 2010; Al-Momani 2010; Abdel Razaq 2011). The following structure represents the derivation of free relatives in Arabic (Shlonsky 2002).

(22)

DP

DP   CP

pro   DP   C'

Op_i C   IP

ʔilli
that

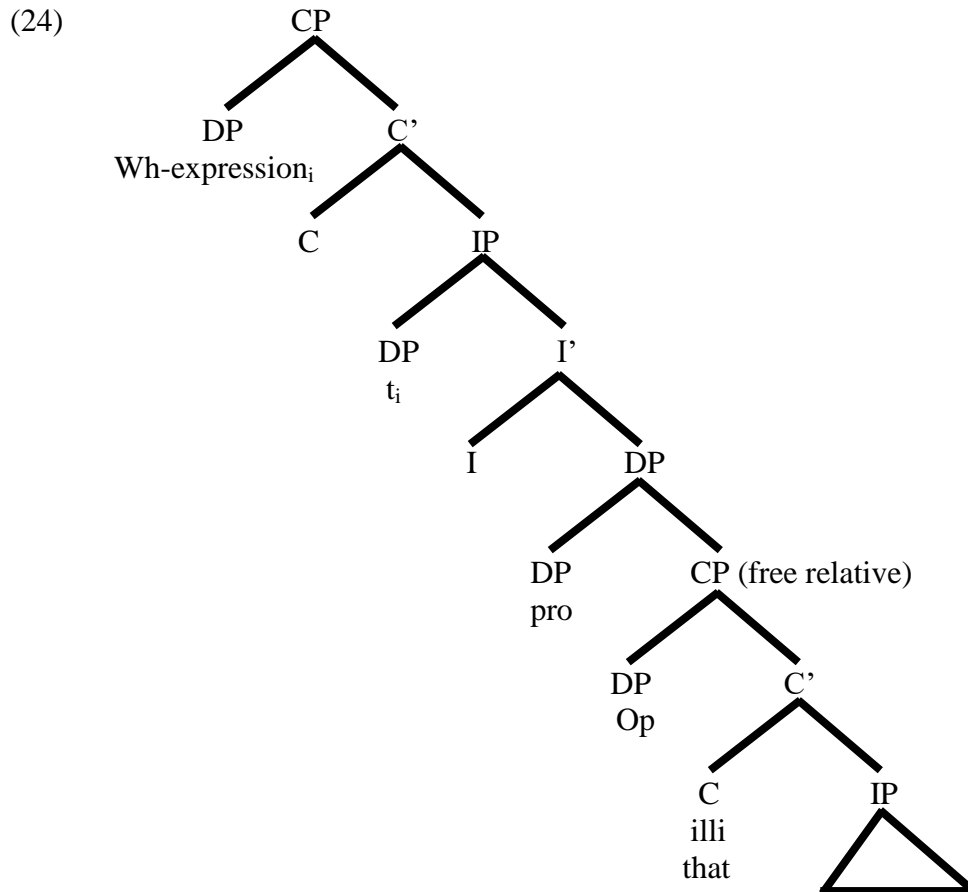iz-zalameh šaf-ha$_i$
the-man   saw.3MS-her
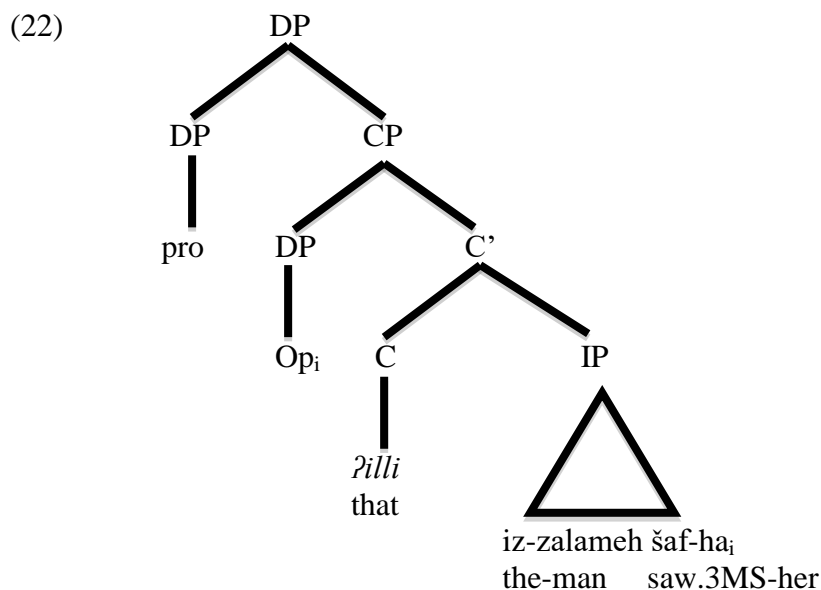
The DP analysis advanced for free relatives in Arabic receives empirical support from the properties and contextual distribution such relative clauses share with DPs. Free/headless relative clauses, though lacking an overt head noun, have the semantics of a nominal argument (see also Harris & Campbell 1995; Ouhalla 1999; Paul 2001). I am adopting the DP analysis for free relative clauses in Arabic throughout my study because this analysis has been defended in various works and there is abundant evidence that it is on the right track. I will analyze the free relative/*ʔilli*-clause involved in *ʔilli*-interrogatives as a DP. Based on this DP analysis of *ʔilli*-clauses/free relative clauses, the structure of this type of wh-question can be revised as follows (cf. (16) above):

(23)   [(Q-particle) DP (PRON) DP]

In brief, the above schema shows that the structure of *ʔilli*-interrogatives consists of two DPs linked by an optional pronominal copula (PRON). The post-PRON DP is a free/headless relative while the pre-PRON DP is a wh-element. The optional pronominal copula (PRON) is a pronominal element homophonous with the third person strong subject pronoun. This pronominal copula agrees in number and gender with the pronominal clitic inside the free relative clause in the case of having an object wh-phrase; it matches the agreement features

on the verb when a subject wh-phrase is employed. This pronominal element is conventionally referred to in the literature as "pronominal copula" or "PRON" because it can realize a copula function in present-tense copular equative structures in Arabic and Hebrew. The nature and distribution of this pronominal copula-like element, however, has never been an easy task in the field of Arabic and Hebrew syntax. There is much controversy on the status of this element due to its verbal-nominal properties in equational structures in both Arabic and Hebrew (see, e.g., Berman & Grosu 1976; Doron 1983 & 1986; Eid 1983, 1991 & 1992; Rapoport 1987; Dechaine 1993; Rothstein 1995; Ouhalla 1999; Shlonsky 2002; Edwards 2006). For example, Eid (1983 & 1991) analyzes this pronominal element as a predicate, specifically, a suppletive form of copula. Cowell (1964) and Brustad (2000) consider it a quasi-verb. Doron (1986) construes this pronominal element in Hebrew equational structures as the phonetic realization of agreement features in INFL.

Before spelling out my proposed analysis for the schema given In (23) above, I will briefly highlight Shlonsky's (2002) analysis of ʔilli wh-questions in Palestinian Arabic ("Class II" in his terminology) due to its connection to the discussion. Shlonsky (2002) proposes that such questions are copular structures in which the wh-phrase is base-generated as a clausal subject in [Spec, IP] and that the free relative clause is a complement of I functioning as a nominal predicate DP of the subject wh-expression. As for the pronominal copula (Pron) in the structure, Shlonsky (2002), following Doron's (1983) analysis for the pronominal copula in Hebrew, argues that it is the phonetic realization of agreement features (Agr) in I(NFL). He further argues that the wh-phrase undergoes overt wh-movement from [Spec, IP] to [Spec, CP]. Shlonsky (2002) assigns the following structure for "class II" questions in Palestinian Arabic.

(24)

```
                    CP
                   /  \
                 DP    C'
          Wh-expression_i  / \
                         C    IP
                            /  \
                          DP    I'
                          t_i   / \
                              I    DP
                                  /  \
                                DP    CP (free relative)
                                pro   /  \
                                    DP    C'
                                    Op    / \
                                        C    IP
                                       illi  /\
                                       that /__\
```

However, this analysis suffers from a number of problems. The first problem in this analysis

is related to the assumption that the free relative clause is merged as a complement of I.

Recall from the previous chapter that Baker (2003), based on the universal definition of

different lexical categories, argues that while verbs take subjects directly, nouns and

adjectives do not. Subjects of non-verbal predications are not real arguments. They are not

generated inside the nominal or adjectival projection, hence cannot be assigned thematic roles

in the lexical domain. Since non-verbal predicates (such as the nominal free relative clause in

this case) are not theta markers (Baker 2003: 43), the subject wh-phrase is left un-theta-

marked under Shlonsky's analysis. To avoid this problem, I will employ Baker's (2003)

PredP analysis (see also Bowers 1993) where I assume that there is a Pred head dominating

the nonverbal predicate and takes care of the assignment of thematic role to its subject (see

section 5.5 below).

Another problem of Shlonsky's (2002) analysis is the application of overt wh-movement from [Spec, IP] to [Spec, CP]. One thing to start with is that this movement of the wh-phrase from a peripheral position to another peripheral position does not receive any empirical support as it does not lead to any tangible change of the linear word order of the whole structure. Second, the rationale of this movement is not viable as well. It is based on the putative assumption that Palestinian Arabic, similar to English, is a wh-movement language where wh-expressions must appear in Comp at S-structure. Palestinian Arabic, unlike English, however, employs the in-situ strategy as a major and productive mechanism for forming wh-questions (see Abu-Jarad 2008 for a discussion of in-situ questions in Palestinian Arabic). Accordingly, Shlonsky's assumption that Palestinian Arabic is a wh-movement language like English is at best ambiguous. Third, this analysis contradicts the non-movement hallmarks manifested by this wh-construction, i.e., the insensitivity to islands as well as the occurrence of a resumptive pronoun. Fourth, recall from the previous chapter that subject wh-phrases in English do not involve overt wh-movement to [Spec, CP] according to the Vacuous Movement hypothesis (Chomsky 1986). In light of the recognition of this Palestinian wh-construction as a copular subject-predicate structure, it is not clear how positing an overt wh-movement of the subject wh-phrase to [Spec, CP] in this wh-construction makes Palestinian Arabic similar to English as Shlonsky assumes. Finally, additional empirical evidence related to embedded contexts and to the possibility of having a question particle in this wh-question will be adduced in the next section to further counter any wh-movement of this type.

The last, and perhaps the most crucial, problem in Shlonsky's analysis is related to construing PRON as the phonetic realization of agreement under INFL, thus echoing the analysis of PRON proposed by Doron (1986) who provides arguments based on evidence from Hebrew that PRON is an agreement clitic situated in INFL. The characterization of

PRON in Arabic as the phonetic realization of agreement in INFL is, however, problematic on both theoretical and empirical grounds. For one thing, this analysis contradicts the nature of the whole structure; *ʔilli*-interrogatives are verbless copular subject-predicate structures (Cheng 1991; Shlonsky 2002; Aoun et al 2010; Abdel Razaq 2011). It is not clear why this subject-verb agreement should manifest in a verbless sentence. More importantly, subject-verb agreement is invariably obligatory in Arabic; no case can be attested in Arabic where the subject-verb agreement feature/inflection is optional. Finally, the optionality of this pronominal element, whether it is an agreement feature or not, is not addressed in Shlonsky's (2002) analysis. What prompts the spell-out of this agreement feature and what intercepts it remain a mystery.

It is worth mentioning here that Shlonsky's (2002) analysis was replicated in the analysis of similar wh-constructions in Lebanese and Standard Arabic by Aoun et al (2010). Thus, all the above-mentioned problems also apply to Aoun et al's (2010) analysis. Shlonsky's (2002) analysis was also adopted by Abdel Razaq (2011) for "PRON-less wh-clefts" in different Arabic dialects. However, Abdel Razaq (2011) differs from Shlonsky (2002) in that he takes the pronominal copula to be a subject pronoun whose presence versus absence corresponds to two different constructions. Thus, the same problems for Shlonsky's analysis that were outlined above, with the exclusion of the treatment of PRON as an agreement feature, also apply to Abdel Razaq's (2011) analysis. Although Abdel Razaq's (2011) analysis of "PRON-less wh-clefts" is still a cleft analysis, he considers both typical clefts lacking PRON and wh-clefts lacking PRON simple subject-predicate structures (see section 5.7.4.2 ahead; see also endnotes 6 and 13).

Despite the above-mentioned technical problems in these three analyses, it should be acknowledged that the insights embodied in them are particularly illuminating and thus will be adopted in my analysis of *ʔilli*-interrogatives in JA, though with certain modifications to

avoid the aforementioned drawbacks. For example, the verbless copular nature of this wh-construction and the DP analysis of the free relative clause, which are shared by these three analyses, will still form the backbone of my alternative analysis. Moreover, the apparent optionality as well as the true pronominal nature of PRON will be adopted from Abdel Razaq's (2011) analysis. However, several assumptions in these analyses will be rejected on both theoretical and empirical grounds, as will be shown in detail in the course of discussion in the remainder of the chapter. Such assumptions include the following: (i) the wh-phrase is base-generated in [Spec, TP] and the free relative clause DP is merged as the complement of the head T (shared by the three analyses); (ii) the wh-phrase undergoes overt wh-movement from [Spec, TP] to [Spec, CP] (also shared by the three analyses); (iii) the characterization of [Spec, TP] as an A'-position (Abdel Razaq 2011); (iv) the characterization of PRON as an agreement feature under INFL (Shlonsky 2002; Aoun et al 2010); (v) the assumption that this wh-construction forms another type of resumptive strategy (Aoun et al 2010); (vi) the assumption that *ʔilli*-interrogatives are equative cleft structures (Abdel Razaq 2011); and (vii) the assumption that PRON is not obligatory in typical cleft sentences (Abdel Razaq 2011).[8]

Turning back to PRON, Soltan (2012) in his wh-cleft analysis of EA analyzes PRON as a copula that occurs in a projection he refers to as CopulaP. It is not clear under Soltan's analysis, however, why a subject pronoun such as PRON should have a copula role and why this copula role is optional in a cleft structure. Equally important, Soltan provides no explanation as to why it is PRON in particular that appears in such (wh-)cleft structures. Neither Shlonsky's (2002) nor Soltan's (2012) characterization of this pronominal element in *ʔilli*-interrogatives receives any independent support. Therefore, I abandon the treatment of this pronominal element as an agreement feature in INFL (Shlonsky 2002; Aoun et al 2010) or a copula (Soltan 2012). Alternatively, following the steps of Edwards (2006) in his analysis of equative structures in Egyptian Arabic and Abdel Razaq (2011) in his analysis of

wh-clefts in different Arabic dialects, I will analyze this pronominal element as what it appears on the surface to be, namely, a subject pronoun.

Adopting the view that PRON is a subject pronoun, I turn now back to the schema in (23). Although the subtle contrast between *ʔilli*-interrogatives with and without PRON seems not to have any obvious connection to the derivation of such structures, closer inspection of the internal relations involved in the two structures does suggest that there is a structural difference between them. A diagnosis that starts with the assumption that PRON is not optional in the traditional sense directly gives us immediate leverage on this conjecture. I will show that the same analysis, or perhaps approach, developed in chapter 3 for wh-questions with and without a clause-internal pronominal clitic can account for the case at hand as well.

As a point of departure, I will assume that the presence of a pronominal element (PRON) coreferential with a left-peripheral constituent is indicative of subject left-dislocation (cf. Edwards 2006; Abdel Razaq 2011).[9] Accordingly, I propose that *ʔilli*-interrogatives with PRON instantiate a subject left-dislocation structure, whereas the absence of PRON is indicative of a typical subject-predicate structure of the type discussed in the previous chapter, hence the optionality of Pron is illusory. The alternative analysis thus invites two major notions in the syntax of Arabic that have already been dealt with in the previous chapters: (i) The notion of verbless/copular subject-predicate constructions discussed in chapter 4 (Benmamoun 2000 & 2008; Baker 2003; Aoun et al 2010), and (ii) the notion of the left-periphery discussed in chapter 3 (Rizzi 1997; Shlonsky 2000; Aoun et al 2010).

It will be shown that the illusory optionality of PRON, as well as the other syntactic aspects of *ʔilli*-interrogatives, can be best captured adopting these two notions. More precisely, I posit that *ʔilli*-interrogatives lacking PRON are derived from a verbless subject-predicate construction of the type discussed in the previous chapter, and, thus, instantiate the format [DP DP]. The initial DP (i.e., the wh-phrase) serves as the subject and the free relative

clause DP functions as the predicate. On the other hand, *ʔilli*-interrogatives involving PRON are cases of subject left-dislocation structures giving rise to what is known as topic-comment structures discussed in chapter 3. The wh-DP forms the topic part of such structures, while the PRON and the free relative clause DP form the comment part of the structure. Under this subject left-dislocation analysis, PRON is a resumptive subject pronoun associated with a left-dislocated subject (cf. Edwards 2006; Abdel Razaq 2011).[10] Thus, I assume that this pronominal element surfaces in the TP-internal position of the left-dislocated subject, i.e., in [Spec, TP]. Simultaneously, being a subject pronoun, it functions as the subject of the comment part of the structure. Such an analysis is congruent with what this pronominal element appears to be, i.e., a resumptive subject pronoun (Edwards 2006; Abdel Razaq 2011), rather than an agreement feature (contra Shlonsky 2002; Aoun et al 2010) or a copula (contra Soltan 2012).

A major upshot of this overall characterization is that we will end up having either an interrogative CP dominating a regular TP when PRON is absent, or an interrogative CP dominating a TopP when PRON is involved. The rest of this chapter is devoted to fleshing out this proposal and showing how it explains the various syntactic properties.

5.5 *ʔilli*-interrogatives without PRON are verbless/copular subject-predicate structures

Recall from the previous chapter that JA, similar to other Arabic varieties, makes a productive use of non-verbal/verbless copular structures in the present tense (see also Bakir 1980; Jelinek 1981; Eid 1983, 1991 & 1992; Farghal 1986; Fassi-Fehri 1993; Bahloul 1993; Shlonsky 1997 & 2002; Benmamoun 2000 & 2008; Al-Horais 2006; Edwards 2006; Aoun et al 2010; Abdel Razaq 2011). It was shown that such sentences consist of a definite nominal argument DP, functioning as the subject of predication, followed immediately by a non-

verbal predicate, which can be a noun phrase, an adjective phrase or a prepositional phrase, as illustrated in the following examples.

(25) a. hiyyeh   momaθileh/ʔil-momaθileh.
      She   actress/the-actress
    'She is an actress/the actress.'

    b. hiyyeh   mašGoleh.
      She   busy.F
     'She is busy.'

    c. hiyyeh   bi-l-mostašfa.
      She   in-the-hospital
     'She is in the hospital.'

It was also shown in the previous chapter that such verbless copular sentences are not restricted to lexical DPs. For instance, a nominal wh-phrase can serve as the subject of such verbless sentences giving rise to what was referred to as verbless copular wh-questions (26a & b). It remains to be added at this juncture that these verbless copular structures are not restricted to simple lexical predicate DPs as well. More complex DPs such as free relative clauses of the type discussed in the previous section can appear in such structures (26c).

(26) a. mi:n   ʔil-momaθileh?
      Who   the-actress
    'Who is the actress?'

    b. eiš   ʔil-muškeleh?
      What the-problem
     'What is the problem?'

    c. hiyyeh   *ʔilli*   iz-zalameh šaf-ha.
      She   that   the-man   saw.3MS-her
     'She is the one that the man saw.'

The above set of data show that a recurrent pattern of such verbless sentences consists of two consecutive DPs without any verbal copula. The first DP, whether lexical or interrogative, serves as the subject of the verbless structure and the second DP, whether simple or complex, serves as its predicate.

Bearing in mind the DP analysis of free relative clauses in Arabic (Ouhalla 1999 & 2004; Shlonsky 2002; Galal 2004; Aoun et al 2010; Al-Momani 2010; Abdel Razaq 2011), the absence of PRON from *ʔilli*-interrogatives results in a complete structural resemblance with such verbless subject-predicate sentences in the sense that we will end up having two consecutive DPs without a verbal copula. The first DP (i.e., the wh-phrase) represents the subject of this construction, and the free relative clause DP forms its predicate. The difference between the two constructions reduces to the nature of the two DPs of which each construction is comprised. While the subject DP in non-wh verbless copular constructions is a lexical one, it is a wh-argument DP in *ʔilli*-interrogatives lacking PRON. Likewise, the predicate DP is a simple lexical DP in non-wh verbless copular structures, but a more complex (i.e., a free relative) DP in *ʔilli*-interrogatives lacking PRON. The following examples further illustrate this generalization.

(27) a. (huwweh) [DP mi:n [DP *ʔilli* šafat iz-zalameh ʔimbariH]]?

       Q [who [that saw.3FS the-man yesterday]]

       'Who is it that she saw the man yesterday?'

   b. (huwweh) [DP **eiš** [DP ***ʔilli*** Saar ʔimbariH]]?

       Q [**what** [**that** happened.3S yesterday]]

       'What is it that happened yesterday?'

   c. (huwweh) [DP mi:n$_i$ [DP *ʔilli* iz-zalameh šaf-ha$_i$ ʔimbariH]]?

       Q [who [that the-man saw.3MS-her yesterday]]

       'Who is it that the man saw her yesterday?'

d. (huwweh) [DP ʔayya binit$_i$ [DP ʔilli iz-zalameh šaf-ha$_i$ ʔimbariH]]?

    Q   [which girl   [that the-man   saw.3MS-her   yesterday]]

    'Which girl is it that the man saw her yesterday?'

e. (huwweh) [DP eiš$_i$ [DP ʔilli iz-zalameh ištar-ah$_i$ ʔimbariH]]?

    Q   [what [that the-man   bought.3MS-it   yesterday]]

    'What is it that the man bought it yesterday?'

Accordingly, I propose that *ʔilli*-interrogatives lacking PRON represent a verbless subject-predicate structure and, thus, receive a similar treatment of that advanced for verbless wh-questions in the previous chapter. Adopting the blended analysis of verbless sentences in Arabic, which was advanced building on both Benmamoun's (2000, 2008) and Baker's (2003) analyses, I assume that the wh-expression DP is first-merged in [Spec, PredP] as the syntactic subject of this verbless structure and the nominal free relative clause predicate DP, being the syntactic predicate of this verbless structure, is merged as a complement of the head Pred. After that, the subject wh-phrase undergoes movement to [Spec, TP] to satisfy the EPP of T. The following abstract syntactic representations can, thus, be given for the underlying structure(s) of *ʔilli*-interrogatives lacking PRON.

(28)   a. **Subject wh-phrases in *ʔilli*-interrogatives lacking PRON**

    [TP wh-phrase$_i$ T [PredP t$_i$ Pred [DP pro [CP *ʔilli* [TP …]]]]]

    b. **Object wh-phrases in *ʔilli*-interrogatives lacking PRON**

    [TP wh-phrase$_i$ T [PredP t$_i$ Pred [DP pro [CP *ʔilli* [TP … resumptive clitic$_i$ …]]]]]

The above representations show that while there is an obligatory resumptive clitic with object wh-phrases, there is no such resumptive clitic with subject wh-phrases. This observation can be straightforwardly explained in light of the fact that the *ʔilli*-clause found in *ʔilli*-interrogatives is a freee relative clause. Recall from the previous section that definite free relatives modify a null head, which can be a subject or object. Filling the relativized position

with a resumptive clitic co-indexed with the null head DP is obligatory in the case of relativizing objects, but such a resumptive pronoun is banned in the case of relativizing subjects. More precisely, when the relativized null DP is a direct object, it is always co-indexed with a resumptive clitic occurring in its corresponding sentence-internal site. However, this resumptive element is disallowed in the relativization site of subject DPs in free relatives (see also Shlonsky 2002; Al-Momani 2010). The ban on resumptive pronouns in the subject position is ascribed to McCloskey's (1990) Highest Subject Restriction which prohibits the occurrence of a resumptive pronoun in the highest subject position inside the relative clause (Shlonsky 2002). Thus, it can be said that the presence or absence of resumption in this wh-construction has nothing to do with any interrogative strategy (contra Aoun et al 2010); rather, resumption is a side-effect of the characteristics of the free relative clause involved in this wh-construction. This analysis also accounts for the occurrence of the relative complementizer *ʔilli* in a principled manner; the relative complementizer *ʔilli* is a sure sign of free relative clauses as well, regardless of the relativization site (see also endnote 1).

Adopting the unselective binding analysis (Pesetsky 1987), the [+wh] feature of the head C in this wh-construction is checked by a null interrogative operator, which in turn binds the syntactic subject wh-element in [Spec, TP]. The S-structure(s) of *ʔilli*-interrogatives lacking PRON in JA can be represented as follows:

(29) a. **Subject wh-phrases in *ʔilli*-interrogatives lacking PRON**

[CP Op$_i$/*huwweh$_i$* [TP wh-phrase$_i$ T [PredP t$_i$ Pred [DP pro [CP *ʔilli* [TP …]]]]

   b. **Object wh-phrases in *ʔilli*-interrogatives lacking PRON**

[CP Op$_i$/*huwweh$_i$* [TP wh-phrase$_i$ T [PredP t$_i$ Pred [DP pro [CP *ʔilli* [TP … resumptive clitic$_i$ …]]]]

The derivation of the wh-questions in (27a) and (27b) above would then look like that in (30a) and (30b) respectively:

(30) a. **Derivation of the wh-question in (27a)**

[CP Op$_i$/*huwweh$_i$* [TP mi:n$_i$ [PredP t$_i$ [DP pro [CP *ʔilli* [TP šafat iz-zalameh ʔimbariH]]]]]

b. **Derivation of the wh-question in (27b)**

[CP Op$_i$/*huwweh$_i$* [TP mi:n$_i$ [PredP t$_i$ [DP pro [CP *ʔilli* [TP iz-zalameh šaf-ha$_i$ ʔimbariH]]]]]

Granting this analysis, the derivation of *ʔilli*-interrogatives lacking PRON can be diagrammatically represented as follows:

(31) a. (huwweh) **mi:n$_i$ *ʔilli*** iz-zalameh šaf-**ha$_i$** ʔimbariH?
    Q   **who that** the-man   saw.3MS-**her** yesterday
    'Who is it that the man saw her yesterday?'

b.

```
                    CP
                   /  \
               Spec    C'
                      /  \
                     C    TP
                     |   /  \
          huwweh/OP_i  DP    T'
                       |    /  \
                    Mi:n_i  T    PredP
                    Who  [+D,+Pres.]  / \
                                    DP   Pred' <Th>
                                    t_i    /  \
                                        Pred   DP
                                              /  \
                                            pro    CP
                                                  /  \
                                                DP    C'
                                                |    /  \
                                               Op_i  C    TP
                                                     |    △
```

Ɂilli   iz-zalameh šaf-ha_i ɁimbariH?

That   The-man saw-her yesterday?
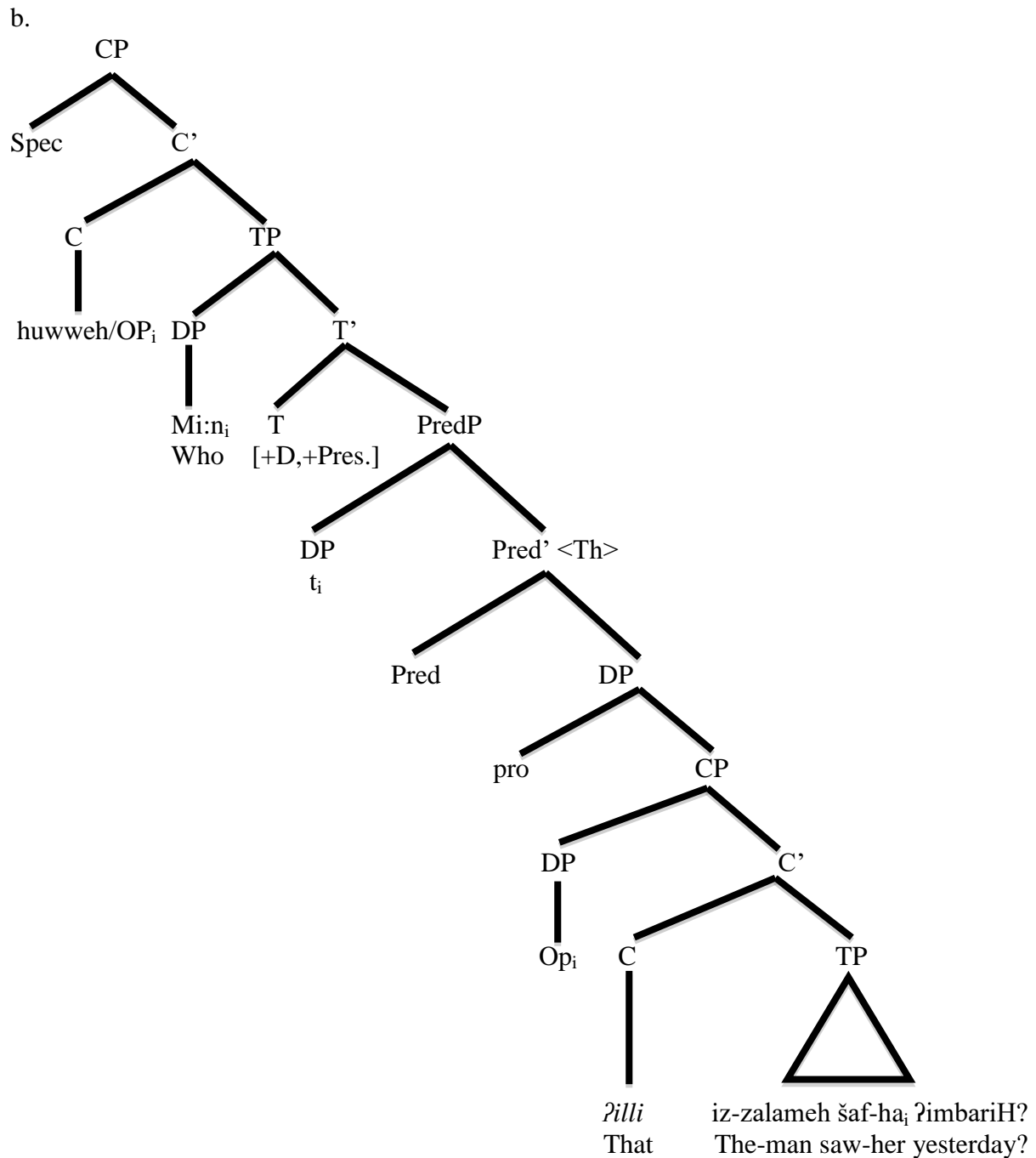
According to the structure I am proposing, there must be a null Pred dominating the nominal free relative predicate (cf. Baker 2003). The subject wh-phrase originates outside the free relative predicate DP as the syntactic subject of a verbless structure (i.e., in the specifier of the silent functional category Pred, where it is assigned its thematic role). After that, it moves to [Spec, TP] to satisfy the [+D] feature of T and to get case assignment. Notice that the head T has the nominal feature [+D] and the abstract tense [+Present] feature (cf. Benmamoun

2000, 2008; Aoun et al 2010). This is ascribed to the fact that verbless subject-predicate structures in Arabic have present-tense interpretation (op. cit.). Notice also that the free relative clause involved in this type of wh-question is a definite free/headless relative clause modifying a null/empty pro.[11] The DP analysis of free/headless relative clauses in Arabic involves the additional assumption that the position of [Spec, *ʔilli*] of the lower CP is filled by a null operator that binds the clause-internal resumptive clitic (see also Cheng 1991; Shlonsky 2002; Al-Momani 2010).

This analysis can adequately capture the syntactic properties of this wh-construction. The structure's island-insensitivity is already met by adopting the unselective binding approach. The presence of the resumptive clitic in the case of employing object wh-phrases versus its absence in the case of employing subject wh-phrases is accounted for by virtue of the characteristics of the free relative clause itself with respect to resumption: the relativization site determines whether a resumptive pronominal element is allowed inside the relative clause or not (see section 5.4 and the discussion therein). The clause-initiality of the wh-phrase is the result of being the syntactic subject in a verbless copular structure. The question particle *huwweh* is the overt lexicalization of the null interrogative operator in C (cf. Baker 1970; Soltan 2011). Finally, adopting the notion of verbless subject-predicate structures (Benmamoun 2000, 2008; Baker 2003; Aoun et al 2010) provides a straightforward explanation of the inadmissibility of adverbial wh-phrases (32a) and PPs (32b) in this wh-construction, which was not addressed in Al-Momani & Al-Saidat's (2010) analysis, as well as in that of Wahba (1984) and El-Touny (2011) for Egyptian Arabic.

(32) a. *[(huwweh)   **ʔeimta$_i$** *ʔilli* iz-zalameh šaf-**uh$_i$**   maha?]
        Q   **when**   **that** the-man   saw.3MS-**it** Maha
        'When did the man see Maha?'

b. *[(huwweh) **la-mi:n_i** *ʔilli* iz-zalameh ʔa9Ta-**uh_i** ʔil-maSari?]

    Q   **to-who**   **that** the-man   gave.3MS-**it**   the-money

    'To whom did the man give the money?'

The inadmissibility of adjunct wh-phrases and PPs in *ʔilli*-interrogatives follows naturally from the underlying subject-predicate structure of this wh-construction. Adverbials and PPs cannot function as a subject in general; only nominal arguments can function as a subject in Arabic (see also Eid 1983, 1991 & 1992; Bahloul 1993; Fassi-Fehri 1993; Benmamoun 2000; Shlonsky 2002; Al-Horais 2006; Soltan 2007; Aoun et al 2010). Thus, it naturally follows that adjunct wh-phrases and PPs do not occur in this type of wh-question.

Further evidence in support of the verbless subject-predicate analysis of this wh-construction comes from the unacceptability of reversing the wh-phrase DP and the free relative clause DP. The only admissible word order in verbless copular structures such as those given in (25) above is the subject-predicate word order whereby the subject is occurring clause-initially before the non-verbal predicate (see also Lassadi 2005; Gad 2011). Reversing the subject and the predicate in such verbless copular structures yields ungrammaticality as this will give rise to a word order never attested in the language, namely, predicate-subject word order. Likewise, reversing the wh-subject DP and the free relative clause DP in the wh-questions given in (27) above is unacceptable (cf. (13b) above). Reversing the two DPs in such wh-questions is acceptable only under an echo-question reading but not under a typical wh-question reading. This further supports my rejection of the cleft analysis for *ʔilli*-interrogatives (Cheng 1991; Abdel Razaq 2011; Soltan 2012) because reversing the two DPs in typical cleft sentences is fully acceptable (cf. (13a) above; see section 5.8 for an account for this property of typical cleft sentences). This also casts further doubt on the equative nature of *ʔilli*-interrogatives (Abdel Razaq 2011).

It remains to be acknowledged at this point that my analysis of *ʔilli*-interrogatives is similar in its essence to that of Shlonsky (2002), Aoun et al (2010) and Abdel Razaq (2011). All these analyses, for example, essentially consider this wh-construction a verbless copular structure and construe the free relative clause involved in this construction as a DP. However, although we all share these two features, my analysis differs from these three analyses in four ways (cf. (24) above). First, I reject the wh-movement from [Spec, TP] to [Spec, CP] because this wh-movement has no evidence: this wh-movement contradicts the island insensitivity of *ʔilli*-interrogatives, and it contradicts the possibility of having a question particle in this wh-construction as well as other observations related to embedded contexts (which will be discussed later in section 5.7.4.2). Second, I reject the assumption that the subject wh-phrase is base-generated in [Spec, TP]. It is not clear why the subject should be base-generated in this position and not instead first-merged in the lexical domain. Third, I reject the assumption that the free relative clause predicate DP is merged as a complement of T as this leaves the subject wh-phrase un-theta-marked (in the sense of Baker 2003), thus I adopt the PredP framework. Fourth, all these analyses neglect the optional question particle that can introduce this wh-construction. My analysis, however, captures this question particle and provides a principled account for its occurrence in the structure.

I also reject Aoun et al's (2010) assumption that *ʔilli*-interrogatives form another type of resumptive wh-questions. It was shown that resumption is not an interrogative strategy in its own. Resumption in *ʔilli*-interrogatives is just an epiphenomenon of the relative clause involved in the structure. Evidence for my analysis comes from the fact that resumption is not involved in *ʔilli*-interrogatives when subject wh-phrases are employed, which means that resumption is not an interrogative strategy as Aoun et al (2010) assume. Otherwise, the lack of resumptive clitics in the context of subject wh-phrases will remain a mystery. As for Abdel Razaq's (2011) analysis, I also reject his assumption that [Spec, TP] is an A'-position. It is

not clear how and why this position in a verbless copular construction should be an A'-position, and why the subject wh-phrase should be base-generated in this A'-position (see also section 5.7.4.2 below for more on this issue). I also reject his assumption that this verbless copular wh-construction is an equative cleft structure. This assumption does not receive any empirical support as is evident by the unacceptability of reversing the two DPs in *ʔilli*-interrogatives as opposed to the acceptability of reversing the two DPs in standard clefts, and by the non-obligatoriness of PRON in *ʔilli*-interrogatives versus its obligatoriness in typical cleft sentences, which, among other things already discussed in section 5.3 above, contradict the wh-cleft analysis in general and the equative cleft nature of *ʔilli*-interrogatives in particular (but see endnotes 6 and 13). In a nutshell, though my analysis shares some features with these analyses, I take issues with many of the technical details.

To recap this section, based on the structural parallelism between *ʔilli*-interrogatives lacking PRON and typical subject-predicate clauses in the language, this wh-interrogative construction is construed as an underlyingly subject-predicate structure. The island-insensitivity of this wh-question, as well as its involvement of resumption, were taken as robust evidence to reject the application of wh-movement to [Spec, CP] (contra Al-Momani & Al-Saidat 2010; Shlonsky 2002; Aoun et al 2010; Abdel Razaq 2011). Alternatively, unselective binding in the sense of Pesetsky (1987) is adopted. It was shown that such an analysis can explain the different syntactic properties of this wh-construction. In the next section, I advance another proposal that can capture the different properties of *ʔilli*-interrogatives when involving PRON.

5.6   *ʔilli*-interrogatives involving PRON are topic-comment structures

In this section, I put forward my proposed analysis for *ʔilli*-interrogatives involving the pronominal copula (PRON) in JA as a topic-comment structure on a par with CLLD wh-

questions discussed in chapter 3. This proposal is triggered by the striking resemblance between *ʔilli*-interrogatives involving PRON and clitic-left dislocation (CLLD) structures in the language (see section 3.4.1 for a detailed discussion of this phenomenon). The analysis suggested by this similarity would be to subsume *ʔilli*-interrogatives involving PRON under CLLD wh-questions. The only difference between the two types of wh-question boils down to the constituent being left-dislocated and the form of the pronominal element that resumes the left-dislocated constituent. Recall from chapter 3 that the left-dislocated wh-phrase represents the object position and, thus, is resumed by a resumptive clitic in the TP-internal object position. However, it will be shown in this section that what undergoes left-dislocation in *ʔilli*-interrogatives involving PRON is the subject wh-phrase, hence being resumed by a subject pronoun (i.e., PRON) rather than a clitic.

Granting the left-dislocation nature of *ʔilli*-interrogatives involving PRON, Rizzi's (1997) Fine Structure of the Left Periphery or Split-CP) analysis is adopted again. I propose that such wh-interrogatives are subject left-dislocation structures, thus instantiating a representation where TopP occurs in a position between CP and TP. The left-dislocated subject wh-phrase occupies the specifier position of this TopP, and is, being a subject, resumed by a subject pronoun that surfaces in its TP-internal subject position. Since subject pronouns in Arabic do not cliticize onto any preceding head, they appear as free-standing strong pronouns, unlike object resumptive pronouns which are invariably attached onto a preceding head as a weak pronoun/clitic (see Aoun et al 2001 & 2010; Guilliot & Malkawi 2006 & 2011; Jassim 2011 for more on resumptive pronouns in Arabic).

A major upshot of this analysis is that what has been analyzed as an optional "pronominal copula" (Soltan 2012) or "agreement feature" under INFL (Shlonsky 2002; Aoun et al 2010) turns out to be neither optional, pronominal copula, nor agreement feature. Rather, it is a subject pronoun resuming a left-dislocated subject (i.e., the wh-phrase itself in

this case), providing further substance to Edwards' (2006) and Abdel Razaq's (2011) treatment of this pronominal element. More importantly, my proposal that CLLD is a productive technique for forming wh-questions in JA receives extra empirical evidence with the corollary that Rizzi's (1997) split-CP analysis, which has been adopted for the left-periphery in Arabic declarative constructions (Shlonsky 2000; Aoun et al 2010), can be extended to the formation of interrogative structures as well.

In what follows, I fill in the particulars of my proposal showing that *ʔilli*-interrogatives with PRON are merely the subject version of CLLD structures in the language (which more typically represent left-dislocation of object constituents). The first symmetry between *ʔilli*-interrogatives involving PRON and CLLD structures is the syntactic composition. Recall that CLLD constructions consist of a displaced object noun phrase associated with a TP-internal resumptive pronoun occupying its thematic position (Bakir 1980; Moore 1988; Lalami 1996; Ouhalla 1997; Aoun & Benmamoun 1998; Shlonsky 2000; Aoun et al 2010). Displacing this nominal element gives rise to what is known in traditional Arabic syntax as topic-comment structures (Bakir 1980; Farghal 1986; Fassi-Fehri 1993; Shlonsky 2000; Soltan 2007), with the comment part forming a full predication in the sense that it has its own subject and predicate. I propose that *ʔilli*-interrogatives involving PRON share the same topic-comment structure of CLLD constructions. Consider the following examples.

(33) **CLLD structure**

[**ʔil-binit_i** [iz-zalameh šaf-**ha_i** ʔimbariH]].
[**The-girl** [the-man saw.3MS-**her** yesterday]]
'The girl, the man saw her yesterday.'

(34) ***ʔilli*-interrogatives involving PRON**

a. Subject wh-phrase in *ʔilli*-interrogatives involving PRON

(huwweh)	[**mi:n_i**	[hiyyeh_i	ʔilli	šafat	iz-zalameh	ʔimbariH]]?
Q	[**who**	[PRON.she	that	saw.3FS	the-man	yesterday]]

'Who is she such that she is the one that saw the man yesterday?'

b. Object wh-phrase in *ʔilli*-interrogatives involving PRON

(huwweh)	[**mi:n_i**	[hiyyeh_i	ʔilli	iz-zalameh	šaf-**ha_i**	ʔimbariH]]?
Q	[**who**	[PRON.she	that	the-man	saw.3MS-**her**	yesterday]]

'Who is she such that she is the one that the man saw her yesterday?'

The wh-phrase in the above example represents a left-dislocated subject (or topic in the traditional sense), and is, being subject, resumed by a subject pronoun (PRON) occupying its subject position inside the clause. Simultaneously, both the PRON and free relative clause DP represent the comment part of the structure with the PRON functioning as the subject of a verbless copular construction and the free relative clause DP serving as its predicate. Accordingly, the whole wh-construction forms a topic-comment structure exactly the same as typical CLLD structures in Arabic.

Simplifying somewhat, the difference between *ʔilli*-interrogatives involving PRON and typical CLLD structures is reduced to the nature of the left-dislocated constituent and the form of the TP-internal resumptive pronoun. While the left-dislocated element is a lexical object noun phrase in the latter, it is a nominal subject wh-phrase in the former. Since the left-dislocated element in CLLD constructions is originally an object, it naturally follows that it is being resumed by a pronoun occupying its clause-internal thematic position; this pronominal element appears as a weak pronoun attached to the preceding verb. In *ʔilli*-interrogatives involving PRON, however, the left-dislocated element, being a subject, cannot be resumed by a pronominal clitic attached to the verb as this is not the thematic position of the subject. The subject position in Arabic is normally filled with a subject pronoun, which stands freely without cliticizing onto any head, unlike object clitics.

Another shared feature between *ʔilli*-interrogatives involving PRON and CLLD structures is the exclusion of non-nominal arguments. Only nominal (wh-) arguments can be left-dislocated; adverbials and PPs are precluded from such constructions. Consider the following paradigm.

(35) **CLLD structures**

    a. *[**ʔimbariH$_i$**   [iz-zalamehšaf-**uh$_i$**   maha]].

      [**Yesterday**   [the-man   saw.3MS-**it**Maha]]

    b. *[**la-maha$_i$**   [iz-zalamehʔa9Ta-**uh$_i$**   ʔil-maSari]].

      [**To-Maha**   [the-man   gave.3MS-**it** the-money]]

(36) *ʔilli*-**interrogatives involving PRON**

    a. *[(huwweh)   [**ʔeimta$_i$** [huwweh$_i$ *ʔilli* iz-zalameh šaf-**uh$_i$**   maha]]?]

      Q   [**when** [PRON.it **that** the-man   saw.3MS-**it**   Maha]]

      'When did the man see Maha?'

    b. *[(huwweh)   [**la-mi:n$_i$** [huwweh$_i$ *ʔilli* iz-zalameh ʔa9Ta-**uh$_i$**   ʔil-maSari]]?]

      Q   [**to-who** [PRON.it **that** the-man   gave.3MS-**it** the-money]]

      'To whom did the man give the money?'

The above examples are ruled out on the ground that adverbial/adjunct elements and PPs cannot undergo left-dislocation. Only nominal (wh-) arguments are admissible in left-dislocation structures. The ban on adverbials and PPs can be attributed to the absence of appropriate resumptive pronouns that correspond to, or can resume, such constituents (Aoun et al 2010).

A third parallelism between *ʔilli*-interrogatives involving PRON and CLLD structures is pertinent to the relationship between the left-dislocated NP and the sentence-internal resumptive pronoun (i.e., PRON in the case of *ʔilli*-interrogatives). In both constructions, this relation is not sensitive to island constraints. The following examples illustrate the violation

of the wh-island condition (37), the complex NP island condition (38) and the adjunct clause condition (39).

(37) **Wh-island**

　　a. **CLLD structure**

　　　[**ʔil-binit**_i　saʔalto　　[ʔiða　iz-zalameh　šaf-**ha**_i]].
　　　[**The-girl**　asked.2P　[whether　the-man saw.3MS-**her**]]
　　　'The girl, you asked whether the man saw her.'

　　b. **Subject wh-phrase in *ʔilli*-interrogatives involving PRON**

　　　(huwweh)　[**mi:n**_i　saʔalto　　[ʔiða　　**hiyyeh**_i　*ʔilli*　šafat
　　　Q　　　　[**who**　asked.2P　[whether　**PRON.she** that　saw.3FS
　　　iz-zalameh ʔimbariH]]?
　　　the-man　yesterday]]
　　　'Who is she such that she is the one that you asked whether she saw the man yesterday?'

　　c. **Object wh-phrase in *ʔilli*-interrogatives involving PRON**

　　　(huwweh)　[**mi:n**_i　saʔalto　　[ʔiða　　**hiyyeh**_i　*ʔilli*　iz-zalameh
　　　Q　　　　[**who**　asked.2P　[whether　**PRON.she** that　the-man
　　　šaf-ha_i　ʔimbariH]]?
　　　saw.3MS-her　yesterday]]
　　　'Who is she such that she is the one that you asked whether the man saw her yesterday?'

(38) **Complex NP island**

　　a. **CLLD structure**
　　　[**ʔil-binit**_i　smi9to　ʔiša9it　[ʔinno　iz-zalameh šaf-**ha**_i]].
　　　[**The-girl**　heard.2Prumor　[that　　the-man　saw.3MS-**her**]]
　　　'The girl, you heard the rumor that the man saw her.'

b. **Subject wh-phrase in** *ʔilli*-**interrogatives involving PRON**

(huwweh) [**mi:n**ᵢ   smi9to   ʔiša9it   [ʔinno   **hiyyeh**ᵢ   *ʔilli*   šafat

Q   [**who**   heard.2Prumor   [that   **PRON.she**   that   saw.3FS

iz-zalameh   ʔimbariH]]?

the-man   yesterday]]

'Who is she such that she is the one that you heard the rumor that she saw the man

yesterday?'

c. **Object wh-phrase in** *ʔilli*-**interrogatives involving PRON**

(huwweh) [**mi:n**ᵢ   smi9to   ʔiša9it   [ʔinno   **hiyyeh**ᵢ   *ʔilli*   iz-zalameh

Q   [**who**   heard.2Prumor   [that   **PRON.she**   that   the-man

šaf-ha**ᵢ**   ʔimbariH]]?

saw.3MS-her   yesterday]]

'Who is she such that she is the one that you heard the rumor that the man saw her

yesterday?'

(39) **Adjunct clause island**

a. **CLLD structure**

[**ʔil-binit**ᵢ   raH   tiz9alo   [law   iz-zalameh   šaf-**ha**ᵢ]].

[**The-girl**   Fut.   b.upset.2P   [if   the-man   saw.3MS-**her**]]

'The girl, you will be upset if the man saw her.'

b. **Subject wh-phrase in** *ʔilli*-**interrogatives involving PRON**

(huwweh) [**mi:n**ᵢ   raH   tiz9alo   [law   **hiyyeh**ᵢ   *ʔilli*   šafat

Q   [**who**   FUT.   be.upset.2P   [if   **PRON.she**   that   saw.3FS

iz-zalameh]]?

the-man]]

'Who is she such that she is the one that you will be upset if she saw the man?'

c. Object wh-phrase in *ʔilli*-interrogatives involving PRON

(huwweh) [**mi:n**_i raH tiz9alo [law **hiyyeh**_i *ʔilli* iz-zalameh

Q [**who** FUT. be.upset.2P [if **PRON.she** that the-man

šaf-ha_i]]?

saw.3MS-her]]

'Who is she such that she is the one that you will be upset if the man saw her?'

As is substantiated through the full acceptability of questioning into different islands in the above examples, the relation between the left-dislocated wh-phrase and its clause-internal resumptive pronoun (PRON) is insensitive to island clauses. As shown in the above examples, the wh-phrase can be far from the PRON because PRON is a resumptive pronoun correferential with a left dislocated element, and the relationship between it and its left-dislocated antecedent is not sensitive to island constraints. In other words, PRON behaves exactly the same as sentence-internal resumptive clitics in CLLD constructions. Simultaneously, PRON is a resumptive subject pronoun that functions as the subject of a verbless copular construction: [PRON + free relative clause]. This asserts that PRON is a subject pronoun, thus defending the position held by Edwards (2006) and Abdel Razaq (2011), but not an "agreement feature" (Shlonsky 2002; Aoun et al 2010) or "copula" (Soltan (2012). The typical [DP [PRON DP]] structure is still there, with the only difference that there is an island intervening between the left-dislocated DP and the comment part (i.e., [PRON + free relative DP]). The above island wh-questions thus instantiate the schematic representation [DP wh-phrase [Island [TP PRON + free relative DP]]]].

Granting the above parallelisms between *ʔilli*-interrogatives involving PRON and CLLD structures, I propose that the former be subsumed under the same framework under which the latter is analyzed (i.e., Rizzi's (1997) proposal for the left-periphery). Along the lines of Shlonsky's (2000) and Aoun et al's (2010) analysis of declarative CLLD structures of Arabic, and similar to my analysis of CLLD wh-questions in chapter 3, I will further

demonstrate that the universal Split CP structure of the left-periphery is also available in *ʔilli*-interrogatives involving PRON, which are taken to be derived from a subject left-dislocated source with the schema [DP [PRON DP]].

Under this analysis, the wh-phrase represents a left-dislocated subject, thus occupying the specifier position of a TopP and is associated with a resumptive subject pronoun (PRON) occupying the subject position in [Spec, TP]. The PRON and the free relative clause DP together form the comment part of the structure, with PRON serving as its subject and the free relative clause DP forming its predicate. The following abstract syntactic representations account for the underlying structure(s) feeding *ʔilli*-interrogatives involving PRON. (The resumption facts associated with subject and object wh-phrases in *ʔilli*-interrogatives lacking PRON that were discussed in the previous section obtain with *ʔilli*-interrogatives involving PRON as well.)

(40) a. **Subject wh-phrases in *ʔilli*-interrogatives involving PRON**

[TopP wh-phrase$_i$ Top [TP PRON$_i$ T [PredP t$_i$ Pred [DP pro [CP *ʔilli* [TP …]]]]]]

b. **Object wh-phrases in *ʔilli*-interrogatives involving PRON**

[TopP wh-phrase$_i$ Top [TP PRON$_i$ T [PredP t$_i$ Pred [DP pro [CP *ʔilli* [TP … resumptive clitic$_i$ …]]]]]]

Based on the island facts observed for this wh-construction, the same approach adopted for other interrogative constructions in the language will be used here. I assume that there is a null operator (Pesetsky 1987) checking the [+wh] feature of C and unselectively binding the left-dislocated subject wh-phrase in its base-generation site. This interrogative operator can be overtly lexicalized as a Q-particle. The clause-initial wh-phrase, in turn, is co-indexed with a resumptive subject pronoun (PRON) occupying its clause-internal subject position (i.e.,

[Spec, TP]). The following abstract syntactic representations would thus account for the surface structure(s) of *ʔilli*-interrogatives involving PRON.

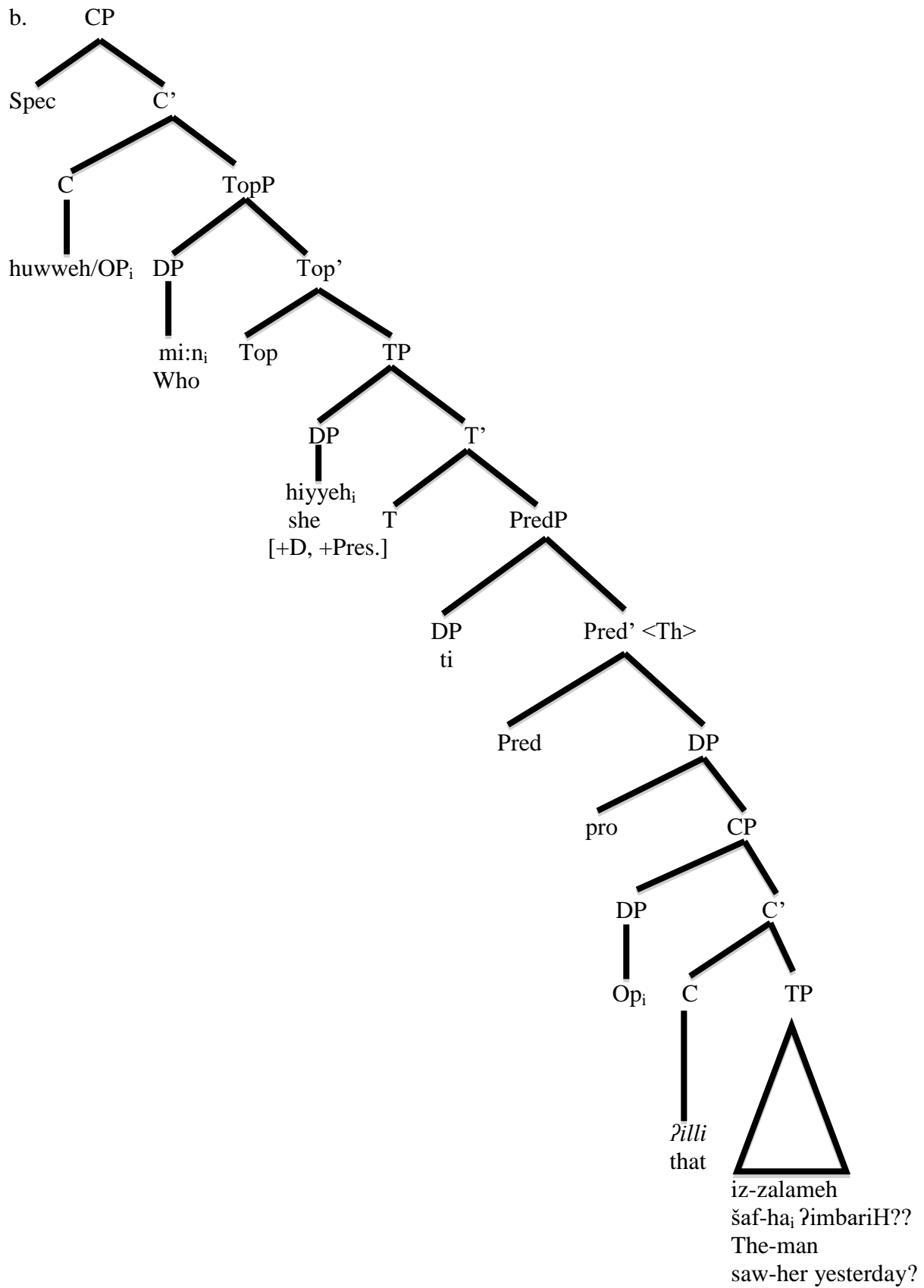(41) a. Subject **wh-phrases in *ʔilli*-interrogatives involving PRON**

[CP C Op$_i$/*huwweh*$_i$ [TopP wh-phrase$_i$ Top [TP PRON$_i$ T [PredP t$_i$ Pred [DP pro [CP *ʔilli* [TP …]]]]]

b. **O**bject **wh-phrases in *ʔilli*-interrogatives involving PRON**

[CP C Op$_i$/*huwweh*$_i$ [TopP wh-phrase$_i$ Top [TP PRON$_i$ T [PredP t$_i$ Pred [DP pro [CP *ʔilli* [TP … resumptive clitic$_i$ …]]]]]

The following diagrammatic representation can be assigned for the structure of *ʔilli*-interrogatives involving PRON.

(42) a. (huwweh) **mi:n$_i$ hiyyeh$_i$**   *ʔilli*   iz-zalameh šaf-**ha$_i$**   ʔimbariH?
         Q   **who PRON.she that** the-man   saw.3MS-**her**   yesterday
         'Who is she such that she is the one that the man saw her yesterday?'

b.

CP

Spec　　C'

C　　　　TopP

huwweh/OP_i　DP　　　　Top'

mi:n_i　　Top　　　TP
Who

DP　　　T'

hiyyeh_i
she　　T　　　PredP
[+D, +Pres.]

DP　　　Pred' <Th>
ti

Pred　　　　DP

pro　　　CP

DP　　　C'

Op_i　C　　　TP

ʔilli
that
iz-zalameh
šaf-ha_i ʔimbariH??
The-man
saw-her yesterday?

It remains to be said that, under this analysis, although the subject pronoun (PRON) surfaces in the clause-internal subject position of the left-dislocated subject wh-phrase (i.e., in [Spec, TP]), it originates as the thematic subject of the structure in [Spec, PredP], where it gets its theta role assigned (cf. Baker 2003). After that, PRON is moved to [Spec, TP] to satisfy the EPP on T and to get its case checked (see the previous chapter for further details). Being a subject pronoun, PRON also functions as the subject of a verbless copular structure whereby the nominal free relative clause DP serves as the predicate. Both PRON and the free relative clause DP thus form the comment part of the whole topic-comment structure. The full predication established between PRON and the free relative clause is prima facie evidence that PRON is a subject pronoun as Edwards (2006 and Abdel Razaq (2011) argue, not a pronominal copula (Soltan 2012) or an agreement feature (Shlonsky 2002; Aoun et al 2010).

To recap this section, *ʔilli*-interrogatives involving PRON behave symmetrically with left-dislocated (topic-comment) structures in the language and are therefore analyzed as such.[12] Among the detected parallelisms between the two constructions are the structural composition in the sense that both have a left-peripheral element forming the topic part as well as a comment part that has a full predication. In addition, the left-peripheral element in both constructions is always associated with a clause-internal resumption. Both constructions also disallow PPs and adverbial elements in their peripheral domains, and are island insensitive. All these symmetries support the analysis of *ʔilli*-interrogatives involving PRON as cases of left-dislocation. The proposed left-dislocation analysis can straightforwardly capture the non-movement hallmarks (i.e., island insensitivity) of the structure by virtue of base-generation. The clause-initial surfacing of the wh-phrase is trivially explained in light of the subject left-dislocation analysis. The truly pronominal nature of PRON as well as its involvement in the structure are also accommodated in this subject left-dislocation analysis. The inadmissibility of PPs and adverbial wh-phrases is attributed to the fact that such

elements cannot be generally left-dislocated in Arabic (Aoun & Benmamoun 1998; Shlonsky 2000; Aoun et al 2010) due to the absence of appropriate resumptive pronouns that can adequately correspond to, or resume, them. Finally, the unselective binding analysis straightforwardly captures the Q-particle.

5.7 Implications and advantages of my analysis

In this section, I discuss some of the implications/consequences of the analysis outlined for *ʔilli*-interrogatives in particular and that of other interrogative constructions in the language.

5.7.1 *ʔilli*-interrogatives are in-situ wh-questions

The above-sketched analysis accounts for the derivation of *ʔilli*-interrogatives in JA as follows:

(i) *ʔilli*-interrogatives that lack PRON represent typical verbless subject-predicate structures, whereby the subject wh-phrase surfaces in [Spec, TP]. In this case, there is an interrogative CP dominating a typical TP.

(ii) *ʔilli*-interrogatives that involve PRON, which is a resumptive subject pronoun, represent a left-dislocated subject-predicate construction, whereby the wh-phrase is base-generated in [Spec, TopP]. In this case, there is an interrogative CP dominating a TopP.

(iii) There is no syntactic wh-movement of the wh-phrase to [Spec, CP] in *ʔilli*-interrogatives, both with and without PRON. The licensing of the whole structure as interrogation is taken care of via unselective binding. The question particle that can optionally introduce *ʔilli*-interrogatives, whether involving PRON or not, is the lexical realization of the null interrogative operator in C.

Though *ʔilli*-interrogatives involve an apparently fronted wh-phrase, my analysis entails they instantiate another instance of concealed in-situ wh-interrogatives in JA. The clause-initial surfacing of the wh-phrase is predestined by virtue of being either a subject in a verbless subject-predicate construction when PRON is absent, or a member in a topic-comment (subject left-dislocation) structure when PRON is involved. The initiality of the wh-phrase is thus not the result of wh-movement to [Spec, CP] but is simply a result of the syntactic function the wh-phrase serves. Put differently, the sentence-initial position of the wh-phrase is its canonical in-situ position either as a subject or a topic, which happens to be a clause-initial position. Therefore, I propose that *ʔilli*-interrogatives instantiate another case of pseudo wh-fronting in JA, similar to CLLD questions, focus fronted questions and subject questions.

5.7.2   JA is an in-situ language of the Chinese type

One of the primary themes of this thesis is that not all clause-initial wh-phrases necessarily involve a bona fide instance of wh-movement in the traditional sense, i.e., movement to [Spec, CP]. A case in point is the different wh-questions involving initial wh-elements in JA. For example, the surface initial position of the wh-phrase transpires to be the canonical or first-merge position of the wh-phrase without need for the application of wh-movement in CLLD questions, subject questions and *ʔilli*-interrogatives. As for focus fronted questions, it was shown that the clause-initial position of the wh-phrase is the result of a movement operation different from wh-movement to [Spec, CP], namely, focus movement to [Spec, FocP].

This conclusion poses a serious challenge to the assumption that JA is a wh-movement language (Abdel Razaq 2011). I propose that JA is not a wh-movement language of the English type, though it sometimes appears to be so. Recall from chapter 2 that the in-situ

strategy is productively used in the formation of wh-questions in JA (see also Al-Momani & Al-Saidat 2010). Bearing this in mind, together with the evidence presented to show that wh-movement is irrelevant when it comes to the derivation of the various instances of clause-initial wh-phrases in JA, it is safe now to generalize that JA is an in-situ language of the Chinese type. This conclusion has been long obscured by the clause-initial position of the wh-phrase in some cases, which has led some Arabic wh-constructions to be classified as wh-fronted ones when in fact their syntactic properties are precisely that of in-situ ones. Under my analysis, no case of clause-initial wh-phrases in JA can be construed as a bona fide wh-movement in the traditional sense (i.e., movement of the wh-phrase to [Spec, CP]). The in-situ classification of JA is consistent with the well-known typological generalization that in-situ languages make use of question particles (cf. Baker 1970; Cheng 1991).

A broader consequence of this analysis is the convergence of a hypothesis with a considerable empirical coverage, namely, Cheng's (1991) Clausal Typing Hypothesis (CTH). At first blush, JA looks as if it were an optional wh-movement language with respect to the surface position of wh-elements. However, I have shown that this is not the case, and that the variation in the surface positions of wh-phrases is a result of their role in the underlying structure. Regardless of the surface position of wh-expressions in JA, all interrogative clauses are typed as such by the same mechanism, namely, the Q-operator. The recognition of the null interrogative particle, or its optional overt realization as the Q-particle *huwweh*, as the locus of interrogative clause typing in all JA wh-questions entails that JA employs just one unique strategy to type a clause as a wh-question, regardless of whether the wh-phrase surfaces clause-initially or clause-internally. This state of affairs is consistent with the Clausal Typing Hypothesis, as it means that JA employs only a single strategy to type a clause as a wh-question, as the CTH contends.

5.7.3 Pruning the inventory of wh-interrogatives in Arabic

Recall from chapter 3 that Aoun & Choueiri (1999) and Aoun et al (2010) consider resumption an independent interrogative strategy in Arabic (i.e., "resumptive wh-questions" in their terminology). They also consider *ʔilli*-interrogatives another type of the resumptive strategy (i.e., "class II of resumptive wh-questions"). However, I have shown that the resumptive clitic in both resumptive wh-questions and *ʔilli*-interrogatives has nothing to do with any interrogative strategy. It is generated as a side-effect of CLLD in the former or relativization in the latter.

Furthermore, under my analysis, *ʔilli*-interrogatives without PRON are subsumed under verbless subject wh-questions as both of them are comprised of two consecutive DPs (similar to non-wh subject-predicate structures discussed in the previous chapter). The initial DP in both wh-constructions is a subject wh-phrase that is first merged in [Spec, PredP] and is then moved to [Spec, TP]. The predicate DP in both constructions is merged as a complement of the head Pred. Such wh-constructions are verbless, thus do not project VPs on a par with their declarative counterparts (cf. Bahloul 1993; Benmamoun 2000 & 2008; Aoun et al 2010). The difference between subject verbless wh-questions and *ʔilli*-interrogatives lacking PRON is reduced to the nature of the predicate DP in each construction. While it is a simple lexical DP in the former, it is a more complex (i.e., free relative clause) DP in the latter. All in all, both *ʔilli*-interrogatives without PRON and verbless subject wh-questions were shown to be typical in-situ wh-questions.

Along the same lines, *ʔilli*-interrogatives involving PRON were subsumed under CLLD wh-questions of the type discussed in chapter 3. In both constructions, there is a left-dislocated wh-phrase that is associated with a resumptive pronoun occupying its TP-internal position. The difference between the two types of wh-question boils down to the constituent being left-dislocated and the form of the pronominal element that resumes this constituent.

The left-dislocated wh-phrase in CLLD wh-questions represents the object position and, thus, is resumed by a resumptive clitic in the TP-internal object position. However, the left-dislocated element in *ʔilli*-interrogatives involving PRON is the subject wh-phrase, hence being resumed by a subject pronoun (i.e., PRON) rather than a clitic. In a nutshell, I contend that JA makes use of CLLD/left-dislocation as a productive mechanism for forming wh-questions, but not of resumption (contra Aoun et al 2010); resumption is just a side effect of left-dislocation or relativization. More importantly, both CLLD questions and *ʔilli*-interrogatives involving PRON were shown to be in-situ wh-questions as well.

A major upshot of my overall analysis is that the inventory of wh-interrogatives across Arabic varieties is pruned by cutting out unnecessary complications where another simpler and more straightforward analysis is feasible. The following table summarizes these conclusions.

Table 1
The different underlying structures of in-situ wh-questions in JA

In-situ wh-questions		
Non-subject wh-questions	**Subject wh-questions**	**Left-dislocated wh-questions**
a. Object in-situ wh-questions (chapter 2) b. Adjunct in-situ wh-questions (chapter 2)	a. Subject verbal wh-questions (Section 4.3) b. Subject verbless/copular wh-questions (Section 4.7) c. *ʔilli* wh-questions lacking PRON (Section 5.5)	a. "Resumptive"/CLLD wh-questions (Section 3.4.2 b. *ʔilli* wh-questions involving PRON (Section 5.6)

A cursory glance at the above table, however, raises the question of why a language has two such similar types of topic-comment wh-constructions which appear to be so similar in meaning: the CLLD wh-questions and the *ʔilli* wh-questions involving PRON.

I will speculate a bit on this observation both from semantic/pragmatic and historical perspectives. It should be first made clear that, although the two wh-constructions represent a topic-comment structure, they are not semantically identical. There is a slight

semantic/pragmatic difference between the two with *ʔilli* wh-questions having more emphasis. This extra emphasis follows naturally from the existence of the pronominal element (PRON) which carries number and gender features as has been shown throughout the study. This emphasis is also connected to the relative clause involved in the structure which causes the question to be associated with a particular identity due to the [+definite] feature of the relative complementizer *ʔilli* 'that' (cf. Al-Momani 2010; Gad 2011).

The coexistence of such two apparently similar topic-comment structures can also be understood in terms of a potential diachronic/historical trajectory. Recall that CLLD wh-questions derive from a verbal structure (chapter 3) whereas *ʔilli* wh-questions are verbless copular structures (as was shown in this chapter). Recall also that the null subject parameter is operative only in verbal sentences in Arabic, but not in verbless ones (see section 4.8 for details). I propose that 'relativization' has started as a mechanism for deriving wh-questions in Arabic to void this parameter in topic-comment/CLLD/left-dislocated subject wh-questions in verbal contexts.

More specifically, relativizing the comment part of the topic-comment/CLLD/left-dislocated subject wh-question given in (43b), which is not very common due to violating the null subject parameter (see section 4.8), will convert the whole topic-comment verbal structure into a verbless one with the format [subject wh-phrase DP + free relative clause DP] as shown in (43c) where the null subject parameter is not operative. After that, the subject wh-phrase in the resulting verbless structure can freely undergo left-dislocation as the resulting subject pronoun (PRON) in the TP-internal subject position in this case will no longer violate the null subject parameter, and the result is a new topic-comment structure with the format [DP [PRON DP]]. The subject inside the relative clause is then deleted due to McCloskey's (1990) Highest Subject Restriction which prohibits the occurrence of a resumptive pronoun in the highest subject position inside the relative clause, yielding the

structure in (43d). In other words, relativization can be considered a last-resort strategy to void the null subject parameter in the case of subject left-dislocation in verbal contexts.

(43) a. **Typical in-situ subject wh-question**

   (huwweh) **mi:n** šaf   iz-zalameh   ʔimbariH?
    Q   **who** saw.3MS   the-man   yesterday
   'Who saw the man yesterday?'

   b. **CLLD/left-dislocated subject wh-question**
   (huwweh) [TopP **mi:n [TP huwweh**   šaf   iz-zalameh   ʔimbariH]]?
    Q   [**who** [**PRON.he** saw.3MS   the-man   yesterday]]
   'Who is the male person (x) such that (x) saw the man yesterday?'

   c. **Non-PRON *ʔilli* question resulting from relativizing the comment part of CLLD question**

   (huwweh) [DP **mi:n**   [DP *ʔilli*   **huwweh**   šaf   iz-zalameh   ʔimbariH]]?
    Q   [**who** [that   **PRON.he**   saw.3MS   the-man   yesterday]]
   'Who is it that he saw the man yesterday?'

   d. ***ʔilli* question with PRON resulting from subject left-dislocating non-PRON *ʔilli* question**

   (huwweh) [TopP **mi:n**   **[TP huwweh** *ʔilli*   šaf   iz-zalameh ʔimbariH]]?
    Q   [**who**   [**PRON.he**   **that**   saw.3MS   the-man   yesterday]]
   'Who is he such that he is the one that saw the man yesterday?'

This 'relativization' strategy was then generalized to other non-subject wh-constructions, namely, object CLLD questions which are already topic-comment structures. Relativizing the comment part of the CLLD question given in (44b) induces the verbless non-PRON *ʔilli* wh-question in (44c), which in turn can undergo left-dislocation yielding a new topic-comment structure, namely, *ʔilli* wh-question with PRON (44d), which carries extra emphasis due to the features of PRON and due to the relative clause.

(44) a. **Typical in-situ object wh-question**

(huwweh) iz-zalameh šaf   **mi:n**   ʔimbariH?

Q   the-man saw.3MS **who**   yesterday

'Who did the man see yesterday?'

b. **Object CLLD wh-question**

(huwweh) [TopP **mi:n$_i$**   [TP iz-zalameh šaf-**ha$_i$**   ʔimbariH]]?

Q   [**who**   [the-man   saw.3MS-**her**   yesterday]]

'Who is the female person (x) such that the man saw (x) yesterday?'

c. **Non-PRON *ʔilli* question resulting from relativizing the comment part of CLLD question**

(huwweh) [DP **mi:n$_i$** [DP *ʔilli*   iz-zalameh šaf-**ha$_i$**   ʔimbariH]]?

Q   [**who**   [**that** the-man   saw.3MS-**her** yesterday]]

'Who is it that the man saw her yesterday?'

d. ***ʔilli* question with PRON resulting from subject left-dislocating non-PRON *ʔilli* question**

(huwweh) [TopP **mi:n$_i$**   **[TP hiyyeh *ʔilli*** iz-zalameh šaf-**ha$_i$**   ʔimbariH]]?

Q   [**who**   [**PRON.she that**   the-man   saw.3MS-**her** yesterday]]

'Who is she such that she is the one that the man saw her yesterday?'

One further interesting consequence of the current analysis is that the mapping of the left periphery in Arabic, which was first proposed by Shlonsky (2000) for declarative constructions, can be extended to wh-interrogative constructions in the language and can provide a straightforward account for their different syntactic properties. Adopting an analysis that can accommodate two wh-constructions under the notion of CLLD/left-dislocation is also potentially revealing with respect to the overall typology of wh-questions, as it opens new windows on the range of potential mechanisms that can be utilized for deriving wh-dependencies. Thus, on a par with Cheng's (1991) wh-clefting in some "optional

wh-fronting" languages, I contend that left-dislocation should be added to the inventory of representations available for the derivation of wh-interrogatives, at least in certain languages. All in all, the study of Arabic wh-questions in general and those of JA in particular contributes to our overall understanding of the range of possible variation in wh-question formation and long-distance dependencies.

5.7.4 Other left-dislocation analyses revisited

In this section, I revisit two left-dislocation analyses upon which my analysis of *ʔilli*-interrogatives with PRON in JA is based. Although the insights embodied in these analyses were helpful for my analysis, I will show that none of these analyses can be maintained due to several problems in their details.

5.7.4.1 Edwards' (2006) analysis of equative sentences in Egyptian Arabic (EA)

My analysis of PRON as a subject pronoun resuming a left-dislocated subject is based on the insight embodied in Edwards' (2006) analysis of present-tense equational/equative sentences in Egyptian Arabic (EA) of the type illustrated in (45). Such equative sentences consist of two DPs separated by PRON instantiating the schematic structure DP-PRON-DP.

(45) il-bint   hiyya l-mas'u:la.
      the-girl she   the-responsible(FemSg)
      'the girl is the one responsible.'

Edwards (2006) proposes that such equative copular structures in EA derive from a left-dislocation source whereby the left-dislocated DP occupies a topic position (i.e., in [Spec, CP] according to Edwards) and is resumed by PRON, which is a resumptive subject pronoun originating in [Spec, VP]. This initial stage of the derivation is roughly represented by Edwards as follows:

(46) [CP DP il-bint C' [vP hiyya v' [v XP l-mas'u:la]]]

       The-girl   she   the-responsible

However, Edwards (2006), following an assumption put forward in Simpson & Wu (2002), adopts a reanalysis approach in an attempt to account for the verbal-nominal properties of PRON. In this approach, the pronominal element (PRON), though analyzed as actual subject pronoun originating in [Spec, vP], undergoes a cyclical reanalysis process to become the functional head of vp, as shown below.

(47) [CP DP il-bint C' [vP v' [v hiyya XP l-mas'u:la]]]

       The-girl   She   the-responsible

Though Edwards' (2006) analysis captures the left-dislocation nature of structures involving PRON, as well as the real nature of PRON as a subject pronoun, it cannot be fully tenable (cf. Abdel Razaq 2011). For example, it neglects that equative constructions are verbless and verbless copular constructions in Arabic do not project VPs (cf. Jelinek 1981; Bahloul 1993; Benmamoun 2000& 2008; Aoun et al 2010). Thus, assuming that PRON originates in [Spec, VP] does not receive independent support. Furthermore, it neglects that verbless copular sentences in Arabic invariably have a present-tense interpretation, hence are TPs (Bahloul 1993; Benmamoun 2000& 2008; Al-horais 2006; Aoun et al 2010). Finally, the evidence that the left-dislocated element is situated in [Spec, CP] is at best ambiguous, and requires a number of supporting assumptions which cannot be independently justified. This postulation contradicts the distributional properties of left-dislocated elements in the language where they occur after the complementizer and thus must be in a position below C (Aoun & Benmamoun 1998; Shlonsky 2000; Aoun et al 2010; see chapter 3 for a full discussion). Adopting the modified version of left-dislocation I am proposing in this study, which is based upon Rizzi's (1997) split-CP analysis, all the above-mentioned problems of Edwards' (2006) analysis can

be avoided. According to my analysis, the following representation can be given to equative copular sentences in EA.

(48) [TopP   il-bint$_i$ Top [TP   hiyya$_i$ T [PredP t$_i$ Pred [DP   l-mas'u:la]]]]
             The-girl   she   the-responsible

Besides equative verbless structures in Arabic (Eid 1991 & 1992; Edwards 2006; Abdel Razaq 2011), the sketched analysis has the potential to be generalized to other syntactic constructions that make use of the pronominal element (PRON) such as identificational sentences in Hebrew (Doron 1983; Shlonsky 2002) and reduced specificational pseudo clefts in Russian (Markman 2008). Noticeably, matters cannot be this simple in other languages as the occurrence of this pronominal element seems to be language-specific (mostly Semitic languages) and even structure-specific being restricted to copular verbless structures.

5.7.4.2   Abdel Razaq's (2011) wh-cleft analysis

Another left-dislocation analysis worth revisiting is that embodied in Abdel Razaq's (2011) equative cleft analysis of wh-clefts involving PRON in different Arabic dialects. Abdel Razaq (2011) generalizes that *ʔilli*-interrogatives   ("wh-clefts" in his terminology) are merely the wh-counterpart of the typical cleft structures in Arabic, so he assigns the same underlying structure of cleft sentences to wh-cleft constructions.[13]

Cleft sentences involving PRON were originally deemed by Abdel Razaq a species of equative constructions, which in turn were construed as a left-dislocation structure on a par with Egyptian equative structures (Edwards 2006). The consequence of all the above generalizations made by Abdel Razaq was that cleft sentences involving PRON parallel equative structures involving PRON, and thus are left-dislocated structures. Simultaneously, since he deemed wh-clefts involving PRON to be merely the wh-counterpart of standard cleft sentences involving PRON, the former ended up to be equative, cleft and, thus, left-dislocated structures. However, this characterization was mainly driven by the superficial

similarity in the composition of all these structures, especially their involvement of PRON. There was no individual treatment of each construction to test its left-dislocated nature, except for equative constructions involving PRON.

The structural representation Abdel Razaq gives for wh-clefts involving PRON is roughly represented in (49) below, which is originally the structure he gave to typical cleft sentences involving PRON (with the exclusion of the CP projection of course).

(49)   [CP wh-phrase$_i$ [TP t$_i$ [PredP PRON [DP free relative clause]]]

A closer scrutiny of Abdel Razaq's wh-cleft equative analysis reveals that it is problematic on several grounds. One thing to start with is the equative status of *ʔilli*-interrogatives. It was shown in section 5.3 above that the equational nature of this wh-construction is at best marginal, let alone the obligatoriness of PRON in equative constructions (Eid 1991 & 1992; Ouhalla 1999; Edwards 2006; Al-Horais 2006). Specifically, *ʔilli*-interrogatives cannot be considered equative as reversing the two DPs of the structure brings about marginality, a crucial difference from typical clefts (see also sections 5.3 and 5.5 above).

Under my analysis, the non-reversibility of the two DPs involved in *ʔilli*-interrogatives follows from the fact that this wh-construction derives from a verbless subject-predicate construction in which the wh-phrase is the syntactic subject in [Spec, TP] when PRON is absent or a left-dislocated subject in [Spec, TopP] when PRON is available. Recall that the subject in such Arabic verbless structures must precede the predicate. Reversing the two DPs in such verbless subject-predicate structures gives rise to a word order prohibited in the language, namely, predicate-subject word order. Since the free relative clause found in *ʔilli*-interrogatives functions as the predicate of a wh-subject in a verbless structure, it naturally follows that the canonical position of this free relative clause is following the subject wh-phrase. Reversing the wh-phrase and the free relative clause is only acceptable under an

echo-question reading, because the subject in such cases would occur after the predicate which is not the norm in the language. This is not the case in typical clefts, however: reversing the two DPs in typical cleft sentences is fully acceptable, which supports Abdel Razaq's assumption that clefts are equative structures, but contradicts his assumption that *ʔilli*-interrogatives are equative cleft structures. Thus, the equative cleft analysis of *ʔilli*-interrogatives (in the sense of Abdel Razaq 2011) breaks down upon consideration of the non-reversibility of the wh-phrase and the free relative clause. The cleft nature of this wh-construction is further undermined considering the non-obligatoriness of PRON, the inadmissibility of adverbs and the absence of focal stress in this wh-interrogative as opposed to the obligatoriness of PRON, the full acceptability of adverbs and the presence of focal stress in typical cleft constructions (see section 5.3 above; but see also endnotes 6 and 13).

Despite the left-dislocation analysis embodied in Abdel Razaq's proposal, this left-dislocation cannot be captured. The dislocated element (whether in simple equative constructions, standard cleft sentences or wh-cleft structures), according to Abdel Razaq's analysis, is still in a TP-internal position (i.e., in [Spec, TP]). This assumption, however, is not viable. As we have seen earlier, there is a sort of consensus in the literature that left-dislocated elements occur in a position higher than, or external to TP; this is due to the fact that left-dislocation structures are A'-dependencies (Cinque 1990; Rizzi 1997; Shlonsky 2000; Aoun et al 2010; among others).

Furthermore, Abdel Razaq's analysis involves a non-standard assumption, that is, that [Spec, TP] is an A'-position rather than A position. This characterization of the status of [Spec, TP] is originally based upon Soltan's (2007) analysis of SV sentences in Standard Arabic (SA). Soltan (2007) notices that extraction across a postverbal subject is fully acceptable in SA (50a), whereas it is ruled out across preverbal subjects (50b). This has led

Soltan (2007) to generalize that the preverbal subject in SA occurs in an A'-position, hence blocking wh-movement on minimality grounds.

(50) a. man   Daraba   Zayd-un?
         Who   hit.3sgmas Zayd-nom
         'Who did Zayd hit?'

      b. *man   Zayd-un   Daraba?
          Who   Zayd-nom   hit.3sgmas
          'Who did Zayd hit?'   (Soltan 2007: 52)

Interestingly, though Soltan (2007) argues for the A'-status of the [Spec, TP] position in SA, he clearly excludes other spoken dialects from this generalization. It is not clear why Abdel Razaq (2011) extends this generalization to other dialects. The standard view in other spoken dialects is that [Spec, TP] is an A-position where canonical subjects are licensed (see also Benmamoun 1992 & 2000; Aoun et al 2010). Clear evidence in support of the standard view comes from the fact that wh-movement across a preverbal subject to [Spec, CP] is licit in most languages. If this position were an A'-position, this wh-movement would be illicit in any SV language, a prediction that is not borne out. Consider the following example from JA, which can be representative of any spoken Arabic dialect.

(51) (huwweh) mi:n$_i$ iz-zalameh šaf   ø$_i$ ʔimbariH?
       Q   who   the-man   saw.3MS yesterday
       'Who did the man see yesterday?'

Thus, for any SVO Arabic dialect allowing extraction of wh-expressions across preverbal subjects, Abdel Razaq's characterization of [Spec, TP] as an A'-position breaks down. My understanding is that [Spec, TP] is an A-position, a status that is unalterable, unchangeable and indelible through the derivation. Even the extraction facts reported by Soltan (2007) for SA can be looked at from a different angle. Specifically, the ungrammaticality of the wh-

question given in (50b) is not necessarily the result of extraction over an A'-position as Soltan (2007) assumes. It can be the result of the lack of subject-verb inversion, which is needed to satisfy an adjacency requirement between the wh-phrase and the verb in SA (cf. Ouhalla 1997; Shlonsky 2000; Aoun et al 2010).

This adjacency requirement between the wh-phrase and the verb in SA can be understood in light of the assumption that wh-questions represent a subclass of focus constructions. Since this same adjacency requirement is observed in typical focus fronting constructions in SA (Bakir 1980; Shlonsky 2000; Aoun et al 2010), the obligatory subject-verb inversion in SA wh-questions receives a straightforward explanation. According to Shlonsky (2000), the obligatory subject-verb inversion in focus fronting constructions in SA is the result of an adjacency requirement whereby the verb in focus fronting constructions must be adjacent to the focus fronted element in [Spec, FP], hence the verb obligatorily moves to F. Shlonsky (2000) explains this adjacency requirement in light of the familiar left-adjacency between the focused element and the verb in focus-movement languages such as Hungarian (see, e.g., Horvath 1976, 1986; Kiss 1987; Brody 1990; Puskas 1992). According to Shlonsky (2000), when a [+focus] element moves to [Spec, Foc], V raises to Foc^0 to satisfy a Focus Criterion: the [+focus] element and I^0 which is marked [+FOCUS] are brought into a Spec-Head configuration (see also Brody 1990). Thus, it can be said that, under the assumption that wh-questions in SA are a subclass of focus fronting, it is the lack of this subject-verb inversion and the violation of this adjacency requirement that brings about ungrammaticality in (50b), not the extraction over an A'-position as Soltan claims.

Another problem in Abdel Razaq's analysis lies in its approach to syntactic movement. The assumed wh-movement in wh-clefts is not based upon any syntactic evidence, island facts for example. It is only driven by the assumption that both Jordanian and Palestinian Arabic are wh-movement languages, a purely impressionistic classification. The other wh-

constructions in these languages are not investigated in Abdel Razaq's work. Moreover, this parametric classification of Palestinian and Jordanian Arabic does not receive any independent empirical support because both languages productively utilize the in-situ strategy as a major mechanism for forming their wh-questions (see Abu-Jarad (2008) for Palestinian Arabic and Al-Momani & Al-Saidat (2010) for Jordanian Arabic; see also chapter 2).

More crucially, postulating the application of this wh-movement entails postulating that the moved wh-phrase will be concurrently coindexed with a trace in [Spec, TP] and a resumptive pronoun in [Spec, PredP] (under his analysis; cf. (49) above), a case difficult to be found in any movement configuration. Such an analysis can be seriously challenged by the view that resumption signals absence of movement (Aoun & Li 2003; McCloskey 2006; Aoun et al 2010; among others).

Finally, this wh-movement analysis contradicts the detected non-movement properties of this wh-construction, i.e., island insensitivity and resumption. It also neglects the possibility of having an overt question particle in the CP domain and the possibility of embedding the whole wh-question after the complementizer. Under the assumption that the wh-phrase undergoes overt movement to [Spec, CP] (Shlonsky 2002; Aoun et al 2010; Abdel Razaq 2011), it is not clear how to accommodate the Q-particle (which must precede the wh-phrase) into the analysis and how to account for the following data where the wh-phrase appears after the sentential complementizer.

(52) a. (huwweh) fakkarto ?inno mi:n$_i$ hiyyeh$_i$ *?illi* iz-zalameh
         Q   thought.2P that who PRON.she that the-man
      šaf-ha$_i$?imbariH?
      saw.3MS-her yesterday
      'Who is she such that she is the one that you thought that the man saw her yesterday?'

b. (huwweh)   maha   galat Pinno eiš$_i$ huwweh$_i$ Pilli iz-zalameh

   Q   Maha   said.3FS   that what PRON.it that he-man

   ištar-ah$_i$ PimbariH?

   bought.3MS-it   yesterday

   'What is it such that it is the thing that Maha said that the man bought it yesterday?'

All the previous analyses assume that the wh-phrase in *Pilli*-interrogatives undergoes movement to [Spec, CP] by sheer stipulation. The data in (52) above, however, do not seem to bear on the issue of the legitimacy of an operation of overt syntactic wh-movement to [Spec, CP]. The real reason that can prompt this movement is still not clear. Based on the absence of any empirical evidence for the application of this wh-movement, a non-movement approach is more compelling.

5.8 The structure of clefts in Arabic

The discussion in section 5.3 raises the question of what syntactic structure underlies the derivation of typical cleft sentences in Arabic. The structure should account for the surface similarities between typical cleft sentences and *Pilli*-interrogatives involving PRON while also capturing the discerned distinctions between the two constructions.

Recall that Arabic cleft sentences share a similar surface structure with *Pilli*-interrogatives involving PRON. Both constructions consist of an initial nominal constituent followed by a "pronominal copula" (PRON) and a free relative clause. However, cleft sentences differ from *Pilli*-interrogatives in the obligatoriness of PRON, the focal stress on the initial nominal element, the lack of restrictions on the definiteness of the initial nominal element, and the full acceptability of reversing the nominal element and the free relative clause. I assume that these differences are sufficient reasons for assigning cleft sentences the structure [clefted-phrase$_i$ [PRON [t$_i$ free relative DP]]], differing from the analysis of *Pilli*-interrogatives as [wh-phrase$_i$ [PRON$_i$ free relative DP]].

There are two reasons internal to the structure of Arabic clefts which exclude them from the left-dislocation analysis advocated for *ʔilli*-interrogatives involving PRON. First, the possibility of cleftting indefinite noun phrases precludes a subject left-dislocation analysis, as left-dislocation is restricted to definite noun phrases (cf. Lalami 1996; Ouhalla 1997; Aoun & Benmamoun 1998; Shlonsky 2000; Aoun et al 2010). Second, the obligatoriness of PRON in clefts is another point against the subject left-dislocation analysis. Recall that the absence of PRON in *ʔilli*-interrogatives was taken as evidence for the absence of left-dislocation and its presence as a signal of the application of subject left-dislocation. This means that there is a basic source from which this left-dislocated structure derives, namely, *ʔilli*-interrogatives without PRON which instantiate simple subject-predicate constructions. I take the obligatoriness of PRON in clefts as evidence for the lack of any subject left-dislocation of the sort found in *ʔilli*-interrogatives; otherwise, clefts with no PRON should have been available in the language, which is not the case (but see Abdel Razaq 2011 for a different view; see also endnotes 6 and 13). More precisely, the obligatory presence of PRON in clefts indicates the lack of the basic simple non-PRON subject-predicate source from which clefts with PRON should derive via the mechanism of left-dislocation. Therefore, I assume that PRON is the real thematic subject of a particular predicational relation involved in cleft sentences (but not a resumptive subject pronoun resulting from subject left-dislocation as in *ʔilli*-interrogatives involving PRON), and that the mechanism of focus fronting is responsible for the displacement of the other constituents in the structure, as will be shown shortly.

Based on these properties of Arabic clefts, I put forward an alternative analysis building mainly on the insight of Ouhalla's (1999) analysis. However, I divert from Ouhalla's analysis in certain details and, instead, employ the approach adopted so far in the current study. Specifically, I again draw on the status of PRON as a true subject pronoun (Edwards 2006; Abdel Razaq 2011) and make use of the notion of left periphery (Rizzi 1997; Shlonsky 2000)

as well as the notion of verbless subject-predicate structures in Arabic (Benmamoun 2000, 2008; Baker 2003).

Ouhalla (1999) argues that cleft sentences in Standard Arabic are interpreted as equations because the free relative clause can enter into a true equative relationship with the initial noun phrase. Ouhalla's treatment of clefts in Standard Arabic as equations is influenced by Heycok & Kroch's (1999) analysis of English pseudo-clefts (see also Higgins 1979). Under Ouhalla's analysis, clefts in Arabic involve two categories of the same denotational type: the clefted (or "f-phrase" in his terminology) and the free relative DP. Let's consider the following examples from JA to illustrate this point. The sentence given in (53a) is a typical cleft and the sentence in (53b) is its pseudo-cleft version.

(53) a. **ʔil-binit$_i$** hiyyeh *ʔilli* iz-zalameh šaf-**ha$_i$** ʔimbariH.
    The-girl PRON.she **that** the-man saw.3MS-**her** yesterday
   'It is the girl that the man saw her yesterday.'

  b. *ʔilli* iz-zalameh šaf-ha$_i$ ʔimbariH hiyyeh ʔil-binit$_i$.
    That the-man saw.3MS-her yesterday PRON.she the-girl
   'The one that the man saw her yesterday is the girl.'

The full acceptability of the above sentences shows that reversing the two constituents of the cleft sentence does not affect the meaning. This supports Ouhalla's observation that Arabic clefts are equative in nature. Accordingly, it can be said that the pseudo-cleft in (53b) has the cleft sentence in (53a) as an alternative. However, as was pointed out in section 5.3, the situation is different in *ʔilli*-interrogatives where the wh-phrase and the free relative clause cannot be so interchanged (except for echo readings). Clefts are freely reversible but for *ʔilli*-interrogatives the reversed variant is highly marked and only marginally acceptable. This indicates that *ʔilli*-interrogatives are not equative structures, unlike cleft structures. Consider the following examples from JA.

(54) a. **mi:n_i** (hiyyeh)   *ʔilli*   iz-zalameh šaf-**ha_i**   ʔimbariH?

      Who (PRON.she) **that** the-man   saw.3MS-**her** yesterday

    'Who is she such that she is the one that the man saw her yesterday?'

   b. ? *ʔilli*   iz-zalameh šaf-ha_i   ʔimbariH   (hiyyeh)   mi:n_i?

      That the-man   saw.3MS-her yesterday (PRON.she)   who

    ?? '?? The one that the man saw her yesterday is who?'

As for the structure of clefts, Ouhalla (1999) argues that a more appropriate structure for Arabic clefts is one in which the f-phrase (i.e., the clefted phrase) and the free relative clause form a small clause constituent in the complement position of I, and either the f-phrase or the free relative can move to the subject position.[14] Movement of the f-phrase gives rise to typical cleft sentences, while movement of the free relative clause yields pseudo-cleft sentences. He gives the following representation for cleft sentences: [IP e I [SC f-XP RC]].

As for PRON, Ouhalla (1999) assumes that the functional relationship between the f-phrase and the free relative clause is mediated by PRON which is located under INFL. In other words, he considers PRON to be the spell-out of the AGR element of I, along the lines of Doron (1983, 1986). However, it was argued throughout this chapter that this view is problematic (see also Edwards 2006) and that it is more accurate to treat PRON as a subject pronoun.

Although Ouhalla's (1999) analysis arguably succeeds in accounting for the different properties of cleft sentences in Arabic, I propose some modification to capture the status of PRON as a true subject pronoun, the internal structure of the small clause involved in cleft sentences, and the nature of the grammatical relations involved in the structure. I start with determining the nature of the structural relations between the different constituents involved in cleft sentences. Along the lines of Ouhalla (1999), I assume that the clefted phrase and the free relative clause form a small clause, and that either member of the small clause can undergo focus movement to [Spec, FocP] giving rise to the two possible surface structures of

Arabic clefts. However, I divert from Ouhalla's analysis and assume that the small clause originates as a complement of the head Pred, rather than the head I. In addition, I propose that PRON is the real subject of the whole structure, thus it originates in the specifier of PredP as the thematic subject and then moves to [Spec, TP] for feature-checking considerations and case assignment. This means that there is a predicational relation in the structure that holds between PRON and the small clause in the complement of the head Pred. Moving the f-phrase/clefted phrase to [Spec, FocP] yields a typical cleft sentence, while moving the free relative clause yields a pseudo cleft sentence. The following representations illustrate my analysis.

(55) **The structure of cleft sentences:**

[FocP f-phrase$_i$ [TP PRON$_j$ [PredP t$_j$ [SC t$_i$ + free relative DP]]]

(56) **The structure of pseudo cleft sentences:**

[FocP free relative DP$_i$ [TP PRON$_j$ [PredP t$_j$ [SC f-phrase + t$_i$]]]

In brief, under this analysis of cleft sentences, PRON is the true subject and the predicate is a small clause, one constituent of which undergoes focus fronting. At this juncture, the structure of small clauses arises as an issue. Small clauses are themselves considered to be made up of a subject and a predicate. Thus, we seem, in the case of Arabic clefts, to have a subject-predicate structure that itself is a predicate of a higher subject. It should be made clear at this point, however, that I have been using the category small clause (SC) merely as a generic term to explain the different grammatical relationships involved in the structure of cleft sentences and to highlight that there is a subject-predicate relationship between PRON and the small clause on one hand, and another internal/lower predicational relationship within the small clause on the other hand. The latter predicational relationship

holds between a nominal constituent (i.e., the f-phrase/clefted phrase) and the free relative clause.

Small clauses of the format [NP XP], with the XP being a non-verbal predicate, are common cross-linguistically and they occur in different positions. Besides their well-known function as a complement of a verb in English, for example, they can function as a complement of a preposition as in (57a), a subject of a sentence as in (57b), or even a subject of a small clause as in (57c). (All the following examples are retrieved from Balazs 2012: 1.)

(57) a. With [Charlie Cowell intent on ruining him], Harold wasn't safe.

   b. [Tommy and Zaneeta in a relationship] wasn't/*weren't good for Mayor Shinn's blood pressure.

   c. Eulalie considered [[Tommy and Zaneeta in a relationship] bad for Mayor Shinn's blood pressure].[15]

The structure of small clauses, however, is a controversial issue in syntax. For example, Stowell (1981, 1983) and Contreras (1987) argue that the category of a small clause is the maximal projection of its head predicate, i.e., category XP. Chomsky (1981) and Hornstein & Lightfoot (1984, 1987), by contrast, argue that the category of a small clause must be bigger than the maximal XP projections. According to Chomsky (1981), for example, a small clause is category S (TP in today's terms), so that all clauses are uniformly treated. More precisely, small clauses are category S similar to all propositional clauses, which in turn means that the subject of small clauses is governed and Case-assigned from outside the small clause (on a par with the subject of all propositional clauses in the terms of the GB framework). Hornstein & Lightfoot (1984, 1987) agree with this analysis.[16] The proposal that a Small clause is category S can be represented as follows (from Balazs 2012: 14).

(58)

```
        S
       /\
      /  \
    NP    XP
```
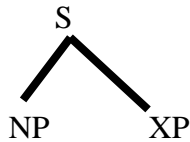
Turning back to the small clause involved in cleft sentences in JA, the subject-predicate relationship involved in this small clause holds between a nominal element and a free relative clause DP, so it instantiates a verbless copular construction of the type discussed in section 5.5 above. Recall that such verbless subject-predicate structures in Arabic have a present-tense interpretation and thus are widely taken as TPs that lack a VP projection (cf. Benmamoun 2000, 2008; Aoun et al 2010). I thus extend the same blended analysis advanced for verbless copular present-tense sentences in Arabic to the small clause involved in cleft sentences. Accordingly, this small clause is a TP that lacks a VP projection, but it involves a PredP (cf. Bowers 1993; Baker 2003): the subject of the small clause is first-merged in [Spec, PredP] and the free relative clause predicate DP is merged as the compliment of Pred; the subject then undergoes movement to [Spec, TP] for feature checking considerations and case assignment. Consequently, the structures given in (55) and (56) above can be revised in more detail as follows:

(59) The structure of cleft sentences:

[FocP f-phrase$_i$ [TP PRON$_j$ [PredP t$_j$ [TP t$_i$ [PredP t$_i$ [DP free relative]]]]]]

(60) The structure of pseudo cleft sentences:

[FocP free relative DP$_i$ [TP PRON$_j$ [PredP t$_j$ [TP f-phrase$_x$ [PredP t$_x$ [DP t$_i$]]]]]]]

Under this analysis, the derivation of a cleft sentence in JA such as that given in (53a) above proceeds as follows: since the lower predicate is nominal (i.e., the free relative clause), it is a DP. As a predicate, it will also project PredP, where the external lower argument subject 'the girl' merges in the lower [Spec, PredP]. Since this lower subject-predicate

structure is a full fledged verbless clause that has a present-tense interpretation, it projects a TP and the lower subject 'the girl' undergoes raising to the lower [Spec, TP] to check the EPP on T and to assign case. Simultaneously, the whole TP is a predicate of a higher subject, thus it projects another PredP, where the external higher argument subject (i.e., PRON) merges in the specifier position of this higher PredP. The higher PredP projects another TP and the higher subject moves from the higher [Spec, PredP] to the specifier position of this higher TP. Finally, either member of the lower predication undergoes focus movement to an A'-position (i.e., [Spec, FocP]): focus fronting of the lower subject 'the girl' induces a typical cleft sentence such as (53a) above while focus fronting of the free relative predicate DP gives rise to a pseudo cleft structure such as (53b) above.

This analysis raises another question, however: if the small clause itself involves a PredP, then there is one PredP on top of another PredP; what motivates such a configuration in Arabic?

The recursion of PredP in cleft sentences in Arabic (as well as in certain other copular structures as will be shown shortly) reflects the fact that there are two predicational relationships involved in such structures. The first predicational relationship is the embedded predication established between the lower subject and the lower free relative predicate DP; this layer of predication is mediated through a functional head Pred. The second predicational relationship holds between the higher subject DP, namely, PRON, and the embedded predication as a whole; this predication is mediated through a higher Pred head. In other words, both the matrix and embedded predicational relationships are mediated through the functional head Pred, hence two PredPs.

It is worth mentioning here that the existence of two predicational relationships in a given copular structure is not restricted to cleft sentences. It is common in non-cleft structures as well. The following examples illustrate how a lower subject-predicate structure itself can

be a predicate of a higher subject in a non-cleft sentence. Thus, the above sketched analysis for the two predicational relationships involved in cleft sentences has the potential to be extended to such non-cleft sentences as well. It is noteworthy here that the more general definiteness restriction on subjects in Arabic does not hold in the context of lower subject-ppredicate structures, as shown in the indefiniteness of the lower subject in (62) and (63).

(61) a. [Hiya   [ʔal-fatat-u ʔal-Taweelat-u]].   Standard Arabic
         [PRON.she   [girl-Nom   tall.FS-Nom]]
         'She is the tall girl.'

     b. [Hiyyeh   [ʔil-binit ʔil-Taweeleh]].   Jordanian Arabic
         [PRON.she   [girl   tall.FS]]
         'She is the tall girl.'

(62) a. [Hiya   [fatat-un   Taweelat-un]].   Standard Arabic
         [PRON.she [girl-Nom   tall.FS-Nom]]
         'She is a tall girl.'

     b. [Hiyyeh   [binit Taweeleh]].   Jordanian Arabic
         [PRON.she   [girl tall.FS]]
         'She is a tall girl.'

(63) a. [ʔal-mo9alemat-u   [fatat-un Taweelat-un]].   Standard Arabic
         [The-teacher.FS-Nom   [girl-Nom   tall.FS-Nom]]
         'The teacher is a tall girl.'

     b. [ʔil-m9almeh [binit Taweeleh]].   Jordanian Arabic
         [The-teacher.FS   [girl tall.FS]]
         'The teacher is a tall girl.'

My analysis of cleft sentences in general and of small clauses as fully-fledged TPs that can function as a predicate of a higher subject in particular neatly accounts for the different syntactic properties of clefts. For example, it correctly captures the two predicational relationships involved in cleft sentences, and the status of PRON as a true subject pronoun.

While PRON can be a resumptive pronoun resulting from left-dislocating a subject as in *ʔilli*-interrogatives, it is not always a resumptive pronoun; it can be a real subject pronoun as in typical cleft sentences. My analysis also captures the nature of clefts as verbless copular structures (Cheng 1991; Ouhalla 1999; Abdel Razaq 2011). The lack of definiteness restriction on the clefted phrase stems from the fact that the clefted phrase originates as the subject of an embedded predication (small clause) prior to undergoing focus movement to the clause-initial position; as was shown above, both definite and indefinite subjects can occur in the embedded subject-predicate structure.

In addition, this analysis makes available a principled account for the equative nature (or the 'free reversibility' for that matter) of clefts in Arabic: focus fronting of either member of the small clause is the mechanism responsible for the derivation of both cleft and pseudo-cleft sentences. It also maintains the general theoretical trend that the clefted phrase is a focus phrase (Ouhalla 1999). I assume that focus-movement of the type discussed in chapter 3 is also at work in the derivation of cleft sentences in Arabic. Many linguists (e.g. Choe 1987; Brody 1990; Tsimpli 1990, 1995; Ouhalla 1997, 1999; among others) argue that fronted f-phrases target the specifier position of the functional head FocP/FP (see also chapter 3 for further details).

This analysis also provides a principled account for the prosodic characteristics of cleft sentences in Arabic. Recall that there is a special pitch accent (or focal stress) on the initial nominal constituent in Arabic clefts. A possible way of incorporating this prosodic property of cleft sentences into the proposed analysis is by manipulating the [+F] feature encoded in the representation of focus constructions. It is widely assumed that f-phrases are designated with a [+F] feature (see, e.g., Jackendoff 1972; Ouhalla 1997, 1999; among others) and that this feature is spelled out as a focal stress. Under the assumption that f-phrases are interpreted in the FocP layer, the focal stress finds a principled account. On one hand, the fact that

clefted constituents invariably receive nuclear stress asserts that clefted elements are focused constituents. The absence of this focal stress from wh-words in *ʔilli*-interrogatives, on the other hand, supports the distinction between the two constructions in the sense that this prosodic difference has structural implications.

My analysis is also consistent with several well-established proposals in the field. For example, it is consistent with Williams's' (1980, 1983) predication theory in which both small clauses and 'regular-sized' clauses are taken to be of the same type of subject-predicate relationship. In addition, It is consistent with Stowell's (1981, 1983) proposal that all lexical categories can be predicates with subjects, and with Bowers' (1993) proposal where predicates of all categories project a PredP (see also Baker 2003). My analysis also maintains Chomsky's (1981) and Hornstein & Lightfoot's (1984, 1987) analysis whereby all subject-predicate structures are taken to be of the same category: (category S which is TP in today's terms). However, my analysis counters Balazs' (2012) universal structure of small clauses as tenseless PrPs. Although small clauses are typically considered tenseless structures (Balazs 2012), the Arabic data discussed above suggest that they can be tensed as well. Nothing in principle prevents adding tensed TPs to the inventory of NPs, Aps, and PPs which can predicate and thus project PredP. No tense mismatch is possible as verbless sentences in Arabic invariably have present-tense interpretation: both the matrix and the lower/embedded subject-predicate structures are verbless and thus present-tense sentences.

Summarizing, though the formula of cleft sentences in Arabic consists of two DPs linked together by a pronominal copula (PRON) similar to *ʔilli*-interrogatives with PRON, the discussion shows that the internal relations between these constituents are not the same, and thus cleft sentences instantiate a different syntactic derivation other than left-dislocation of the type advanced for *ʔilli*-interrogatives involving PRON. The proposed analysis of cleft sentences can account for all their properties in a principled manner. Undoubtedly, further

research is still needed to validate the proposed analysis.

5.9   Conclusions

The goal of this chapter was to investigate the derivation of *ʔilli*-interrogatives in JA and show how it fares with the different strands developed so far in the study. It was first shown that we are faced with a peculiar state of affairs whereby evidence exists in favor of the application of wh-movement (i.e., the clause-initiality of the wh-phrase), but conflicting evidence also exists suggesting the absence of movement (i.e., island insensitivity and resumption). Thus, it does not come as a surprise that the derivation of this wh-construction has been a controversial issue in the field, and some of its syntactic properties have been completely neglected in the previous analyses.

I started the chapter showing the inadequacy of analyzing JA *ʔilli*-interrogatives in terms of wh-movement (e.g., Al-Momani & Al-Saidat 2010 for JA; Wahba 1984 & El-Touny 2011 for EA). The island insensitivity of the structure and the involvement of resumption formed the sort of evidence needed to abandon the wh-movement hypothesis. Likewise, Cheng's (1991) wh-cleft analysis of *ʔilli*-interrogatives in EA, which was also adopted by Soltan (2012) for EA and extended to other Arabic varieties by Abdel Razaq (2011) (though the details are different), was shown to be unextendable to JA considering the various asymmetries between this wh-construction and typical clefts in the language.

It was made clear that any analysis of *ʔilli*-interrogatives has to account for all the following syntactic properties: the nature of the pronominal element (PRON), the presence of the Q-particle, the presence of the relative complementizer *ʔilli* 'that', the structure's island-insensitivity and involvement of resumption (together with having an apparently fronted wh-phrase), and the ban on adjunct wh-phrases and PPs.

The point of departure for my proposed analysis was abandoning two assumptions in the field: (i) that JA is a wh-movement language (Abdel Razaq 2011), and (ii) that PRON is an optional agreement feature under INFL (Shlonsky 2002; Aoun et al 2010) or optional copula (Soltan 2012). Instead, a different path was pursued where PRON is analyzed as a subject pronoun resuming a left-dislocated subject (in the sense of Edwards 2006; Abdel Razaq 2011). An immediate consequence of this implementation was that the optionality of this subject pronoun is illusory. More precisely, this optionality is just an epiphenomenon of two different, though superficially similar, constructions in the sense that its presence vs. absence engenders two different underlying structures that can feed *ʔilli*-interrogatives. Consequently, the internal relations involved in the structure and the nature of each constituent were reconsidered.

Based on the symmetries between *ʔilli*-interrogatives lacking PRON and verbless copular structures in Arabic, the former were analyzed accordingly. The blended analysis (Benmamoun 2000 plus Baker 2003) advanced for verbless subject-predicate sentences in the previous chapter was adopted for this end. On the other hand, based on the amassed symmetries between *ʔilli*-interrogatives involving PRON and CLLD constructions in the language, the former was juxtaposed with the latter in terms of syntactic derivation. The assumption that *ʔilli*-interrogatives involving PRON are underlyingly left-dislocated constructions has as its immediate consequence the existence of a TopP hosting the clause-initial wh-phrase, which is base-generated in the specifier position of this projection as a left-dislocated subject.

Based on the observation that the question particle always precedes the clause-initial wh-phrase in *ʔilli*-interrogatives, whether involving PRON or eschewing it, together with island facts and resumption-related observations, the assumption that the wh-phrase moves

to[Spec, CP] (Shlonsky 2002; Aoun et al 2010; Abdel Razaq 2011) was abandoned in favour of the unselective binding approach (Pesetsky 1987; Chomsky 1995).

Besides straightforwardly capturing the different syntactic properties of this wh-construction, my analysis has some major corollaries, the most important of which is the absence of overt wh-movement in the derivation of *ʔilli*-interrogatives, whether involving PRON or not. This entails that *ʔilli*-interrogatives, though involving a clause-initial wh-phrase, are another type of in-situ wh-questions in JA, thus adding a further instance to what I am calling pseudo wh-fronting. This overall approach has the potential of being extended to other superficially similar structures, such as equative sentences in Arabic and identificational sentences in Hebrew, where it may be able to surmount the theoretical and empirical problems already detected in the existing analyses. Finally, under my analysis, the inventory of wh-interrogatives across Arabic varieties is pruned by cutting out unnecessary complications where another simpler and more straightforward analysis is feasible.

Endnotes

1. It is worth mentioning at this juncture that there are two distinct complementizers in JA. The first is the relative complementizer *ʔilli*, which introduces relative clauses. The second is the sentential complement complementizer *ʔinno*, which introduces complement clauses (See also Ouhalla 2004; Aoun et al 2010; Shaheen 2012). The following are illustrative examples.

(i) maha galit   *ʔinno/*ʔilli* ʔil-walad   kasar   iš-šubbak.
    Maha said.3FS that   the-boy broke.3MS the-window
    'Maha said that the boy broke the window.'

(ii) maha   šafat   ʔil-walad   *ʔilli/*ʔinno* kasar   iš-šubbak.
     Maha   saw.3FS the-boy that   broke.3MS the-window
     'Maha saw the boy that broke the window.'

Since the two complementizers have the same English translation (i.e., 'that'), I will mark the relative complementizer *ʔilli* in italics and boldface throughout the examples in this chapter. This will help identify relative clauses which form an integral part of the wh-construction under investigation.

2. The transcriptional conventions, gloss translations and English translations of the examples cited from Al-Momani & Al-Saidat (2010), as well as other sources, are taken as is. No modifications have been made.

3. Under Al-Momani & Al-Saidat's (2010) movement analysis, the resumptive pronoun could perhaps be regarded as an overt spell-out of the trace of wh-movement (as proposed, e.g., by Wahba (1984) for Egyptian Arabic), but Al-Momani and Al-Saidat do not explicitly propose this. See, however, Cheng (1991) and Soltan (2012) for argumentation against Wahba's (1984) analysis.

4. Cheng's (1991) Clausal Typing Hypothesis (CTH) assumes that "every clause needs to be typed. In the case of typing a wh-question, either a wh-particle in C is used or else fronting of a wh-word to the Spec of C is used, thereby typing a clause through C by Spec-head agreement" (p. 29). This hypothesis means that languages that have syntactic wh-movement, English for example, use it to type a sentence as interrogative. Languages that do not have syntactic wh-movement, such as Mandarin Chinese, use another strategy to type a clause as interrogative, i.e., by using question particles. In addition, and based on Chomsky's (1991) principle of Economy of Derivation, Cheng (1991) proposes that no language can use both strategies to type a clause as a wh-question.

5. All the Egyptian examples in this section were cited by Cheng (1991), and were in turn taken from Wahba (1984).

6. The view that the pronominal copula (or PRON) is obligatory in Arabic clefts is held by Ouhalla (1999). This view is also held by all my informants and by me. However, Abdel Razaq (2011) considers PRON to be not obligatory in cleft sentences and argues, building on certain prosodic/pronunciational patterns, that it is possible to have a cleft sentence without PRON. In other words, he argues that there are two different cleft structures in Arabic: clefts lacking PRON and clefts involving PRON. (He extends this cleft analysis to *ʔilli*-interrogatives as will be shown in this chapter.) Nevertheless, none of my informants has

accepted PRON-less clefts or judged them as grammatical structures (nor do I). Therefore, I will follow the steps of Ouhalla (1999) and continue considering PRON obligatory in cleft sentences, thus dispensing with Abdel Razaq's assumption that PRON is not obligatory in typical cleft sentences.

7. In addition to the two types of definite relative clauses discussed in this section, JA makes use of another type of relative clause, namely, indefinite relative clauses. Indefinite relatives differ from both full/headed definite relatives and free/headless definite relatives in two ways: (i) indefinite relatives lack the relative complementizer *ʔilli* 'that' altogether, and (ii) indefinite relatives modify an indefinite head noun. The resumption facts observed in full and free definite relatives, however, hold with indefinite relatives as well. I disregarded indefinite relatives completely here as they are irrelevant to the discussion of the wh-question under examination. The interested reader is referred to Al-Momani's (2010) study for more details on indefinite relative clauses in Jordanian Arabic.

8. Abdel Razaq's (2011) assumption regarding the non-obligatoriness of PRON in cleft sentences (as well as in equative copular sentences) is built upon a similar earlier observation made by Cowell (1964) for equational sentences in Syrian Arabic. Under this assumption, Abdel Razaq (2011) analyzes equativs lacking PRON, clefts lacking PRON and wh-clefts lacking PRON as verbless subject-predicate structures.

9. The left-dislocation/topic-comment nature of sentences involving PRON is traced back to Edwards' (2006) analysis of equative copular sentences in Egyptian Arabic which make use of PRON too. Under Edwards' analysis, PRON is treated as a subject pronoun that originates in the thematic subject position in a subject left-dislocation structure (but see section 5.7.4.1 below). Abdel Razaq (2011) extends Edwards' subject left-dislocation analysis as well as his characterization of PRON as a subject pronoun to other Arabic constructions that involve PRON: equative sentences, cleft sentences and wh-clefts. However, as the discussion unfolds, I take a more in-depth look at the details of these two analyses and outline a set of arguments demonstrating that, though having much to commend them, these analyses are still in need of revision (see section 5.7.4 below). The new analysis I am offering for *ʔilli*-interrogatives with PRON has the potential to be extended to other constructions with PRON such as equative constructions and wh-cleft sentences in Arabic.

10. See also Aoun, Choueiri & Hornstein (2001) for more argument on the possibility of strong subject pronouns to resume an antecedent in an A'- position.

11. It is worth mentioning here that it is also possible to have full/headed relative clauses in *ʔilli*-interrogatives, both involving and lacking PRON, as shown in the following examples.

  (i) a. **Wh-phrase as animate subject**
      (huwweh) **mi:n$_i$** (**hiyyeh**)   ʔil-binit$_i$ ***ʔilli*** šafat   iz-zalameh ʔimbariH?
       Q   **who** (**PRON.she**)   the-girl   **that** saw.3FS the-man   yesterday
      'Who is she such that she is the girl that saw the man yesterday?'

    b. **Wh-phrase as in animate subject**
      (huwweh) **eiš**(**huwweh**)   il-eši$_i$ ***ʔilli*** Saar   ʔimbariH?
       Q   **what** (**PRON.it**) the-thing   **that** happened.3S yesterday
      'What is it such that it is the thing that happened yesterday?'

c. **Wh-phrase as animate direct object**
   (huwweh) **mi:n$_i$** (**hiyyeh**)   ʔil-binit$_i$ *ʔilli* iz-zalameh šaf-**ha$_i$**   ʔimbariH?
   Q   **who** (**PRON.she**) the-girl **that** the-man   saw.3MS-**her** yesterday
   'Who is she such that she is the girl that the man saw her yesterday?'

d. **Wh-phrase as inanimate direct object**
   (huwweh) **eiš$_i$** (**huwweh**) il-eši$_i$ *ʔilli* iz-zalameh ištar-**ah$_i$**   ʔimbariH?
   Q   **what** (**PRON.it**) the-thing **that** the-man   bought.3MS-**it** yesterday
   'What is it such that it is the thing that the man bought it yesterday?'

However, such structures are uncommon. This can be explained in light of the fact that the head of the relative clause in such cases is taken to be stylistically redundant as it can be easily identified depending on different factors. For example, the (in)animacy of the head of the relative clause is identifiable by virtue of the wh-phrase itself. The number and gender of the head of the relative clause is also identifiable through the resumptive clitic inside the relative clause in the context of object wh-phrases, and through the agreement features on the verb in the context of subject wh-phrases. Thus, it can be said that, though it is possible syntactically to have a full/headed relative clause in *ʔilli*-interrogatives, this structure is uncommon due to stylistic considerations (cf. Abdel Razaq 2011).

12. A left-dislocation analysis is also found in Abdel Razaq's (2011) account of equative wh-clefts involving PRON in different Arabic variaties. However, the details of my analysis are crucially different (see section 5.7.4.2 below on this issue and on problems with Abdel Razaq's left-dislocation analysis).

13. It is worth reaffirming here that, under Abdel Razaq's (2011) analysis, *ʔilli*-interrogatives, whether involving or lacking PRON, are analyzed as equative "wh-clefts". This is because Abdel Razaq considers PRON not obligatory in both typical cleft sentences (contra Ouhalla 1999) and in equative copular sentences as well (contra Eid 1991, 1992; Ouhalla 1999; Edwards 2006; Al-Horais 2006). The outcome of this characterization is that *ʔilli*-interrogatives whether involving or lacking PRON are equative cleft structures. However, the left-dislocation analysis is found only with *ʔilli*-interrogatives involving PRON (and with clefts and equatives involving PRON as well). As for *ʔilli*-interrogatives lacking PRON, they were analyzed as basic simple subject-predicatte constructions (similar to clefts and equatives lacking PRON), which is Abdel Razaq's analysis that I have highlighted in sections 5.4 and 5.5 above and shown to be problematic on several grounds. The discussion in this subsection, however, is intended to address Abdel Razaq's left-dislocation aanalysis of *ʔilli*-interrogatives involving PRON (i.e., "left-dislocated equative wh-clefts" involving PRON).

14. This analysis is essentially the same as that suggested for copular sentences by Moro (1990), with the difference that the small clause is assumed to be the complement of V.

15. The example in (57c) clearly indicates that there is no restriction on where a small clause itself can be a subject. The small clause "Tommy and Zaneeta in a relationship" is the subject of another small clause. This indeed triggers another plausible analysis for cleft sentences in Arabic in which the PRON and the nominal f-phrase form a subject-predicate small clause itself a subject of the nominal free relative clause.

16. Kitagawa (1985) also argues that small clauses must be bigger than the maximal XP projections (contra Stowell (1981, 1983) and concludes that Stowell's analysis is incorrect.

Alternatively, based on the observation that extraction out of small clauses is fully acceptable as shown below, Kitagawa argues that Small clauses must contain COMP (=C), and he concludes that small clauses are category S' (CP in today's terms) (but see Balazs (2012) for argument against Kitagawa's analysis).

(i) Who$_i$ did Marcellus consider [S' t$_i$ [S t$_i$ [INFL Ø [NP a great con man]]]]?

(Balazs 2012: 18)

Chapter 6
Summary, conclusions and questions for future research

6.1   Summary and conclusions

Natural languages come in basically two major types in terms of wh-question formation: (i) The English type which requires its wh-phrases to be overtly moved to [Spec, CP] and disallows in-situ wh-phrases, and (ii) the Chinese type which keeps wh-phrases in-situ and disallows overt wh-extraction to [Spec, CP]. This dissertation has provided an in-depth examination of the syntax of wh-question formation in JA with the goal of providing a uniform analysis of the derivation of the different wh-constructions available in the language. At first glance, JA looks as if it belongs to both types, as its wh-phrases can surface either clause initially or clause internally. Of the five distinct wh-constructions in JA, four surface with a clause-initial wh-phrase (similar to English wh-questions) and the fifth is a typical in-situ strategy whereby the wh-phrase surfaces clause internally (similar to Chinese wh-questions). This description gives the impression that JA is an optional wh-movement language in the sense that it allows wh-phrases to either move to [Spec, CP] or stay in-situ.

The most obvious account of the Jordanian Arabic situation is a split analysis that adopts Huang's (1982) covert movement analysis for in-situ wh-questions and Chomsky's (1977, 1995) overt movement analysis for wh-questions with clause-initial wh-phrases. However, such an analysis is undesirable on both theoretical and empirical grounds. Theoretically, it entails the postulation that JA applies wh-movement at LF for in-situ wh-questions and in syntax for wh-questions with clause-initial wh-phrases, a distinction that appears to be nothing more than an ad-hoc stipulation. Empirically, it fails to account for the island insensitivity of in-situ wh-questions as well as other types of wh-question involving clause initial wh-phrases in the language: CLLD and *ʔilli* wh-questions.

The approach adopted in this dissertation starts with abandoning the classification of JA as a wh-movement language (Abdel Razaq 2011) and rejecting the wh-movement analysis (Chomsky 1977, 1995) as the mechanism responsible for clause-initial wh-phrases in JA. Based on a close inspection of the syntax of each JA wh-construction, I have argued that the clause-initial position of JA wh-phrases has nothing to do with wh-movement to [Spec, CP]. Rather, it is simply a result of the syntactic function the wh-phrase serves. It was shown that the wh-phrase can function as a subject in either a verbal or verbless structure, hence surfacing clause-initially in [Spec, TP]. It was also shown that the clause-initial surfacing of the wh-phrase can be the result of other mechanisms such as CLLD or focus fronting whereby it surfaces in [Spec, TopP] or [Spec, FocP] respectively.

As for the typical in-situ strategy in JA, Pesetsky's (1987) unselective binding was adopted. Empirical evidence from island effects and intervention effects was adduced in favour of a non-movement analysis of in-situ wh-questions in JA. On the face of it, JA looks similar to English as four types of the interrogative constructions it uses involve clause-initial wh-phrases. However, the closer inspection of subject wh-questions, CLLD wh-questions and *ʔilli* wh-questions reveals that they, though apparently fronted wh-constructions, cluster with the typical in-situ type in terms of island insensitivity. In addition, the sentence-initial position turns out to be the canonical position of the wh-phrase in such constructions and is warranted without the application of syntactic wh-movement. Therefore, these interrogative constructions are treated as concealed species of the in-situ strategy found in Chinese. If a valid case can be made for similarity with in-situ wh-languages such as Chinese and Japanese, it is that the only Jordanian wh-question with a clause-initial wh-phrase that exhibits island effects should be taken to be an instance of focus-fronting rather than wh-fronting.

The binding analysis advanced for typical in-situ questions in JA was extended to the other wh-constructions in the language. The adoption of unselective binding (Pesetsky 1987) makes available a framework that can uniformly account for the interpretation of all types of wh-question in JA. It also enables us to understand all JA wh-constructions as in-situ structures. The details of this binding analysis can be summarized as follows. There is always a null interrogative operator in C that can unselectively bind the wh-phrase in:

(i) a clause internal argument or adjunct position, giving rise to the typical in-situ strategy (whether with subject or non-subject wh-questions),

(ii) a left peripheral position associated with a clause-internal resumptive element, giving rise to left-dislocated wh-questions (whether CLLD questions or *ʔilli* questions involving PRON), or

(iii) a left peripheral position associated with a clause-internal trace, giving rise to focus fronted wh-questions.

The following table summarizes the major syntactic properties for each wh-construction in JA.

Table 1
Syntactic properties of wh-questions in JA

	Focus fronted wh-questions	CLLD wh-questions	In-situ non-subject wh-questions	In-situ subject wh-questions	*ʔilli* wh-questions
Position of wh-phrase	Sentence-initial position	Sentence-initial position	Sentence-internal argument or adjunct position	Sentence-initial position	Sentence-initial position
Permissible Wh-words	All	Only nominal	All	Only nominal	Only nominal
Questioning PP's	Yes	No	Yes	No	No
Island sensitivity	Yes	No	No	No	No
Derivational mechanism	Unselective binding	Unselective binding	Unselective binding	Unselective binding	Unselective binding
Binding operator	Null operator in CP	Null operator in CP	Null operator in CP	Null operator in CP	Null operator in CP
Bound variable	The clause-initial focus fronted argument or adjunct wh-phrase in [Spec, FocP]	The clause-initial CLLD'ed nominal wh-phrase in [Spec, TopP]	The clause-internal argument or adjunct wh-phrase	The clause-initial nominal wh-phrase in [Spec, TP]	The clause-initial nominal wh-phrase in [Spec, TP] when PRON is absent or in [Spec, TopP] when PRON is involved

Though focus fronted wh-questions, CLLD wh-questions, subject wh-questions and *ʔilli* wh-questions in JA involve apparently fronted wh-phrases, their derivation does not involve bona fide wh-movement in the classical sense (i.e., to [Spec, CP]). The clause-initial position of wh-elements in these wh-constructions is just a side effect of the underlying structure of each type. Specifically, it can be predestined by virtue of being a focalized element in a focus structure, a topic in a (clitic-) left-dislocated structure or the subject of the structure, which all happened to be canonically clause-initial in the language. Therefore, it can be generalized that such wh-questions instantiate cases of pseudo wh-fronting: Though all these wh-

constructions look as if they were derived via overt wh-movement to [Spec, CP], it turns out that the clause-initial position of the wh-phrase is the in-situ /first-merge position of the wh-phrase (as in the case of CLLD wh-questions, subject wh-questions and *ʔilli* wh-questions), or is the result of focus movement (as in the case of focus fronted wh-questions), without the application of wh-movement to [Spec, CP]. The differences with respect to the type of wh-elements allowed in each wh-construction, the optional Q-particle *huwweh* that can introduce any wh-construction in the language, island facts and embedded contexts have constituted extra evidence for my overall analysis.

Thus, it can be concluded that the Jordanian data further support that the syntactic mechanism of movement (Chomsky 1977) is not the only operation involved in deriving wh-constructions. Rather, the unselective binding framework (Baker 1970; Pesetsky 1987; Chomsky 1995) is still needed in natural language grammar as it can straightforwardly capture the discrepancies that some wh-constructions exhibit: being island insensitive and concurrently involving a clause-initial wh-expression.

Since I propose that there are no cases of wh-movement of the wh-phrase to [Spec, CP], either overtly in syntax or covertly at LF, the apparent optionality displayed by JA in terms of wh-question formation transpires to be just apparent. Wh-questions with initial wh-phrases and wh-questions with in-situ wh-phrases correspond to different derivations, syntactic structures and semantic interpretations. There are no two derivations that share the same interpretation or numeration.

Given the clause-initial position of the wh-phrase, it is understandable that several Arabic wh-constructions have been analyzed as involving wh-movement in previous research (e.g. Wahba 1984; Shlonsky 2002; Lassadi 2005; Al-Momani & Al-Saidat 2010; among others). However, the closer inspection reveals that the syntactic properties of such wh-constructions are precisely that of in-situ ones. Nothing a priori prevents adopting a non-

movement analysis for wh-questions with clause-initial wh-phrases. One must carefully investigate at least the canonical structural position of wh-phrases in different wh-constructions, closing the loophole available to wh-movement to [Spec, CP] especially when there is no evidence for its application. All in all, the study of Arabic wh-questions in general and those of JA in particular contributes to our overall understanding of the range of possible variation in wh-question formation and long-distance dependencies.

The analysis proposed, besides successfully avoiding the inaccurate classification of JA as a wh-movement language, explains all the facts surrounding the asymmetries observed between different wh-constructions in a principled manner. The different question types are derived from different underlying structures that are independently motivated by structural and pragmatic factors. The initial surfacing of the wh-phrase in such wh-questions is just the result of the syntactic function it realizes in these structures (being a subject, focus fronted element or left-dislocated constituent). I contend that accounting for the variation in forming wh-questions in a single language in this way is more explanatory than arbitrarily choosing overt/covert movement or strong/weak features.

The major implication of this analysis is that JA, though it looks like a wh-movement language of the English type, is in fact an in-situ wh-language of the Chinese type, contra the putative wh-movement classification (Abdel Razaq 2011). My overall analysis is also consistent with the well-known typological generalization that in-situ languages make use of question particles (cf. Baker 1970; Cheng 1991).

The proposed analysis is compatible with Cheng's (1991) Clausal Typing Hypothesis (CTH), which assumes that a given clause is typed as a wh-question either by movement to [Spec, CP] or by a question particle. Under economy considerations, no single language should make use of both options. Adopting a split analysis whereby JA is taken to be both a wh-movement and in-situ language at the same time would contradict the CTH. My analysis

provides a principled solution to this problem as JA transpires to be an in-situ language whose wh-questions are invariably typed by a null interrogative morpheme irrespective of the surface position of the wh-phrase. The recognition of the null interrogative particle, or its optional overt realization as the Q-particle *huwweh*, as the locus of interrogative clause typing in all JA wh-questions entails that JA employs just one unique strategy to type a clause as a wh-question, as predicted by Cheng's Clausal Typing Hypothesis, regardless of whether the wh-phrase surfaces clause-initially or clause-internally.

One further interesting consequence of the current analysis is that the mapping of the left periphery in Arabic, which was first proposed by Shlonsky (2000) for declarative constructions, can be extended to wh-interrogative constructions in the language and can provide a straightforward account for their different syntactic properties. The projections TopP and FocP, which normally host non-wh left-peripheral elements, were shown to be suitable hosts for wh-phrases as well. Extending this split-CP analysis to cover wh-constructions is useful as it was capable of capturing a widely neglected aspect of wh-questions in JA, namely, the Q particle *huwweh*. Also, it successfully captured the asymmetries attested by both focus fronted and CLLD questions in terms of island effects and gap versus clitic asymmetry. Finally, adopting an analysis that can accommodate two wh-constructions under the notion of CLLD/left-dislocation is also potentially revealing with respect to the overall implications for the analysis of wh-questions in general and those in Arabic in particular. It opens new windows on the potential mechanisms employed for forming wh-questions. Thus, on a par with Cheng's (1991) wh-clefting in some optional wh-fronting languages, I contend that left-dislocation should be added to the inventory of representations available for the derivation of wh-interrogatives, at least in certain languages.

More research is certainly needed to further develop the insights suggested in this study and to extend the analysis so as to cover a wider variety of languages. It is my hope, having

discarded the LF movement analysis and defended a non-movement approach, that wh-questions in a typologically broad set of languages can be tested for correlations between the initial position of wh-phrases and the application of a bona fide wh-movement. Extending the current analysis to other languages will deepen our understanding of wh-question formation by revealing additional instances of pseudo wh-fronting.

6.2 Variation in wh-question formation across Arabic dialects: A topic for future research

Different Arabic dialects exhibit clear variation in terms of the strategies they employ in wh-question formation and in the distribution of wh-phrases within each strategy. For instance, Standard Arabic (SA) does not allow the in-situ strategy except for echo readings (Fassi-Fehri 1993; Gad 2011) and very restricted contexts such as scholastic usages (Aoun et al 2010). Egyptian Arabic (EA), by contrast, employs the in-situ strategy as its default mechanism for forming wh-interrogatives to the exclusion of the moved/gap strategy (i.e., the "focus-fronting strategy" under my analysis); only wh-adjuncts in EA, but not wh-arguments, can be fronted while associated with a clause-internal gap (and only marginally) (cf. Wahba 1984; Osman 1990; Lassadi 2005; Aoun et al 2010; El-Touny 2011; Gad 2011; Soltan 2011, 2012).

With the exception of EA, almost all Arabic dialects allow fronting wh-phrases to a clause-initial position with a gap marking its clause-internal site (the "focus fronting" strategy under my analysis). (See Fassi-Fehri 1993, Aoun et al 2010, Gad 2011, Alotaibi 2013 and Al-Shorafat 2013 for Standard Arabic; Aoun & Choueiri 1999 and Aoun et al 2010 for Lebanese Arabic; Wahba 1991 and Ouhalla 1996 for Iraqi Arabic; Nouhi 1996 for Moroccan Arabic; Shlonsky 2002 and Abu-Jarad 2008 for Palestinian Arabic.) My focus fronting analysis of this wh-construction in JA has the potential to be extended to all these moved/gap structures across all these dialects as it provides a uniform analysis of this wh-construction

across these dialects. My analysis can also straightforwardly capture the widely-neglected question particle which is found in almost all these dialects. More importantly, the focus fronting analysis advanced in this study can avoid the assumed optionality in the case a given dialect makes use of both the moved/gap strategy and in-situ strategy, as will be shown shortly.

CLLD wh-questions have not received as much attention as the typical fronted/moved/gap wh-questions in the literature. They have been briefly discussed only in Lebanese Arabic (Aoun & Choueiri 1999; Aoun et al 2010), Standard Arabic (Aoun et al 2010) and Jordanian Arabic (Abdel Razaq 2011) under the label of "resumptive wh-questions". Aoun & Choueiri (1999) and Aoun et al (2010) adopt a base-generation analysis of this wh-construction in Standard and Lebanese Arabic in which the wh-element is taken to be base-generated in [Spec, CP]. They did not acknowledge the left-dislocated nature of this wh-construction or the optional question particle that can surface before the wh-phrase. Abdel Razaq (2011) does not provide a comprehensive analysis of this wh-construction. He is only concerned with investigating the internal morpho-syntactic structure of the wh-phrase *šu* 'what', which is disallowed in this wh-construction in Lebanese Arabic. However, nothing a priori prevents the existence of this wh-construction in the other Arabic dialects as CLLD constructions are common across these dialects. My CLLD analysis has the potential to be extended to these dialects as well. It was shown that resumption is not an independent interrogative strategy on its own (contra Aoun & Choueiri 1999; Aoun et al 2010; Abdel Razaq 2011). Rather, under my analysis, resumption is generated as a side-effect of CLLD in such wh-constructions.

ʔilli-interrogatives have been documented in all the examined Arabic dialects; however, they have received different analyses. (See Aoun et al 2010 for Standard and Lebanese Arabic; Shlonsky 2002 and Abu-Jarad 2008 for Palestinian Arabic; Al-Momani & Al-Saidat

2010 for Jordanian Arabic; Wahba 1984, Osman 1990, Cheng 1991, Lassadi 2005, Gad 2011, Soltan 2011 for Egyptian Arabic.) *ʔilli*-interrogatives in Egyptian Arabic, for example, were analyzed under the wh-movement schema (Wahba 1984; "nominal wh-questions" in her terminology), LF movement (Osman 1990; "relativized wh-questions" in her terminology), and focus movement (Lassadi 2005; Gad 2011). All these analyses were triggered by the island sensitivity of this wh-construction in EA. However, Cheng (1991) and Soltan (2012) argue that *ʔilli*-interrogatives in EA are island insensitive and, thus, cannot be derived via wh-movement. They instead opt for a wh-cleft analysis of this wh-construction. Abdel Razaq (2011) adopts a wh-cleft analysis for *ʔilli*-interrogatives ("wh-clefts" in his terminology) in different Arabic dialects as well, though the details of his analysis are different (as was shown in chapter 5). Shlonsky (2002) proposes a copular/identificational analysis for *ʔilli*-interrogatives in Palestinian Arabic ("Class II" wh-questions in his terminology). Shlonsky's analysis was extended to Lebanese and Standard Arabic by Aoun et al (2010).

My analysis of *ʔilli*-interrogatives in JA, though it shares some features with some of these analyses, differs from all of them. For example, I reject any wh-movement in the derivation of *ʔilli*-interrogatives for several empirical reasons. Also, I reject the cleft nature of this wh-construction on empirical grounds. Finally, I reject the assumption that *ʔilli*-interrogatives are a second class of the resumption strategy (as Aoun & Choueiri 1999; Aoun et al 2010 claim). I instead propose that the resumptive clitic manifested in this interrogative construction is merely a side-effect of the underlying structure that feeds this type of wh-question whereby there is always a free relative clause. Recall that resumptive clitics are among the hallmarks of relative clauses in Arabic (see section 5.4). I suggest that my analysis can be extended to *ʔilli*-interrogatives in any of these Arabic dialects as it can provide the needed unified analysis and straightforwardly capture the question particle which is widely neglected in these analyses.

With the exception of Standard Arabic (Fassi-Fehri 1993; Aoun et al 2010; Gad 2011), in-situ wh-questions are documented in almost all the examined Arabic dielects, with some variation in the distribution of wh-phrases within this strategy. For example, in Egyptian Arabic (Wahba 1984; Lassadi 2005; Gad 2011; Soltan 2012), Jordanian Arabic (Al-Momani & Al-Saidat (2010), Palestinian Arabic (Abu-Jarad 2008) and Iraqi Arabic (Wahba 1991; Ouhalla 1996), all wh-phrases can stay in-situ. However, Lebanese Arabic exhibits some variation in this regard. While all nominal wh-phrases in Lebanese can remain in situ, the wh-phrase *šu* 'what' diverges from this pattern in the sense that it cannot stay in-situ. Furthermore, while "referential" adverbial wh-phrases in Lebanese Arabic (i.e., 'when' and 'where') can remain in situ in simplex and complex sentences, "non-referential" adverbial wh-phrases (i.e., 'why' and 'how') are only marginally acceptable in simplex sentences (Aoun & Choueiri 1999; Aoun et al 2010). According to Aoun & Choueiri (1999), the ban on *šu* 'what' is related to d-linking factors. Abdel Razaq (2011) pursues a rather different path to account for the ban on this wh-phrase in in-situ questions in Lebanese Arabic, building mainly on its internal syntactic structure. He concludes that this wh-phrase is a CP, hence cannot stay in any argument position.

In addition to the variation that Arabic dialects exhibit with regard to the in-situ strategy, there is a variation in the analysis of this type of wh-question as well. For example, Wahba (1994) and Osman (1990) propose that in-situ wh-phrases in Egyptian Arabic undergo LF movement as they observe the constraints on wh-movement, i.e., Subjacency. Similarly, Wahba (1991) adopts the LF movement analysis for Iraqi in-situ wh-questions. According to her, LF movement is similar to overt movement in that it is subject to several locality conditions. However, other Arab linguists opt for the unselective binding analysis to account for in-situ wh-questions (cf. Ouhalla (1996) for Iraqi Arabic; Aoun & Choueiri (1999) and Aoun et al (2010) for Lebanese Arabic; Soltan (2012) for Egyptian Arabic).

Several questions immediately arise at this point: (i) Why do some Arabic dialects allow more wh-interrogative strategies than others? (ii) Why do some Arabic dialects impose restrictions on the type of wh-phrase in different strategies? (iii) What is the appropriate analysis of each interrogative strategy in these dialects (in light of the lack of consensus among Arab linguists)?

It is clear at this point that more work is needed to provide comprehensive answers to these questions. Identifying the reasons that stand behind the interrogative strategies allowed in each Arabic dialect as well as the distribution of wh-phrases within each strategy across different Arabic dialects are topics worthy of discussion in their own right. For example, the ban on wh-in-situ in SA is worth further investigation. Similarly, the reasons for the ban on the gap/fronted strategy in EA, unlike almost all other spoken dialects, should be addressed on its own. It is not clear so far whether a morphosyntactic approach of the type adopted by Ouhalla (1996) for Iraqi Arabic and Abdel Razaq (2011) for Iraqi and Lebanese Arabic, for example, can provide comprehensive answers to all these questions. Though the internal complex morpho-syntactic structure of individual wh-phrases can account for part of this variation, under the assumption that the internal structure of wh-phrases affects their external syntax (in the sense of Ouhalla (1996) and Abdel Razaq (2011)), more work is still needed to validate this line of research. More importantly, a uniform analysis of the type advanced for JA in the present study is undoubtedly needed for at least each Arabic dialect, regardless of the internal morphho-syntactic structure of different individual wh-phrases in these dialects.

The above-mentioned facts also suggest that a rigid parametric approach is too broad to capture the variation exhibited by different Arabic dialects. Since different dialects within the Arabic family allow both the moved and in-situ strategies, the parametric classification is clearly not sufficient to describe these dialects and a micro-parametric variation should therefore be acknowledged. Nothing in principle prevents employing different mechanisms in

the derivation of wh-questions in different Arabic dialects, but the grammatical criteria for any analysis should be clear. Otherwise put, the research agenda should maintain a unified treatment of the grammatical constraints that govern wh-constructions while investigating different dialects, and even languages.

I propose, for example, that island effects should be taken seriously to determine the mechanism responsible for interpreting different wh-questions in different Arabic dialects. If the different dialects cannot be subsumed under a unified classification due to the variation they exhibit, the general grammatical constraints that govern wh-constructions should at least be treated uniformly. I have argued that in-situ wh-phrases can attain scope either through LF movement when the constraints on overt movement (i.e., island constraints) are observed, or through unselective binding by a Q particle when they violate such constraints. Indeed, this path has been pursued by many linguists (see, e.g., Pesetsky 1987, 2000; Cole & Hermon 1994, 1998; Richards 2001; Bruening & Tran 2006; among others).

Finally, the clause-initial position of the wh-phrase should not be a motivation for launching a wh-movement analysis as this clause-initial position is not always necessarily the result of bona fide wh-movement to [Spec, CP]. It can be the result of focus fronting or the result of another mechanism that exists more generally in the language such as CLLD, hence an instance of pseudo wh-fronting.

References

Abdel Razaq, I. (2011). *Who is what and what is who: The morpho-syntax of Arabic wh.* (Doctoral dissertation). Queen Mary, University of London.

Abdul-Ghany, M. (1981). *Government binding in classical Arabic* (Doctoral dissertation). University of Texas, Austin.

Abu-Jarad, H. (2008). Wh-movement in Palestinian Arabic. *Journal of Al-Azhar University, 10*(1-b), 49-62.

Agbayani, B. (2000). Wh-subjects in English and the vacuous movement hypothesis. *Linguistic Inquiry, 31*, 703-713.

Alexiadou, A. & Anagnostopoulou, E. (1998). Parametrizing AGR: Word order, V-movement and EPP-checking. *Natural Language and Linguistic Theory, 16*(3), 491-539.

Alexiadou, A. & Anagnostopoulou, E. (1999). EPP without Spec, IP. In David Adger, Susan Pintzuk, Bernadette Plunkett, & George Tsoulas (Eds.), Specifiers: Minimalist approaches (pp. 93-109). Oxford University Press, Oxford.

Al-Horais, N. (2006). Arabic verbless sentences: is there a null VP? *Pragmalinguistica, 14*, 101-116.

Al-Momani, I. (2010). Direct object relative clauses in Jordanian Arabic: A minimalist approach. *International Journal of Academic Research, 2*(3), 226-237.

Al-Momani, I. & Al-Saidat, E. (2010). The syntax of wh-movement in Jordanian Arabic. *European Journal of Scientific Research, 40*(4), 609-628.

Al-Shorafat, M. (2013). A phase-based account of wh-questions in Standard Arabic. *Linguistics and Literature Studies, 1*(4), 179-190. Retrieved from: http://www.hrpub.org/download/20131201/LLS2-19300741.pdf

Alotaibi, M. (2013). A problem with wh-questions in Modern Standard Arabic. *Language at the University of Essex (LangUE) Proceedings* (pp. 1-8). Essex University, UK. Retrieved from: http://www.essex.ac.uk/langling/documents/langue/langue_2012_proceedings.pdf

Alsayed, A. (1998). *A government-binding approach to restrictive relatives, with particular reference to restrictive relatives in Standard Arabic* (Doctoral dissertation). University of Essex.

Aoun, J. (1985). *A grammar of anaphora*. Cambridge, Mass.: MIT Press.

Aoun, J. (1986). *Generalized binding: The syntax and logical form of wh-interrogatives*. Dordrecht: Foris.

Aoun, J. (1999). Clitic-doubled arguments. In Kyle Johnson & Ian Roberts (Eds.), *Beyondprinciples and parameters: Essays in memory of Osvaldo Jaeggli* (pp. 13-42). Dordrecht: Kluwer Academic Publishers.

Aoun, J. & Benmamoun, E. (1998). Minimality, reconstruction, and PF movement. *Linguistic Inquiry, 29*(4), 569-597.

Aoun, J., & Benmamoun, E. (1999). Gapping, PF merger, and patterns of partial agreement. In Shalom Lappin & Elabbas Benmamoun (Eds.), *Fragments: Studies in ellipsis and gapping* (pp. 175-192). New York: Oxford University Press.

Aoun, J., Benmamoun, E., & Choueiri, L. (2010). *The syntax of Arabic*. Cambridge: Cambridge University Press.

Aoun, J., Benmamoun, E., & Sportiche, D. (1994). Agreement, word order, and conjunction in some varieties of Arabic. *Linguistic Inquiry, 25*(2), 195-220.

Aoun, J. & Choueiri, L. (1997). *Resumption and last resort*. University of Southern California, Los Angeles.

Aoun, J. & Choueiri, L. (1999). Modes of interrogation. In Elabbas Benmamoun (Ed.), *Perspectives on Arabic Linguistics: Papers from the Annual Symposium on Arabic Linguistics XII* (pp. 7-26). Amsterdam: John Benjamins.

Aoun, J., Choueiri, l., & Hornstein, N. (2001). Resumption, movement, and derivational economy. *Linguistic Inquiry, 32*, 371-403.

Aoun, J. & Li, Y. (1993). Wh-elements in situ: Syntax or LF? *Linguistic Inquiry, 24*, 199-238.

Aoun, J. & Li, Y. (2003). *Essays on the representational and derivational nature of grammar: The diversity of wh-constructions*. Cambridge, Mass.: MIT Press.

Authier, J-Marc. (1992). Iterated CPs and embedded topicalization. *Linguistic Inquiry, 23*, 329-336.

Babby, L. (1980). *Existential sentences and negation in Russian*. Ann Arbor: Michigan, Karoma.

Bahloul, M. (1993). The copula in Modern Standard Arabic. In Mushira Eid & Clive Holes (Eds.), *Perspectives on Arabic Linguistics: Papers from the Annual Symposium on Arabic Linguistics V* (pp. 209-229). Amsterdam: John Benjamins.

Balazs, J. E. (2012). *The syntax of small clauses* (M.A. thesis). Cornell University, New York.

Baker, C. (1970). Note on the description of English questions: The role of an abstract question morpheme. *Foundations of Language, 6*, 197-219.

Baker, M. (2003). *Lexical categories: Verbs, nouns, and adjectives*. Cambridge: Cambridge University Press.

Bakir, M. (1980). *Aspects of clause structure in Arabic* (Doctoral dissertation). Indiana University, Indiana.

Bayer, J. (2005). Wh-in-situ. In Martin Everaert & Henk C. van Riemsdijk (Eds.), *The Blackwell companion to syntax, V* (pp. 376-438). Oxford: Blackwell Publishers.

Bayer, J. & Cheng, L. (2015). Wh-in-situ. In Martin Everaert & Henk van Riemsdijk (Eds.), *The Blackwell companion to syntax*, case #77.

Beck, S. (1996). Quantified structures as barriers for LF movement. *Natural Language Semantics, 4*, 1-56.

Beck, S. & Kim, S. (1997). On wh and operator scope in Korean. *Journal of East Asian Linguistics, 6*(4), 339-384.

Benmamoun, E. (1992). *Functional and inflectional morphology: Problems of projection, representation and derivation* (Doctoral dissertation). University of Southern California, Los Angeles.

Benmamoun, E. (2000). *The feature structure of functional categories: A comparative study of Arabic dialects*. Oxford: Oxford University Press.

Benmamoun, E. (2008). Clause structure and the syntax of verbless sentences. In Robert Freidin, Carlos P. Otero & Maria Luisa Zubizarreta (Eds.), *Foundational issues in linguistic theory* (pp. 105-131). Cambridge, Mass.: MIT Press.

Berman, E. & Grosu, A. (1976). Aspects of the copula in modern Hebrew. In P. Cole (Ed.), *Studies in modern Hebrew syntax and semantics* (pp. 265-285). North Holland, Amsterdam.

Boeckx, C. (2003). *Islands and chains: Resumption as stranding*. John Benjamins.

Borer, H. (1984). *Parametric syntax*. Dordrecht: Foris.

Borer, H. (1986). The syntax of pronominal clitics. In Hagit Borer (Ed.), *Syntax and semantics 19: The syntax of pronominal clitics*. New York: Academic Press.

Borsley, R. (1999). *Syntactic theory: A unified approach*. London: Arnold.

Boskovic, Z. (1997). Superiority effects with multiple wh-fronting in Serbo-Croatian. *Lingua, 102*, 1-20.

Boskovic, Z. (2002). On multiple wh-fronting. *Linguistic Inquiry, 33*(3), 351-383.

Bowers, J. (1993). The syntax of predication. *Linguistic Inquiry, 24*, 591-656.

Brody, M. (1990). Some remarks on the focus field in Hungarian. *University College of London Working Papers, 2*, 201-225.

Browning, M. A. (1996). CP recursion and that-t effects. *Linguistic Inquiry, 27*, 237-255.

Bruening, B. & Tran, T. (2006). Wh- questions in Vietnamese. *East Asian Linguist, 15*, 319-341.

Brustad, K. (2000). *The syntax of spoken Arabic: A comparative study of Moroccan, Egyptian, Syrian, and Kuwaiti dialects*. Washington, DC: Georgetown University Press.

Chang, L. (1997). *Wh-in-situ phenomena in French*. M.A thesis, University of British Columbia.

Chang, M. (2000). On Tsou wh-questions: Movement or in situ? *Language and Linguistics, 1*(2), 1-18.

Cheng, L. (1991). *On the typology of wh-questions* (Doctoral dissertation). MIT, Massachusetts.

Cheng, L. & Huang, C.-T. J. (1996). Two types of donkey sentences. *Natural Language Semantics, 4*, 121-163.

Cheng, L. (2003a). Wh-in-situ. *Glot International, 7*(4), 103-109.

Cheng, L. (2003b). Wh-in-situ. *Glot International, 7*(5), 129-137.

Cheng, L. (2009). Wh-in-situ: From the 1980s to now. *Language and Linguistics Compass, 3*(3), 767-791.

Cheng, L. & Rooryck, J. (2000). Licensing wh-in-situ. *Syntax*, 1-19.

Choe, H-S. (1987). *Restructuring parameters and scrambling in Korean and Hungarian*. Ms., MIT.

Chomsky, N. (1964). *Current issues in linguistic theory*. Mouton, The Hague. Chomsky, N. (1973). Conditions on transformations. In Stephen Anderson & Paul Kiparsky (Eds.), *A Festschrift for Morris Halle* (pp. 232-286). New York: Holt, Rinehart, & Winston.

Chomsky, N. (1977). On wh-movement. In Peter W. Culicover, Thomas Wasow & Adrian Akmajian (Eds.), *Formal syntax* (pp. 71-132). New York: Academic Press.

Chomsky, N. (1981). *Lectures on government and binding*. Dordrecht: Foris.

Chomsky, N. (1982). *Some concepts and consequences of the theory of government and binding*. Cambridge, Mass.: MIT Press.

Chomsky, N. (1986). *Barriers*. Cambridge, Mass.: MIT Press.

Chomsky, N. (1991). Some notes on economy of derivation and representation. In Robert Freidin (Ed.), *Principles and parameters in comparative grammar* (pp. 417-454). Cambridge, Mass.: MIT Press.

Chomsky, N. (1995). *The minimalist program*. Cambridge, Mass.: MIT Press.

Chomsky, N. (2000). Minimalist inquiries: The framework. In Roger Martin, David Michaels & Juan Uriagereka (Eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik* (pp. 89-115). Cambridge, Mass.: MIT Press.

Chomsky, N. (2001). Derivation by phase. In Michael Kenstowicz (Ed.), *Ken Hale: A life in language* (pp. 1-52). Cambridge, Mass.: MIT Press.

Chomsky, N. & Lasnik, H. (1977). Filters and control. *Linguistic Inquiry, 8*, 425-504.

Chomsky, N. & Lasnik, H. (1993). Principles and parameters theory. In J. Jacobs, A. von Stechow, W. Sternefield, & T. Vannemann (Eds.), *Syntax: An international handbook of contemporary research* (pp. 506-569). Berlin: de Gruyter.

Cinque, G. (1990). *Types of A'-dependencies*. Cambridge, Mass.: MIT Press.

Cinque, G. (1993). A null theory of phrase and compound stress. *Linguistic Inquiry, 24*(2), 239-298.

Cole, P. & Hermon, G. (1994). Is there LF wh-movement? *Linguistic Inquiry, 25*(2), 239-262.

Cole, P. & Hermon, G. (1998). The typology of wh-movement: Wh-questions in Malay. *Syntax, 1*(3), 221-258.

Contreras, H. (1987). Small clauses in Spanish and English. *Natural Language and Linguistic Theory, 5*(2), 225-243.

Cowell, M. (1964). *A reference grammar of Syrian Arabic*. Washington, DC: Georgetown University Press.

Dayal, V. (1991). Subjacency effects at LF: The case of Hindi wh. *Linguistic Inquiry, 22*(4), 762-769.

Dechaine, R.-M. (1993). *Predicates across categories* (Doctoral dissertation). University of Massachusetts, Amherst.

Declerck, R. (1988). *Studies on copular sentences, clefts and pseudo-clefts*. Dordrecht: Foris Publications.

Doron, E. (1983). *Verbless predicates in Hebrew* (Doctoral dissertation). University of Texas, Texas.

Doron, E. (1986). The pronominal copula as agreement clitic. In Hagit Borer (Ed.), *The syntax of pronominal clitics, vol. 19 of syntax and semantics* (pp. 313-332). New York: Academic Press.

Edwards, M. (2006). Pronouns, agreement and focus in Egyptian Arabic. *SOAS Working Papers in Linguistics, 14*, 51-62.

Eid, M. (1983). The copula function of pronouns. *Lingua, 59*, 197-207.

Eid, M. (1991). Verbless sentences in Arabic and Hebrew. In Bernard Comrie & Mushira Eid (Eds.), *Perspectives on Arabic Linguistics: Papers from the Annual Symposium on Arabic Linguistics III* (pp. 31-61). Amsterdam: John Benjamins.

Eid, M. (1992). Pronouns, questions, and agreement. In Ellen Broselow, Mushira Eid & John McCarthy (Eds.), *Perspectives on Arabic Linguistics: Papers from the Annual Symposium on Arabic Linguistics IV* (pp. 107-141). Amsterdam: John Benjamins.

El-Touny, K. (2011). Optionality in Cairene Arabic wh-questions between the minimalist program and optimality theory. *Studies in the Linguistic Sciences: Illinois Working Papers*, 16-35.

El-Yasin, M. (1985). Basic word order in classical Arabic and Jordanian Arabic. *Lingua, 65*(2), 107-122.

Falk, Y. (2004). The Hebrew present tense copula as a mixed category. In M. Butt & T. Holloway King (Eds.), *Proceedings of the LFG 04 Conference* (pp. 226-246). University of Canterbury, New Zealand. On-line: CSLI Publications.

Farghal, M. (1986). *The syntax of wh-questions and related matters in Arabic* (Doctoral dissertation). Indiana University, Indiana.

Farghal, M. (1994). The wh-movement hypothesis: Counterevidence from Arabic. *Papers and Studies in Contrastive Linguistics, 29*, 91-104.

Fassi-Fehri, A. (1993). *Issues in the structure of Arabic clauses and words*. Dordrecht: Kluwer.

Fiengo, R., Huang, C.-T. J., Lasnik, H. & Reinhart, T. (1988). The syntax of wh-in-situ. In Hagit Borer (Ed.), *Proceedings of the 7th West Coast Conference on Formal Linguistics* (pp. 81-98). Stanford.

Gad, R. (2011). *A syntactic study of wh-movement in Egyptian Arabic within the minimalist program* (Doctoral dissertation). University of Leeds.

Galal, M. (2004). *A minimalist approach to relative clauses in Modern Standard Arabic* (Doctoral dissertation). University of Kansas.

George, L. (1980). *Analogical generalization in natural language syntax* (Doctoral dissertation). MIT, Cambridge, Mass.

Groos, A. & van Riemsdijk, H. (1981). Matching effects in free relatives: A parameter of core grammar. In Adnana Belletti, Lucia Brandi & Luigi Rizzi (Eds.), *Theory of markedness in generative grammar*. Pisa: Scuola Normale Superiore.

Grosu, A. (1989). Pied piping and the matching parameter. *Linguistic Review, 6*, 41-58.

Guilliot, N. & Malkawi, N. (2006). When resumption determines reconstruction. *Proceedings of the West Coast Conference on Formal Linguistics, 25*, 168-176.

Guilliot, N. & Malkawi, N. (2011). Weak versus strong resumption: Covarying differently. In Alain Rouveret (Ed.), *Resumptive pronouns at the interfaces*. Amsterdam: John Benjamins Publishing Company.

Haegeman, L. (1994). *Introduction to government and binding theory*. Second edition. Oxford: Blackwell.

Hagstrom, P. (1998). *Decomposing questions* (Doctoral dissertation). MIT, Cambridge, Mass.

Harbert, W. (1992). Gothic relative clauses and syntactic theory. In Irrnengard Rauch, Gerald F. Carr & Robert L. Kyes (Eds.), *On Germanic linguistics: Issues and methods* (pp. 109-146). Berlin: Mouton de Gruyter.

Harbert, W., & Bahloul, M. (2002). Postverbal subjects in Arabic and the theory of agreement. In Jamal Ouhalla & Ur Shlonsky (Eds.), *Themes in Arabic and Hebrew syntax* (pp. 45-70). Dordrecht: Kluwer Academic Publishers.

Harris, A. & Campbell, L. (1995). *Historical syntax in cross-linguistic perspective*. Cambridge: Cambridge University Press.

Heggie, L. (1988). *The syntax of copular structures* (Doctoral dissertation). University of Southern California, Los Angeles.

Heim, I. (1982). *The semantics of definite and indefinite noun phrases* (Doctoral dissertation). University of Massachusetts, Amherst.

Heycock, C. & Kroch, A. (1999). Pseudocleft connectedness: Implications for the LF interface level. *Linguistic Inquiry, 30*(3), 365-397.

Higgins, F. (1979). *The pseudo-cleft construction in English*. New York: Garland Publication.

Hoh, P. & Chiang, W. (1990). A focus account of moved wh-phrases at S-structure in Chinese. *Lingua, 81*, 47-73.

Hornstein, N. & Lightfoot, D. (1984). *Rethinking predication*. Ms., University of Maryland.

Hornstein, N. & Lightfoot, D. (1987). Predication and pro. *Language, 63*(1), 23-52.

Horvath, J. (1976). Focus in Hungarian and the x' notation. *Linguistic Analysis, 2*, 175-197.

Horvath, J. (1986). *Focus in the theory of grammar and the syntax of Hungarian*. Dordrecht: Foris.

Hsu, P-L. (2010). Wh-in-situ, phase, and argument-adjunct asymmetry. In L. E. Clemens & C.-M. L. Liu (Eds.), *Proceedings of the 22nd North American Conference on Chinese Linguistics (NACCL-22) & the 18th International Conference on Chinese Linguistics (IACL-18), Vol 2* (pp. 209-219). Harvard University, Cambridge, MA.

Huang, C.-T. J. (1982). Move wh in a language without wh-movement. *The Linguistic Review, 1*, 369-416.

Jackendoff, R. (1972). *Semantic interpretation in generative grammar*. Cambridge, Mass.: MIT Press.

Jassim, Q. (2011). *Relative clauses in Iraqi Arabic and the status of resumptive pronouns* (M.A thesis). University of Barcelona. Retrieved from: http://filcat.uab.cat/clt/publicacions/reports/pdf/GGT-11-07.pdf.

Jelinek, E. (1981). *On defining categories: Aux and predicate in Egyptian colloquial Arabic* (Doctoral dissertation). University of Arizona, Tuscon.

Katz, J. & Postal, P. (1964). *An integrated theory of linguistic descriptions*. Cambridge, Mass.: MIT Press.

Kahnemuyipour, A. (2001). On wh-questions in Persian. *Canadian Journal of Linguistics, 46*(1/2), 41-61.

Kenstowicz, M. & Wahba, W. (1983). Wh-in-situ constructions in Egyptian Arabic. In M. Kenstowicz & W. Wahba (Eds.), *Current approaches to African linguistics, vol. 2* (pp. 261-281). Dordrecht: Foris.

Koopman, H., & Sportiche, D. (1991). The position of subjects. *Lingua, 85*, 211-258.

Kiss, K. (1987). *Configurationality in Hungarian*. Dordrecht: Foris.

Kiss, K. (1995). *Discourse configurational languages*. New York: Oxford University Press.

Kiss, K. (1998). Identificational focus versus information focus. *Language, 74*, 245-273.

Kitagawa, Y. (1985). Small but clausal. *Papers from the Regional Meeting of the Chicago Linguistic Society, 21*, 210-220.

Labov, W. (1995). The case of the missing copula: The interpretation of zeros in African American English. In L. Gleitman & M. Liberman (Eds.), *Language: An invitation to cognitive science 1* (pp. 25-54).

Lalami, L. (1996). Clitic left dislocation in Moroccan Arabic. In Mushira Eid & Dilworth Parkinson (Eds.), *Perspectives on Arabic Linguistics: Papers from the Annual Symposium on Arabic Linguistics IX* (pp. 115-129). Amsterdam: John Benjamins.

Lasnik, H. & Saito, M. (1984). On the nature of proper government. *Linguistic Inquiry, 15*(2), 235-289.

Lasnik, H. & Saito, M. (1992). *Move α: Conditions on its application and output*. Cambridge, Mass.: MIT Press.

Lassadi, B. (2005). *The syntax and semantics of optional wh-movement: The case of Egyptian Arabic* (Doctoral dissertation). University of Ottawa, Canada.

Mahajan, A. (1990). *The A/A-bar distinction and movement theory* (Doctoral dissertation). MIT, Cambridge, Mass.

Mahajan, A. (1994). Against the relevance of subjacency at LF: The case of Hindi wh. *Linguistic Inquiry, 25*, 171-178.

Mahfoudhi, A. (2002). Agreement lost, agreement regained: A minimalist account of word order and agreement variation in Arabic. *California Linguistic Notes, 27*(2), 1-28.

Makkawi, A. (2014). *Participles as non-verbal predicates* (M.A thesis). University of Manitoba, Canada.

Markman, V. (2008). Pronominal copula constructions are what? Reduced specificational pseudo-clefts! *Proceedings of the West Coast Conference on Formal Linguistics, 26*, 366-374.

Matheieu, E. (1999). Wh in situ and the intervention effect. *University College London Working Papers in Linguistics 11* (pp. 441-472). London: University College.

Megerdoomian, K. & Ganjavi, S. (2000). Against optional wh-movement. In Vida Samiian (Ed.), *Proceedings of the Western Conference on Linguistics*. California State University, Fresno.

McCloskey, J. (1979). *Transformational syntax and model theoretic semantics: A case study of Irish*. Dordrecht: Reidel.

McCloskey, J. (1990). Resumptive pronouns, A'-binding and levels of representation in Irish. In Randall Hendrick (Ed.), *Syntax and semantics 23: Syntax of the modern Celtic languages* (pp. 199-248). San Diego: Academic Press.

McCloskey, J. (1992). Adjunction, selection and embedded verb. *Working paper, Linguistics Research Center* (pp. 92-07). University of California: Santa Cruz.

McCloskey, J. (2006). Resumption. In M. Everaert & H. Riemsdijk (Eds.), *The Blackwell companion to syntax* (pp. 94-117). Blackwell, Malden.

Miyagawa, S. (1987). LF affix raising in Japanese. *Linguistic Inquiry, 18*, 362-367.

Mohammad, M. (1989). *The sentential structure of Arabic* (Doctoral dissertation). University of Southern California, Los Angeles.

Mohammad, M. (1990). The problem of subject-verb agreement in Arabic: Towards a solution. In Mushira Eid (Ed.), *Perspectives on Arabic Linguistics: Papers from the First Annual Symposium on Arabic Linguistics* (pp. 95-126). Amsterdam: John Benjamins.

Moore, J. (1988). Word order and case assignment in Modern Standard Arabic. *Proceedings of the Chicago Linguistics Society* (pp. 283-294). Chicago.

Morita, H. (2012). How the syntax knows when to apply binding or movement to wh-expressions. *Proceedings of GLOW in Asia IX*.

Moro, A. (1990). *There-raising: Principles across levels*. Paper presented at the 1990 GLOW Colloquium, Cambridge.

Moutaouakil, A. (1989). *Pragmatic functions in a functional grammar of Arabic*. Foris, Dordrecht.

Ndayiragije, J. (1999). Checking economy. *Linguistic Inquiry, 30*, 399-444.

Nishigauchi, T. (1986). Quantification in syntax (Doctoral dissertation). University of Massachusetts, Amherst.

Nishigauchi, T. (1990). *Quantification in the theory of grammar*. Cluwer, Dordrecht.

Nishigauchi, T. (1991). Construing wh. In James C.-T. Huang & Robert May (Eds.), *Logical structure and linguistic structure* (pp. 197-231). Dordrecht: Kluwer.

Nouhi, Y. (1996). *Wh-constructions in Moroccan Arabic (*M.A thesis). University of Ottawa, Canada.

Osman, M. (1990). *The syntax and logical form of wh-interrogatives in Cairene Egyptian Arabic* (Doctoral dissertation). University of Washington.

Ouhalla, J. (1991). *Functional categories and parametric variation*. London: Routledge.

Ouhalla, J. (1994). Verb movement and word order in Arabic. In N. Hornstein & D. Lightfoot (Eds.), *Verb movement* (pp. 41-85). Cambridge University Press.

Ouhalla, J. (1996). Remarks on the binding properties of wh-pronouns. *Linguistic Inquiry, 27*(4), 676-707.

Ouhalla, J. (1997). Remarks on focus in Standard Arabic. In Mushira Eid & Robert Ratcliffe (Eds.), *Perspectives on Arabic Linguistics: Papers from the Annual Symposium on Arabic Linguistics X* (pp. 9-45). Amsterdam: John Benjamins.

Ouhalla, J. (1999). Focus and Arabic clefts. In G. Rebuschi & L. Tuller (Eds.), *The grammar of Focus* (pp. 335-359). Amsterdam: John Benjamins.

Ouhalla, J. (2004). Semitic relatives. *Linguistic Inquiry, 35*, 288-300. Paul, I. (2001). Concealed pseudo-clefts. *Lingua, 111*(10), 707-727.

Paul, I. (2003). On the lack of wh-movement in Malagasy. *Paper presented at the Tenth Meeting of the Austronesian Formal Linguistics Society*. University of Hawaii.

Pesetsky, D. (1987). Wh-in-situ: Movement and unselective binding. In Eric J. Reuland & Alice G. B. ter Meulen (Eds.), *The representation of (in)definiteness* (pp. 98-129). Cambridge, Mass.: MIT Press.

Pesetsky, D. (1998). *Phrasal movement and its kin*. Ms., MIT.

Pesetsky, D. (2000). *Phrasal movement and its kin*. Cambridge, Mass.: MIT Press.

Pires, A. & Taylor, H. (2009). The syntax of wh-in-situ and common ground. *Proceedings from the Annual Meeting of the Chicago Linguistic Society, 43*(2), 201-215.

Plunkett, B. (1993). The position of subjects in Modern Standard Arabic. In Mushira Eid & Clive Holes (Eds.), *Perspectives on Arabic Linguistics: Papers from the Annual Symposium on Arabic Linguistics V* (pp. 231-260). Amsterdam: John Benjamins.

Puskas, G. (1992). The wh-criterion in Hungarian. *Rivista di Grammatica Generativa, 17*, 141-186.

Rahhali, M. & Souali, E. (1997). A minimalist approach to verb movement in Standard Arabic. *Studia Linguistica, 51*(3), 317-338.

Rapoport, T. (1987). *Copular, nominal, and small clauses: A study of Israeli Hebrew*. Ph.D dissertation, MIT, Cambridge, Mass.

Reinhart, T. (1998). Wh-in-situ in the framework of the minimalist program. *Natural Language Semantics, 6*, 29-56.

Richards, N. (1997). *What moves where when in which language* (Doctoral dissertation). MIT, Cambridge, Mass.

Richards, N. (2001). *Movement in language*. Oxford: Oxford University Press.

Rizzi, L. (1997). The fine structure of the left periphery. In L. Haegeman (Ed.), *Elements of grammar: A handbook of generative syntax* (pp. 281-337). Dordrecht: Kluwer.

Rizzi, L. (2001). On the position "interrogative" in the left periphery of the clause. In G. Cinque & G. Salvi (Eds.), *Current studies in Italian syntax* (pp. 287-296). Elsevier, Amsterdam.

Rizzi, L. (2011). Minimality. In Cedric Boeckx (Ed.), *The Oxford handbook of linguistic minimalism* (PP. 220-238). Oxford: Oxford University Press.

Ross, J. (1967). *Constraints on variables in syntax* (Doctoral dissertation). MIT, Cambridge, Mass.

Roussou, A., Vlachos, C. & Papazachariou, D. (2014). In situ, ex situ, and (non) echo questions. In Nikolas Lavidas, Thomaï Alexiou, & Areti Maria Sougari (Eds.), *Major Trends in Theoretical and Applied Linguistics 1: Selected Papers from the 20th ISTAL* (pp. 475-494).

Rothstein, S. (1995). Small clauses and copular constructions. *Syntax and Semantics, 28*, 27-48.

Sabel, J. (2000). Partial wh-movement and the typology of wh-questions. In U. Lutz, G. Muller & A. Stechow (Eds.), *Wh-scope marking* (pp. 409-446). Amsterdam: Benjamins.

Sabel, J. (2001). Malagacy…. *Proceedings of Austronesian Formal Linguistics Association VIII*. MIT, Cambridge, Mass.

Sabel, J. (2002). Wh-questions and extraction asymmetries in Malagasy. *MIT Working Papers in Linguistics 44* (pp. 309-324).

Sabel, J. & Zeller, J. (2006). Wh-question formation in Nguni. In John Mugane et al (Eds.), Selected Proceedings of the 35th Annual Conference on African Linguistics (pp. 271-283). Somerville, MA: Cascadilla Proceedings Project.

Saddy, D. (1991). Wh-scope mechanisms in Bahasa Indonesia. In Lisa Cheng & Hamida Demirdache (Eds.), *MIT Working Papers in Linguistics 15* (pp. 183-218). Department of Linguistics and Philosophy, MIT, Cambridge, Mass.

Sahawneh, M. (forthcoming). *Probes and pronouns: Variation in agreement and clitic doubling in Arabic* (Doctoral dissertation). University of Manitoba, Canada.

Sato, Y. (2011). *Wh-questions in Colloquial Singapore English: Syntactic evidence for the Malay substrate hypothesis*. Retrieved from: http://ling.auf.net/lingbuzz/001234

Shaheen, B. (2012). The status of *yalli/lli* in Latakian Syrian Arabic: Complementizer, relative pronoun or determiner? In C. Gkonou & M. Alharbi (Eds.), *Essex Graduate Student Papers in Language & Linguistics 13* (pp. 120-133). Department of Language and Linguistics, University of Essex.

Shlonsky, U. (1992). Resumptive pronouns as a last resort. *Linguistic Inquiry, 23*, 443-468.

Shlonsky, U. (1997). *Clause structure and word order in Hebrew and Arabic: An essay in comparative semitic syntax*. Oxford: Oxford University Press.

Shlonsky, U. (2000). Remarks on the complementizer layer of Standard Arabic. In J. Lecarme, J. Lowenstamm & U. Shlonsky (Eds.), *Research in Afroasiatic grammar* (pp. 325-344). Amsterdam: John Benjamins.

Shlonsky, U. (2002). Constituent questions in Palestinian Arabic. In Jamal Ouhalla & Ur Shlonsky (Eds.), *Themes in Arabic and Hebrew syntax* (pp. 137-160). Dordrecht: Kluwer Academic Publishers.

Shlonsky, U. & Ouhalla, J. (2002). *Themes in Arabic and Hebrew syntax: Studies in natural language and linguistic theory 53*. Dordrecht: Kluwer Academic Publishers.

Sibawayh, A. (741-AD; 1977). *Al-kitaab*. Impression, Cairo, Dar Al-Qalam Press.

Simpson, A. (1999). Wh-movement, licensing, and the locality of feature checking. In D. Adger, S. Pintzuk, B. Plunkett & G. Tsoulas (Eds.), *Specifiers: Minimalist approaches* (pp. 231-247). England: Oxford University Press.

Simpson, A. (2000). *Wh-movement and the theory of feature-checking*. Amsterdam: John Benjamins.

Simpson, A. & Wu, Z. (2002). Agreement, shells and focus. *Language 78*(2), 287-313.

Soltan, U. (2007). *On formal feature licensing in minimalism: Aspects of Standard Arabic morphosyntax* (Doctoral dissertation). University of Maryland, College Park.

Soltan, U. (2011). On strategies of question-formation and the grammatical status of the Q-particle huwwa in Egyptian Arabic wh-questions. In Lauren Friedman (Ed.), *University of Pennsylvania Working Papers in Linguistics*, 17(1), Article # 24. Retrieved from: http://repository.upenn.edu/pwpl/vol17/iss1/24

Soltan, U. (2012). On licensing wh-scope: Wh-questions in Egyptian Arabic revisited. In Reem Bassiouney & Graham E. Katz (Eds.), *Arabic languages and linguistics* (pp. 99-114). Washington, DC: Georgetown University Press.

Stepanov, A. & Tsai, W.-T. Dylan. (2008). Cartography and licensing of wh-adjuncts: A cross-linguistic perspective. *Natural Language & Linguistic Theory, 26*(3), 589-638.

Stjepanovic, S. (1995). *Short-distance movement of wh-phrases in Serbo-Croatian matrix clauses*. Ms., University of Connecticut, Storrs.

Stjepanovic, S. (1999). *What do second position cliticization, scrambling, and multiple wh-fronting have in common?* (Doctoral dissertation). University of Connecticut, Storrs.

Stowell, T. (1981). *Origins of phrase structure*. (Doctoral dissertation). MIT, Cambridge, Mass.

Stowell, T. (1983). Subjects across categories. *The Linguistic Review, 2*(3), 285-312.

Suffer, M. (1984). Free relatives and the matching parameter. *Linguistic Review, 3*, 363-368. Sumangala, L. (1991). 'Inner' and 'outer' subjects in Sinhala. In Almeida J. Torivio & Wayne E. Harbert (Eds.), *Cornell University Working Papers in Linguistics 9* (pp. 229-257). Cornell University, Ithaca.

Takita, K., Fuji, C., & Yang, B. (2007). Wh-questions in Chinese and Japanese: Anti-crossing and anti-superiority. *Nanzan Linguistics: Special Issue, 2*(1), 99-112.

Tancredi, C. (1990). *Not only EVEN, but even ONLY*. Ms., MIT, Cambridge, Mass.

Tsai, W.-T. Dylan. (1994a). *Economizing the theory of A-bar dependencies*. (Doctoral dissertation). MIT, Cambridge, Mass.

Tsai, W.-T. Dylan. (1994b). On nominal islands and LF extraction in Chinese. *Natural Language and Linguistic Theory, 12*(1), 121-175.

Tsai, C.-Y. Edwin. (2009). *Wh-dependency in Vietnamese and the syntax of wh-in-situ*. M.A thesis, National Tsing Hua University.

Tsai, W.-T. Dylan. (2008). Left periphery and how-why alternations. *Journal of East Asian Linguistics, 17*, 83-115.

Tsimpli, I-M. (1990). The clause structure and word order in modern Greek. In John Harris (Ed.), *UCL Working Papers in Linguistics 2* (pp. 226-255). University College London, Department of Phonetics and Linguistics: London.

Tsimpli, I. (1995). Focusing in modern Greek. In Katalin E'Kiss (Ed.), *Discourse configurational languages* (pp. 176-206). Oxford: Oxford University Press.

Von Stechow, A. (1996). Against LF pied-piping. *Natural Language Semantics, 4*, 57-110.

Wachowicz, K. (1978). Q-morpheme hypothesis, performative analysis and an alternative. In Henry Hiz (Ed.), *Questions* (pp. 151-163). Dordrecht: Reidel.

Wahba, W. (1984). *Wh-constructions in Egyptian Arabic*. Ph.D dissertation, University of Illinois at Urbana Champaign, Urbana.

Wahba, W. (1991). LF movement in Iraqi Arabic. In James C.-T. Huang & Robert May (Eds.), *Logical structure and linguistic structure: Cross-linguistic perspectives* (pp. 253-276). Dordrecht: Kluwer Academic Publishers.

Watanabe, A. (1991). *Wh-in-situ, subjacency, and chain formation*. Ms., MIT.

Watanabe, A. (1992). Subjacency and s-structure movement of wh-in-situ. *Journal of East Asian Linguistics, 1*(3), 255-291.

Watanabe, A. (2003). Wh-in-situ languages. In Mark Baltin & Chris Collins (Eds.), *The handbook of contemporary syntactic theory* (pp. 203-226).

Williams, E. (1980). Predication. *Linguistic Inquiry, 11*(1), 203-238.

Williams, E. (1983). Against small clauses. *Linguistic Inquiry, 14*(2), 287-308.

Zubizarreta, M. (1998). *Prosody, focus and word order*. Cambridge, Mass.: MIT Press.