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**The Syntax and Semantics
of Optional Wh-movement:
The Case of Egyptian Arabic**

BOUTHEINA LASSADI

Thesis submitted to the
Faculty of Graduate and Postdoctoral Studies
in partial fulfillment of the requirements
for the degree of Ph.D. in Linguistics

Department of Linguistics

Faculty of Arts

University of Ottawa

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Boutheina Lassadi

Abstract

In forming wh-questions, Egyptian Arabic (EA) exhibits apparent optional wh-movement whereby both options of fronting the wh-phrase or leaving it in situ are possible. I argue in this dissertation that optionality in EA wh-question formation does not contradict minimalist assumptions since the two options of fronting or leaving the wh-phrase in situ correspond to two different derivations that have two different syntactic structures and two different semantic interpretations. As a consequence, I do not adopt the idea that wh-movement is triggered by a [+wh] feature and I also reject the covert LF movement of wh-in-situ.

I claim that wh-question formation in EA is driven by focus and propose that focus is embodied in the form of an intonational morpheme.

There are two distinct options to form wh-questions in EA, so I claim that there are two distinct focus morphemes that enter the computational system: an information focus morpheme and a contrastive focus morpheme. When the information focus morpheme enters the derivation, it is a variable that is bound to the focused constituent in-situ. When the contrastive focus morpheme enters the derivation with the operator *illi* which has scopal properties and EPP features that accounts for its leftward location in the clause, it is bound to the particle *illi*. Being bound to the operator *illi*, the contrastive focus morpheme is located at the left-periphery of the clause. When a wh-phrase enters the derivation with the contrastive focus morpheme and the particle *illi*, it moves to the leftward position triggered by features of the focused morpheme. Fronting of the wh-phrase is therefore triggered by features of the particle *illi*. However, the particle *illi* is not always present when the wh-phrase is fronted. This occurs with subject wh-phrases where the presence of the particle is optional and with adjunct wh-phrases where fronted adjunct wh-phrase cannot occur with *illi*. In case of the subject wh-phrase, wh-in-situ form is not possible because subject wh-phrase must always be fronted for two reasons: EPP features which trigger movement of the wh-phrase to [Spec, TP] and contrastive focus features which trigger movement of the subject wh-phrase from [Spec, TP] to [Spec, FP], the latter, which is interpreted as information focus, contains an overt *illi* particle but not the former, which denotes contrastive focus. In case of the object wh-phrase, fronted wh-phrase is always associated with an overt *illi* particle. In the case of adjunct wh-phrase, the fronted wh-phrase can never take an overt *illi* particle. I postulate that the presence of the particle *illi* in the derivation is triggered by an overt movement of the wh-phrase (this happens with subject wh-phrase denoting contrastive focus and fronted object wh-phrases). The absence of the particle *illi* with adjuncts suggests that adjuncts wh-phrases do not undergo movement but are adjoined to the derivation postcyclically.

List of Abbreviations

Abbreviations in the text:

- [+I-focus]: Information focus
- [+C-focus]: Contrastive focus
- PF: Phonological Form
- LF: Logical Form
- EPP: Extended Projection Principle
- Foc: Focus
- F: focus head of a Focus Phrase
- FP: Focus Phrase
- Spec: Specifier
- TP: Tense Phrase
- T: tense head of a Tense Phrase
- IP: Inflectional Phrase
- I: inflection head of an Inflection Phrase
-

Abbreviations in the glosses:

Glosses of authors used in the dissertation differ from glosses I use for my examples collected from my informants. Here is a list of abbreviations of glosses I use in the text :

- S. Singular
- Pl. Plural
- M. Masculine
- F. Feminine
- Fut. Future
- Perf. Perfect

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CHAPTER 1: INTRODUCTION

1.1 Introduction

Chomsky's (1977) article on wh-movement represents a major step in unifying the theory of movement. Chomsky unified the derivation of various wh-constructions (such as relative clauses, questions, topicalizations, and cleft constructions) in a general theory of movement. Since then, wh-movement has continued to be an important topic on the generative research agenda, attracting many linguists who are still concerned with the issues raised by Chomsky's (1977) article.

In this dissertation, I will be concerned with one of the issues raised by wh-movement. I will explore optionality of wh-movement based on a specific dialect of Arabic, Egyptian Arabic. Optionality of wh-movement is not one of the general features of the theory of wh-movement since it is not shared by all languages, but it is a phenomenon that we can observe in certain languages listed below in 1.2 with

some examples. What makes this phenomenon interesting is that it poses problems for the Minimalist Program (Henceforth, MP), the theoretical framework used in this dissertation. Optionality of movement contradicts basic tenets of the Minimalist Program. Optional movement makes a derivation with a wh-phrase moving into [Spec, CP] not "optimal" since such a derivation should be blocked by a more economical derivation, the one with a wh-phrase in situ. According to the Minimalist Program, optional movement should not exist, because this goes against optimality in derivations. There must be only one derivation that is considered the most economical and that satisfy optimality.

1.2 Optional wh-movement: a crosslinguistic problem

This dissertation considers optional wh-movement from a minimalist perspective. Wh-movement is apparently optional in some languages such as French (Boeckx 1999, Bošković 2000, Cheng 1997, Cheng and Rooryck 2000), Bahasa Indonesia (Cheng 1997), Palauan (Cheng 1997), Egyptian Arabic (Cheng 1997, Wahba 1984), Iraqi Arabic (Simpson 2000), Babine-Witsuwit'en (Denham 2000), Persian (Megerdooian and Ganjavi 2000 and Kahnemuyipour 2000), and Armenian (Megerdooian and Ganjavi 2000). The main problem these languages present to Chomsky's theory and subsequent analyses of wh-movement is the use of both wh-movement and wh-phrase in situ strategies in order to form questions. The following examples demonstrate 'optionality of movement' - a situation in which wh-phrases may appear either in situ or displaced:

French

- (1) Marie a vu **qui**?
Marie has seen **who**
'Who did Mary see?'

- (2) **Qui** Marie a vu?
Who Marie has seen
'What did Mary see?'

(Cheng and Rooryck 2000: 4)

Bahasa Indonesia

- (3) **Kenapa** Jon mem-beli buku?
Why Jon pref-bought a book
'Why did Jon buy a book?'

- (4) Sally men-cintai **siapa**?
Sally pref-loves **who**
'Who does Sally love?'

(Cheng 1997: 47-48)

Palauan

- (5) **Ng-te'a** a killed-ii a sub?
CL-**who** NOM R-PF-heat 3s. NOM soup
'Who heated up the soup?'

- (6) K-osiik er a **te'ang**?
2s-look for p **who**
'Who are you looking for?'

(Cheng 1997: 48)

Iraqi Arabic

- (7) Mona shaafat **meno**?
Mona saw whom
'Who did Mona see?'

- (8) **Sheno** tsawarit Mona Ali ishtara?
What thought Mona Ali bought
'What did Mona think Ali bought?'

(Simpson 2000: 73-74)

Egyptian Arabic

- (9) **Ma'a miin** Mona rahit il-Qahirah?
With whom Mona went to-Cairo
'With whom did Mona go to Cairo?'

- (10) Fariid hawil yi'mil **iih**?
Fariid tried to-do **what**
'What did Fariid try to do?'

(Cheng 1997: 47)

Armenian

- (11) Ara-n **vor girk-en** e k' artatsel?
Ara-Nom **which book**-Acc is read
'Which book did Ara read?'

- (12) **Vor girk-en** e Ara-n k' artatsel?
Which book-Acc is Ara-Nom read
'Which book did Ara read?'

(Megerdooonian and Ganjavi 2000: 1)

Persian

- (13) Nâdir **ki-ro** did?
Nader **who**-Acc saw
'Which did Nader see?'

- (14) **Ki-ro** nâdir did?
Who-Acc Nader saw
'Who did Nader see?'

(Megerdooonian and Ganjavi 2000: 1)

Babine-Witsuwit' en

- (15) Lillian **ndu** yunkët?
Lillian **what** 3.S. bought 3.S.
'What did Lillian buy?'

- (16) **Ndu** Lillian yukët?
what 3.S. Lillian bought 3.S.
'What did Lillian buy?'

(Denham 2000: 201)

In the early stages of the Minimalist Program, Chomsky (1993, 1995b) proposed feature strength as the trigger for overt movement of a wh-phrase to [Spec, CP]. Namely, wh-phrases moved in order to check a strong feature in C. It seems reasonable to consider feature strength as a parameter behind language variation in wh-question formation, i.e.,

some language could have a strong [+wh]¹ feature triggering overt movement of the wh-phrase (e.g., English). Some other languages could have a weak [wh] feature that does not trigger overt movement of the wh-phrase (e.g., Chinese).

Feature strength cannot serve as a unifying explanation for wh-movement since a feature might have to be considered strong and weak at different times in a given language. However, it seems less reasonable to assign such parametric variation (meaning weak [wh] feature AND strong [wh] feature) within a given language, as seen in examples (1-16). A language cannot have [wh] marked as both strong and weak. Optionality of movement, then, seems to contradict basic tenets of the early Minimalist Program. As stated above, optionality of movement makes a derivation (in this case, the one with a moved wh-phrase into [Spec, CP]) not "optimal" since it should be blocked by a more economical derivation.

1.3 Issues raised by optional wh-movement languages

Optional wh-movement raises the following questions:

- Why is it that not all wh-phrases undergo movement to [Spec,CP] in some languages such as those listed in (1-16) above?
- Why is it that some languages, such as those listed in (1-16) above, exhibit optional movement of wh-phrases?

¹ The [$\pm$ wh] feature indicates that the wh-feature can be strong, i.e. can trigger movement of the wh-phrase, or weak i.e. cannot trigger movement of the wh-phrase.

- With the minimalist principles in mind, how is optional movement in some dialects of Arabic explained, and why are both options (of moving the wh-phrase and of leaving it in situ) available?

These questions lead us to inquire about even more basic assumptions on wh-question formation:

- What triggers movement? Is it a [+wh] feature? Is this feature present in all languages? What characteristics of the [+wh] feature trigger movement?
- Where do wh-phrases move?
- To what extent does LF movement of wh-phrases mimic overt movement?
- Is wh-question formation a general or universal process that obeys wh-diagnostics or is it a construction-specific process that displays particular properties in a given language?

Some of these questions have not been directly addressed in works on the formation of wh-questions. Many authors, most importantly Huang (1982), Pesetsky (1987), and Aoun and Li (1993), Richards (1997) have raised the question of why some languages such as Chinese and Japanese tend to leave the wh-phrase in situ, which questions the universal notion that wh-phrases must move to be licensed locally at [Spec,CP] by checking a [+wh] feature. However, these works have not addressed questions about the validity of optional wh-movement and have instead focused on accounting for wh-phrases in situ in languages such as Chinese where

optional wh-movement does not exist and therefore does not pose a problem.

According to the Minimalist Program, optional movement should not exist, because this goes against optimality in derivations. There must be only one derivation that is considered the most economical to reach the PF and LF interfaces² and satisfy optimality. Taking this view, how can we explain and account for optionality in wh-movement? There must be a different triggering element that accounts for wh-movement in languages such as Egyptian Arabic.

1.4 Optional wh-movement in Egyptian Arabic

This dissertation presents an in-depth analysis of the formation of wh-questions in Arabic, focusing on a dialect, Egyptian Arabic, in which optional wh-movement seems to be the rule for wh-question formation. Egyptian Arabic (EA) has two options when forming wh-questions, as illustrated by the following data:

EA: (Matrix questions)³

(17) Ahmad itgawiz **miin** ?

Ahmad marry.3.S.Past who

'Who did Ahmad marry?'

² A detailed explanation of the meaning of the PF and LF interfaces is given in chapter 2, section 2.2.1

³ When the source of the EA data is not mentioned, it means that it is not taken from authors who worked on EA such as Wahba (1984), Cheng (1997), etc. , however this data represents sentences uttered by informants who are native speakers of EA. I describe these informants in chapter 8 (footnote 44)

- (18) **Miin** illi Ahmad itgawiz-u ?
Who illi Ahmad marry.3.S.Past
'Who did Ahmad marry?'

EA: (Embedded questions)

- (19) Ali ayiz yi ?raf ?abilt **miin**
Ali wants to-know you-meet.2.S.Pas.who
'Ali wants to know who you met'

- (20) Ali ayiz yi?raf **miin** illi ?abiltu
Ali wants to-know who illi you-meet.2.S.Past
'Ali wants to know who you met'

The above examples show that in EA both options of clause initial wh-phrases and in situ wh-phrases are possible in both matrix and embedded questions. This dissertation will mainly focus on matrix wh-questions with question words functioning as subject, object, and adjunct.

Both options of forming wh-phrases are not restricted to specific syntactic environments and can occur with wh-phrases functioning as subject, object, or adjunct. Consider the following examples where wh-phrases are located in clause initial position:

- (21) **Miin** illi ga ? [Subject]
Who illi come.3.S.M.Past
'Who came?'

- (22) **Miin** illi Mona darabit-uh ? [Object]
Who illi Mona beat.3.S.F.Past-him

'Who did Mona beat?'

(23) **Fiin** Mona rahat? [Adjunct]

Where Mona go.3.S.F.Past

'Where did Mona go?'

(24) **Ma miin** Mona gat ? [Object of preposition]

With who Mona come.3.S.F.Past

'With whom did Mona come?'

(21-22) above show that clause initial wh-phrases accept the use of the particle *illi*⁴ when the wh-phrase functions as subject and object but not when it functions as adjunct, as in (23) and as object of preposition as in (24). The particle *illi* with wh-phrases functioning as adjunct and object of preposition are ungrammatical in clause initial position as illustrated in (25-26) below:

(25) * **Fiin** illi Mona rahat? [Adjunct]

Where illi Mona go.3.S.F.Past

'Where did Mona go?'

(26) * **Ma?a miin** illi Mona gat ? [Object of preposition]

With who *illi* Mona arrive.3.S.F.Past

'With whom did Mona arrive?'

⁴ The relation between the particle *illi* and wh-question formation has not been mentioned by former studies on wh-questions in EA (Wahba 1984 and Cheng 1997), though Cheng (1997) mentions briefly that the particle *illi* could have some effects on wh-question formation in EA). This issue is explored in this dissertation and a possible explanation is provided in chapter 7. The status of the particle *illi* and the way it is treated in this dissertation is provided in chapter 6.

The particle *illi* is in fact optional with subject wh-phrases as shown in (27) but it is obligatory with object wh-phrases as we can deduce from the ungrammatical sentence in (28) where the particle *illi* is missing, but note that optionality of the particle *illi* with subject wh-phrases is only apparent :

(27) **Miin** ga ? [Subject]

Who come.3.S.M.Past

'Who came?'

(28) ***Miin** Mona darabit-uh ? [Object]

Who Mona beat.3.S.F.Past-him

'Who did Mona beat?'

The distribution of clause initial wh-phrases in EA can be described as follows: Subject, object and adjunct wh-phrases can appear at the leftward periphery of the clause. The particle *illi* is obligatory with object wh-phrases, (22) and (28), but optional with subject wh-phrases, (21) and (27). It cannot be used with adjunct wh-phrases, (23) and object of preposition wh-phrases (24).

Let us consider the distribution of wh-phrases in situ. When a wh-phrase functions as subject, the sentence is grammatical only when the wh-phrase is preverbal as in (29)

below⁵. When the wh-phrase is postverbal the sentence is ungrammatical as in (30) below⁶.

(29) **Miin** ga ?

Who come.3.S.M.Past

'Who came?'

(30) *Ga **miin** ?

Come.3.S.M.Past who

'Who came?'

With object and adjunct wh-phrases, the in-situ or postverbal option is grammatical as in (31-32) below:

(31) Mona darabit **miin** ?

Mona beat.3.S.F.Past who

'Who did Mona beat?'

(32) Mona gat **ma?a miin** ?

Mona arrive.3.S.F.Past with who

'With whom did Mona arrive?'

The distribution of wh-phrases in EA raises the following questions. Is there movement of argument wh-phrases as well

⁵ Note that example (28) repeated in (30) illustrates a clause initial subject wh-phrase which has not undergone movement because subjects cannot be postverbal. It will be explained later in the thesis that subject wh-phrases are always clause initial but they can have different positions when used with or without the particle *illi*.

⁶ In this dissertation, I adopt the view that subjects are VP internal and that they undergo movement to [Spec, IP] in order to check the EPP feature. Therefore, subjects in declaratives do not stay inside the VP, i.e., in situ but they move to [Spec, IP]. In interrogatives as in *miin ga* (who came), the wh-phrase *miin* (who) moves for EPP reasons as in the declarative *Mona gat* (Mona came). Detailed discussion on this issue is provided in chapter 7.

as adjunct wh-phrases when forming clause initial wh-questions? Are argument and/or adjunct wh-phrases adjoined to the clause initial position without any movement operation? If there is movement of the wh-phrase to clause initial position, what triggers such movement? Again, if there is movement of the wh-phrase, how do we account for the in situ form? Can we assume that the in situ option involves a different derivation from the clause initial wh-phrase option?

In this dissertation, I claim that in EA there is no wh-movement triggered by an uninterpretable [wh] feature in either syntax or LF. Instead, in order to solve the apparent optionality that characterizes wh-question formation in EA, I claim that a focus morpheme is responsible for the licensing of wh-question formation in both the clause initial position and the in situ position. In chapters 6, 7, and 8, I will attempt to answer the questions presented above and outline an analysis that accounts for the distribution of wh-phrases in EA. In the following section, I introduce the proposal that I will develop in the rest of the dissertation.

1.5 A focus-based analysis of wh-questions in EA

This dissertation has two main objectives: First, to support the claim that wh-question formation in EA is driven by focus and to propose that focus is embodied in the form of an intonational morpheme; second, to argue that optionality in EA wh-question formation does not contradict minimalist assumptions since the two options (clause with initial wh-phrases and wh-phrases in situ) correspond to two

different derivations that have two different syntactic structures and two different semantic interpretations. As a consequence, I do not adopt the idea that wh-movement is triggered by a [+wh] feature and I also reject the covert LF movement of wh-in situ.

The first step in my analysis is to argue against the idea that a [+wh] feature triggers movement of wh-phrases in EA questions as traditionally proposed by Huang (1982) and Pesetsky (1987), for example. My argument is based on the fact that this language favors the in situ strategy to form wh-questions. In cases where there is an apparent wh-fronting, some other syntactic as well as semantic motivations come into play. The idea that a [+wh] feature drives wh-movement does not seem to be convincing for EA since it does not explain an important part of the wh-in situ data. LF movement was proposed by Huang (1982), Pesetsky (1987), and others to explain wh-in situ by claiming that the [+wh] feature is checked at LF by moving the wh-phrase covertly to [Spec, CP]. However, I argue against LF movement of in situ wh-phrases in EA based on the evidence in Simpson (2000). According to Simpson (2000), there are various syntactic constructions that illustrate that LF movement of wh-phrases does not parallel overt movement. Essentially, these arguments against LF movement show that there are different constraints for overt and covert movement of wh-phrases. Other arguments based on interpretative differences between the two types of movement will be discussed in section 3.6.

As stated above, I claim that in EA, there is no overt wh-movement triggered by a [+wh] feature. Instead, I propose that wh-question formation is intimately linked to focus

structure. By definition, focus is defined as the new information in the sentence that is not shared by the speaker and the hearer. The focused constituent is also characterized by a higher intonation. It is the most prominent constituent in a sentence, whether it is in a question or a statement. In wh-questions, the wh-phrase represents the new information which the speaker is seeking to obtain from the interlocutor, and is also the most prominent part of the question. There is not only an intimate relation between focus and wh-question formation but also an intimate relation between wh-question formation, focus, and stress assignment. In sum, I take the position that the wh-phrase represents the new information, is focused, and bears the main stress of the question.

I follow Cheng and Rooryck (2000) and Brunetti (2003), who advocate an intonational morpheme to explain wh-in situ (Cheng and Rooryck 2000) and to interpret focus as a morpheme in order to account for focus structure in Italian (Brunetti 2003). I propose that there is a link between the stress that the wh-phrase constituent gets in a question and the focus that this same constituent has in the structure.

My proposal is as follows: There is a focus morpheme that enters the derivation as an independent lexical entry taken from the lexicon. This morpheme has prosodic as well as semantic properties. Once the focus morpheme enters the derivation prior to spell out, the matching between stress assignment and focus interpretation occurs. Then, the same structure maps to both PF and LF for interpretation: At PF, focal stress is interpreted, and at LF, the focus type is also interpreted.

There are two distinct options to form wh-questions in EA: one that leaves the wh-phrase in situ and another that

positions the wh-phrase at the leftward periphery of the clause. So I claim that there are two distinct focus morphemes that enter the computational system: an information focus morpheme and a contrastive focus morpheme. When the information focus morpheme enters the derivation, it is a variable that is bound to the focused constituent in situ. When the contrastive focus morpheme enters the derivation with the operator *Q*, it is located in the leftward position of the clause because it has scopal properties and EPP features which attract wh-phrases. Given that the particle *illi* associated with *Q* as contrastive focus is not always present in the derivation (only with argument wh-phrases but not with adjunct wh-phrases), I assume that the contrastive focus morpheme can also be a null operator that contains EPP features, scopal features and the contrastive focus features. In the following section, I give precise examples that illustrate the above proposal.

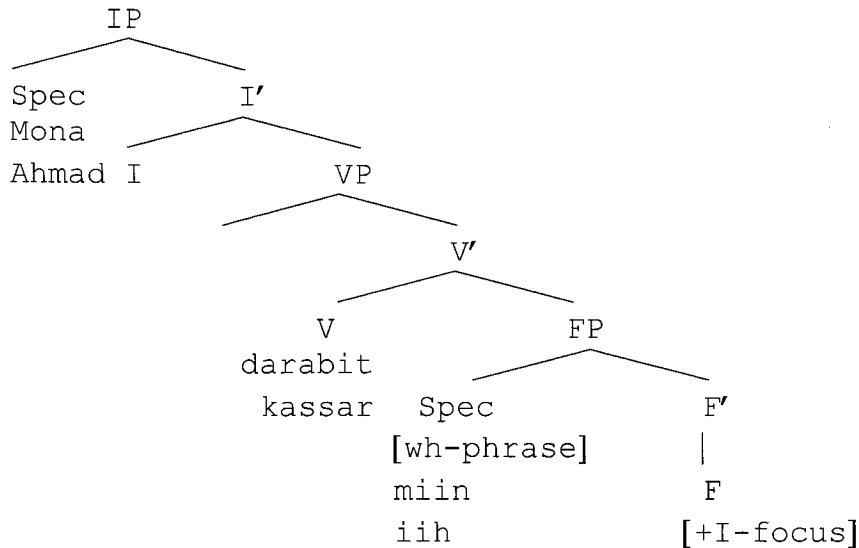
1.6 Two foci structures for two interpretations

Another aspect of my proposal deals with the structure of focus. I follow Belletti (2001, 2002), who proposes two Focus Phrases (FocP), one is low in the structure and one is high in the structure. Each focus has different interface properties and its own interpretation at the semantic level. The low focus phrase denotes information focus and the high focus phrase indicates contrastive focus.

As far as the low focus structure is concerned, it involves the wh-in situ strategy of wh-question formation. The tree in (33) below illustrates the position of a

wh-phrase in situ which is [Spec, FP] such as in (34) and (35) below:

(33) Low focus structure⁷ (for wh-phrase in situ)



(34) Mona darabit **miin** ?
 Mona beat.3.S.F.Past who
 'Who did Mona beat?'

(35) Ahmad kassar **iih** ?
 Ahmad break.3.S.M.Past. what
 'What did Ahmad break?'

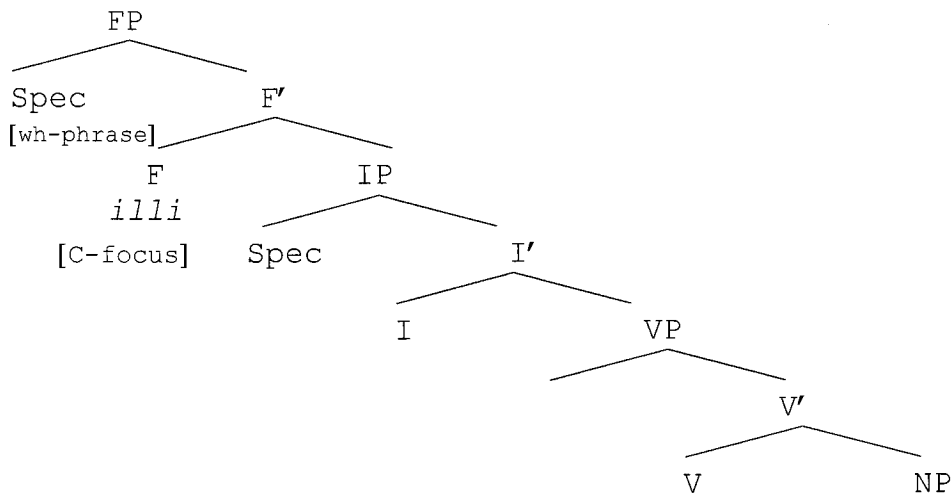
The focus morpheme enters the derivation before spell out together with the other lexical items constituting a question. Once the derivation is complete, it is sent to

⁷ The focus phrase appears at the end of the clause when the wh-phrase stays in situ. The focus phrase has been expanded by the head focus which is attached to the wh-phrase once inserted in the derivation. Since the type of focus morpheme that enters the derivation requires that the wh-phrase to which it is attached to stay in situ, then the expansion of the focus phrase is done locally.

both the PF and LF interfaces for interpretation. It is sent to PF so that the intonational feature of the focus morpheme is interpreted. It is sent to LF so that the type of focus is interpreted. Since the focus morpheme that enters this derivation stays in situ, it is interpreted as the information focus.

On the other hand, the high focus structure looks different both at the syntactic and the semantic levels. Consider the structure in (36) below representing wh-questions such as in (37) and (38). The former represents an object wh-phrase with the particle *illli* and the latter is a subject wh-phrase with the particle *illli*:

(36) High focus structure



- (37) **Miin** illli Mona darabit-uh ?
 Who *illli* Mona hit.F.Past-pr.
 'Who did Mona hit?'

(38) **Miin** illi ga ?

Who *illi* come.3.S.M.Past

'Who came?'

When an object wh-phrase enters the derivation with the contrastive focus morpheme positioned at the clause initial position because it contains EPP and scopal features, it moves from its base-generated position as an object and lands on [Spec, FP]. When a subject wh-phrase enters the derivation with a contrastive focus morpheme it moves from inside the VP to [Spec, IP] for EPP reasons and then moves to [Spec, FP] to get a contrastive focus reading.

Both focus structures in (33) and (36) above illustrate how the focus morpheme enters the derivation and interacts with the wh-phrase. The focus morpheme is located in the F head and the focused wh-phrase in [Spec, FP].

The purpose of this dissertation, then, is to explore solutions to optional wh-movement in EA and account, in minimalist terms, for the two options for forming wh-questions in EA.

In chapter 2, I will explore the basic tenets of the Minimalist Program as outlined by Chomsky (1995b, 2000, 2001) and I also present some ideas of Distributed Morphology as developed by Halle and Marantz (1993), which will be relevant for my analysis of Egyptian Arabic. In chapter 3, I review former analyses of languages that exhibit the two strategies for the formation of wh-questions. I evaluate the LF analysis of the wh-in situ strategy, explore whether LF movement is symmetrical to overt wh-movement, and examine minimalist assumptions on LF wh-movement. I conclude that the LF analysis of wh-in situ

is undesirable and needs to be discarded. Chapter 4 explores focus and how it relates to wh-question formation. Chapter 5 reviews some works that involve morpheme analyses of focus and other that claim that wh-questions involve two types of foci. Chapter 6 surveys some grammatical features of EA that are relevant to my analysis of wh-questions. Chapter 7 and 8 develop the analysis of EA in the light of the focus morpheme proposal outlined above. Chapter 9 summarizes the major arguments of this dissertation and discusses their contribution to wh-question formation and the issue of optionality of movement.

CHAPTER 2: THEORETICAL FRAMEWORK

2.1 Introduction

In this chapter, I review Chomsky's Minimalist Program (1995b, 2000, 2001) and Halle and Marantz's Distributed Morphology (1993). Ideas from both theoretical frameworks will be used in this thesis to develop a focus morpheme analysis of wh-movement in EA.

2.2 The Minimalist Program

The Minimalist Program constitutes Chomsky's improved ideas on the generative grammar tradition starting from Generalized Transformations (1957, 1965, 1971), and continuing with the Standard Theory, the Extended Theory, and Revised Extended Theory, to Principles and Parameters (1981, 1986) or Government and Binding Theory⁸. Chomsky's

⁸ This review does not intend to describe Chomsky's framework but to focus on its recent development in order to provide the necessary background to theoretical discussions introduced in the next chapters.

framework strives to propose a theory of Universal Grammar where the postulated principles are meant to be universal properties of grammars of all human languages and where the observed variations are considered parameters that characterize specific languages.

2.2.1 Computational System

According to the Minimalist Program (MP) as first developed in Chomsky (1993, 1995b), sentence structures are formed by taking fully inflected lexical items from the Lexicon and applying to them the operation Merge, which blends lexical items together in order to construct longer linguistic expressions. These linguistic expressions are of the form (π, λ) , π being the instructions that consist of legitimate objects to be interpreted at the Phonological Form (PF) level and λ being the instructions that consist of legitimate objects to be interpreted at the Logical Form (LF) level. These legitimate objects must satisfy output conditions at the PF and LF interfaces, the two levels that represent respectively the articulatory/perceptual (A/P) apparatus and the intentional/conceptual (I/C) apparatus. PF and LF are levels of representation that stand for linguistic competence whereas the A/P and I/C apparatus represent linguistic performance (Uriagereka 1998: chapter 2). In recent versions of the MP (Chomsky 2001: 7), PF is referred to as the <PHON> interface and the LF interface is abandoned in favor of the <SEM> interface, which expresses a variety of semantic properties such as argument structure,

For more complete reviews of Chomsky's works, the reader is referred to Radford (1997), Uriagereka (1998) and Carnie (2002) among others.

scopal properties, and discourse-related properties. LF properties and LF as a level of representation are abandoned because mapping to <PHON, SEM> is done cyclically piece-by-piece. Whenever a derivation or a cycle⁹ is complete, it is sent to <PHON> for interpretation of its phonetic features and it is sent to <SEM> for interpretation of its semantic features. Both <PHON> and <SEM> are independent and cyclic and they operate in parallel. The operation Transfer hands over each full derivation from overt syntax to both <PHON> and <SEM>.

The construction of a sentence takes place within the computational system C_{HL} , where different operations interact in order to deliver an optimal output. The computational system starts operating by taking some lexical items from the Lexicon and mapping them into pairs of the form (LI, i) where LI is the lexical item and i is the number of times this same lexical item is chosen. This process is also called Numeration (Chomsky 1995: 225). The selected items from the lexicon are then merged together to construct pairs of syntactic objects. The operation Select must exhaust all the chosen lexical items in the Numeration in order for the derivation to converge: " C_{HL} computes until it forms a derivation that converges at PF and LF with the pair (π, λ) after reducing N to zero" (Chomsky 1995: 228).

After Merge, another operation enters C_{HL} in order to take part in the construction of a given sentence. This operation is called Move. In early minimalism, Move consists of moving elements and raising them in order to check features. In recent versions of the MP, Move involves

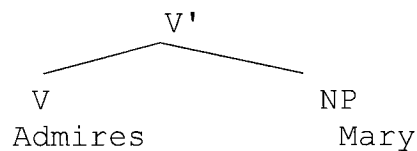
⁹ A cycle represents the course of a derivation which takes the chosen lexical items through the various steps of the grammar (spell out, PF and LF interfaces).

copying where the raised element is a copy of the target. Movement of some lexical items seeks to delete some offending formal features whose presence makes the derivation crash because they are uninterpretable features. Both operations Merge and Move occur throughout the computation. However, in early minimalism, the effects of Merge and Move are not the same if they occurred prior to Spell-out as compared to after Spell-out: the point at which "the derivation splits and heads toward the two interface levels, PF and LF" (Marantz 1995: 356). In the model proposed in Chomsky (1995b), the operations Merge and Move prior to Spell-out affect the phonological component since the merged and/or moved elements are heard. However, these same operations when applied after Spell-out in PF and LF do not affect the phonological component. Also, after Spell-out, the operation Select can no longer operate and select items from the Numeration. In recent versions of the MP (Chomsky 2001), Spell-out applies after each syntactic cycle. Spell-out has become cyclic. It operates after the Transfer operation has occurred in order to prepare another cycle for mapping to PF or <PHON> and LF or <SEM>.

A third operation that participates in the functioning of the computational system that Chomsky introduces in his 2000 paper is Agree. Agree consists of checking the formal features on the syntactic objects without moving and raising these elements. The operation Agree is supposed to replace the earlier (Chomsky 1995b) covert movement and Feature movement at LF. Operation Agree consists of matching the offending features that should be checked with a corresponding feature somewhere in the structure within the domain of the functional category. The operation Agree relates a probe P with a goal G. The probe P seeks the

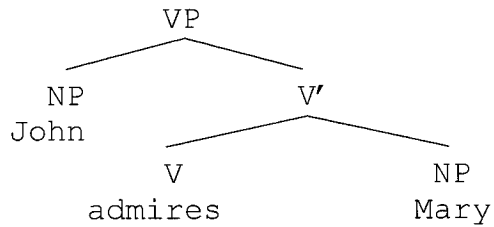
uninterpretable feature on a goal *G* and deletes it. The operation *Agree* is also associated with *Match*, which is a free operation consisting in matching features of the probe with features of the goal.

The syntactic representations of a sentence are built up in a bottom-up fashion by Generalized Transformations. Chomsky (1995b) formalizes this idea by first proposing that two elements, considered to be two independent phrase markers, are combined together. One of the two elements projects in a binary fashion and creates an empty position (a complement position) immediately substituted by the phrase marker that did not project. This process illustrates that *Merge* intervenes to build phrase structures. *Move* also participates in generating representations. When an element moves, the structure projects and creates an empty position (specifier position) which is immediately filled by the moved element. I will illustrate this process using the derivation of the sentence *John admires Mary*. The verb *admires*, taken from the Lexicon fully inflected, is a transitive verb that needs an object. It is merged with the object *Mary* to form the following structure:



It is the *V* that projects into *V'* and creates a complement position that is immediately filled by the object *Mary*.

Then, the verb still needs a subject so it merges with *John* to form the following structure. This structure illustrates the "VP-internal subject" hypothesis, which incorporates the subject within the verb phrase:



The V' projects and creates a specifier position immediately filled by the subject *John*.

After Merge forms the VP, inflectional categories are added and the operation Move is activated in order to check off formal features on these elements. A common assumption is that the verb raises to check tense features on functional heads taken from the Lexicon as targets with formal features. Thus the VP becomes the complement of Tense (T) which receives the moved verb *admires*; the NP subject *John* moves up to check the EPP feature of Tense and lands in the specifier position created by the projection of T'.

Moreover, in order for a derivation to be optimal and well-formed, it must satisfy certain principles and conditions or constraints. There are two types of principles: those that apply at the interface levels of PF and LF and those that apply everywhere in a derivation (Marantz 1995: 354). The Full Interpretation Principle and Bare Output Conditions are the basic principles that concern well-formedness at the interfaces. Both principles deal with conditions on derivations in order to guarantee well-formedness. The Full Interpretation Principle "which states that possible representations consist entirely of legitimate PF/LF objects" (Uriagereka 1998) is important because it prevents uninterpretable elements from reaching the interfaces. Elements that reach the two interfaces must be "meaningful/legible input to the syntax-external cognitive

system, i.e., to A/P and C/I" (Epstein et al. 1996: 15). Bare output conditions imply that once the representations reach PF and LF, they must be legitimate elements of these two interfaces and they must be legible to both the A/P and C/I apparatus respectively. Both apparatus, which are external to the computational system, must be able to pronounce and interpret the representations constructed throughout the derivation. Bare output conditions are also referred to as legibility conditions (Epstein et al. 1996: 8).

Throughout the derivation other principles are important: the Inclusiveness Condition and the Economy Principles. The Inclusiveness Condition states that elements that enter the derivation must be taken from the Numeration through the derivation until the numeration is terminated. The economy conditions require that a minimal number of operations and derivations take place during the computation. There are different aspects of economy principles. An early principle (Chomsky 1995b), that has now been abandoned, is Procrastinate. Procrastinate concerns the operation Move and states that movements are costly and therefore should apply as late in the computation as possible. Thus the most economical way to apply movement is to leave it at the very end of the computation, that is LF, where operations become less costly. An economy principle that has been retained is the Minimal Link Condition, which states that an optimal derivation should involve the shortest movements. Economy principles can be seen as global: They are based on comparing derivations made up by the same lexical entries and keeping the most economical derivations (Marantz 1995: 351). Another way to view them

(see Chomsky 2000) in more recent analyses of minimalism is to visualize economy in local terms within one derivation.

The operations Merge, Move, and Agree described above have been modified in recent work by Chomsky (2001). The operation Merge has become the non-restricted and free operation that takes place in pure Syntax. There are two types of Merge: External Merge and Internal Merge. External Merge applies when two objects α and β are separate and affects argument structure (Chomsky 2001: 11). Internal Merge is a free displacement operation that occurs before or after an operation called Transfer. Transfer is the process of handing over a derivation from Narrow Syntax to PF or LF. If Internal Merge applies before Transfer, an overt movement with pied-piping occurs. If Internal Merge applies after Transfer, a covert displacement takes place. The binary division in Merge contains old versions of both Merge and Move. The operation Move is now renamed Internal Merge and it also contains the operation Agree. To sum up, Move is the association between Agree, Pied-piping, and Merge. The mechanism responsible for displacement continues to be the morphological features which are uninterpretable and must be deleted before the derivation reaches the interfaces.

2.2.2 Features and Interpretability

A basic characteristic of the Lexicon is that lexical entries contain bundles of features, which are of three types: phonological, semantic, and formal. I will concentrate on formal features since they are the ones that affect operations such as Move and Agree in the computational system. Basically, the most commonly discussed

formal features are categorial features ($\pm N$, $\pm V$), case features, ϕ features, EPP¹⁰ features, and Q-features.

Functional heads in the derivation carry formal features. Functional heads such as T, C, v and D are entries from the lexicon and carry necessary formal features to be checked off. In the first version of the Minimalist Program (Chomsky 1995b), functional heads project during the derivation in order to receive the element that moves because of the checking operations and that is how the empty specifier position of the projected functional head is filled up. Defining the status of formal features becomes important because of the role they play throughout the derivation and because, according to Chomsky (1995b), they were the basic and only reason that Move, an important operation of C_{HL}, existed.

Formal features that are uninterpretable are offending features that should be checked off through the derivations. In early Minimalism, the only way to remove offending features was through Move. Movement, which is triggered by feature checking, is not an operation that is available in all languages to the same degree. Therefore, this presupposes that the status of formal features differs from one language to another. Chomsky (1995b) first defined formal features in terms of interpretability and strength, which he later abandoned. Based on this first view, formal features that are interpretable can survive throughout the derivation and reach LF without causing the derivation to crash; uninterpretable features, though, must be checked off

¹⁰ EPP stands for extended projection principle. It is a principle that assumes that every predicate must have a subject. Since early minimalism, this principle has become a morphosyntactic feature that explains movement of the subject to the initial position of the clause to fill in subject position required by the predicate.

through movement in order for the derivation to converge. In later versions of minimalism, EPP features are the only trigger for Move, which is an idea adopted in this work.

2.2.3 Phases

Chomsky (1999, 2000, 2001) introduces the notion of Phase as a level at which the derivation is transferred to the interface levels for interpretation. A phase is determined as a sub-array containing one lexical item (e.g., nominal or verbal). Once the computation of a phase is complete, it heads to the interface levels for interpretation. According to Chomsky (1999: 9), phases are propositional and only vP and CP, but not TP, can be phases. In order for a proposition to be qualified as a phase, it must be a reconstruction site for cyclic movement and have a degree of phonetic independence. There are also strong phases such as CP and tensed vP and weak phases such as passive constructions. Chomsky (2001: 25) adds that a strong phase has an EPP position as an escape hatch for movement. This applies to both CP and vP.

A phase has the following structure:

$$(39) PH = [\alpha [\beta H]]$$

H is the head of the phase and α is the edge of the Phase. The operation Spell-out applies to the Phase in full but the edge of a Phase may not be spelled out to allow movement operations to take place. This phase structure has given rise to the Phase Impenetrability Condition (PIC), which states that "the domain of H is not accessible to

operations, but only the edge of H" (Chomsky 2001: 5). The condition constrains the phase elements that can undergo operations such as Merge or Move (Internal Merge) after the Spell-out of the Phase.

2.2.4 Operations

In the first version of the MP, the lexicon contains lexical items as well as functional items. Lexical items come fully inflected, i.e., they are a combination of stems and inflectional affixes. They also carry features attributed by inflectional affixes. Likewise, functional elements and heads contain features that involve inflectional morphology (Epstein et al. 1996: 12). The checking operation consists in matching the features on the lexical items with the features on the functional heads. Checking is constrained by locality conditions: The lexical items must be in the checking domain of the functional heads in order for the features on the two elements to be checked.

The requirement that morphological features match triggers movement of lexical elements to positions in the functional domain. Licensing inflected elements consists in moving the inflected elements to positions in the functional domain and checking whether the features associated with the inflection match the features represented in the functional heads (Epstein et al. 1996: 14).

Movement can be interpreted in different ways and in the Minimalist Program, the Copy Theory of movement is adopted. On this view, the moved element leaves a copy behind in the

base-generated position, which is necessary for its interpretation at LF. In the Minimalist Program, the Trace theory of Government and Binding has been replaced by the copy theory, which consists of copying the moved element in all the positions that it occupies through movement. Only one copy of the moved element is pronounced at PF, the other copies are necessary for the interpretation of the moved element at LF. In recent work, Move is triggered by an EPP feature.

Agree is the more recent operation through which formal features are licensed. This operation is active when an overt movement of a syntactic object is not possible for feature checking in the absence of an EPP feature. Agree does not involve feature movement but it involves feature matching and according to Chomsky (2000: 132) "matching is a relation that holds of a probe P and a goal G". There must be an uninterpretable feature F on a syntactic object in order to drive the operation Agree. Agree is activated by generating a new object.

Feature movement, which was proposed by Chomsky (1995b), is now abandoned and criticized in Chomsky (2001: 6) on the basis that it is a complex operation that requires complex actions. As for the status of features that drive operations such as Agree and Move, Chomsky (2001) continues to support the idea that bundles of morphological features that are in the derivation must be deleted prior to the transfer to PF because they are uninterpretable¹¹. Various operations can delete uninterpretable features such as Merge, Agree, and Move (= Internal Merge). The EPP feature can only be licensed by Move (=Internal Merge).

¹¹ Unless these features have a phonetic reflex, they cannot survive to PF for interpretation.

2.2.5 Movement, Economy and Optionality

When Chomsky first outlined the general economy approach (1993, 1995b), he postulated that more general principles of Universal Grammar must be formulated by eliminating superfluous steps in derivations. The general economy approach sets guidelines that require derivations to be costless or minimal. This suggests that costly derivations are blocked. Chomsky illustrates how the cost of a derivation is measured through examples of wh-movement. Consider the following sentences:

(40) [_{CP} [_{Spec} How do you think [_{CP} [_{Spec} t''] [_C that John said
[_{CP} [_{Spec} t' [_C that Bill fixed the car t]]]]]]]

(41) [_{CP} [_{Spec} How do you wonder [_{CP} [_{Spec} why John asked [_{CP} [_{Spec}
which car Bill fixed t]]]]]]]

(Chomsky 1995b: 146)

Sentence (40) represents a successive cyclic movement of the wh-phrase. Chomsky suggests that a one-step derivation as in (41) is barred in (41) because shorter movements are less costly than long movement. Movement through successive cycles is shorter than one-step long movement.

Since derivations that undergo movement are costly, Chomsky observes that the economy approach "tend[s] to eliminate the possibility of optionality in derivation" (1995a: 146) and allows a choice only with optional rules that are costless. To distinguish between optional derivations, Chomsky suggests choosing the optimal derivation which must satisfy economy conditions on

movement, i.e., locality conditions. Derivations that do converge are blocked if they are less economical (Chomsky 1995: 220). Chomsky considers that a derivation which is computed with fewer operations, such as Move, is the one that is more economical.

2.3 Distributed Morphology

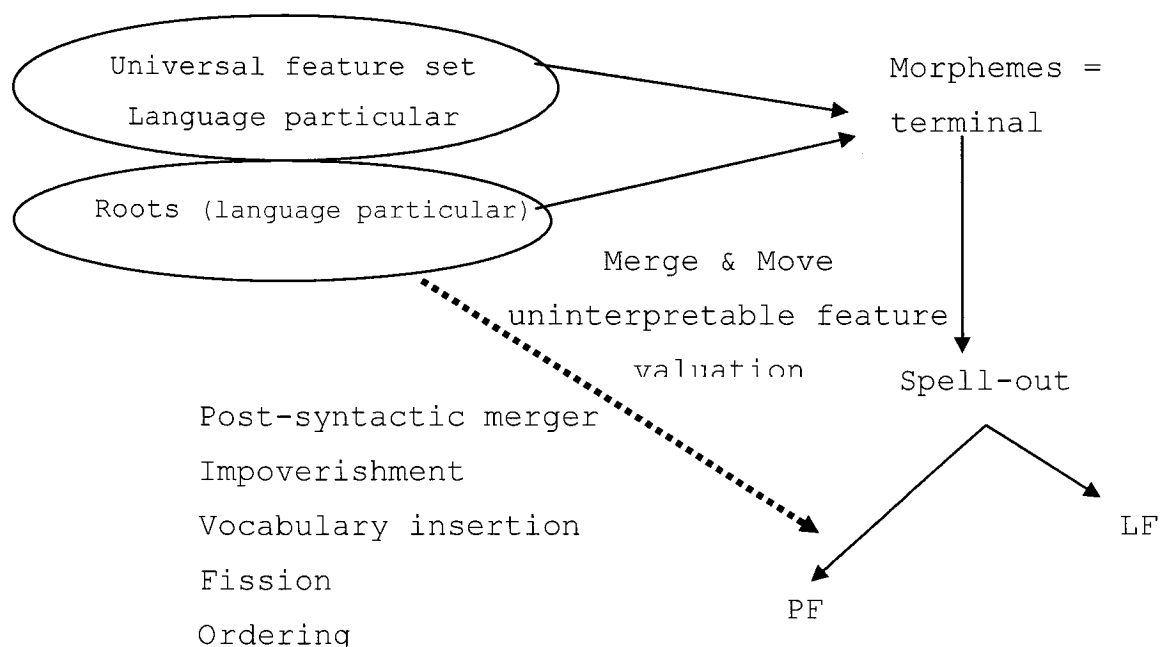
I propose to use Halle and Marantz's (1993) framework, Distributed Morphology (DM), because it has the theoretical tools that will help elaborate the analysis of optional wh-questions in EA. I will mainly adopt DM interpretation of notions such as features, morphemes, and late insertion of lexical items (see below for definitions of these notions in DM terms). I consider that DM is an appropriate framework that will help me to account for the distribution of the particle *illi* (using the notion of late insertion) and the distribution of wh-questions (using a focus morpheme that contains a bundle of features such as EPP features and the contrastive focus feature).

DM uses a single generative engine which is the syntax whereas in Chomsky's Minimalist Framework multiple generative engines are used to relate sound and meaning. In DM the notion of lexicon as defined by generative grammar does not exist. The role of the lexicon is 'distributed' through the various components of the grammar (i.e., the syntax, the phonology, the morphology, the semantics). According to DM, Universal Grammar provides a universal set of features, and every language possesses a subset of these features. When constructing a sentence, we further choose a subset of this subset for the computational system of syntax

and decide how to construct the terminal nodes of the syntax (called morphemes or lexical items in Minimalist terms) from the chosen features. The operation of combining the bundle of features into morphemes for the computational system is called Fusion. The fusion operation combines features that are relevant to the computational system of syntax. Phonological and morphological features are inserted later. The Spell-out operation sends the syntactically generated structures to the morphophonology and LF interfaces for interpretation. This is done cyclically in phase mode.

In DM, the architecture of the grammar is as follows:

(42) Distributed Morphology in the Minimalist Program
(Marantz 2003: 1)



In DM, the structure of the grammar looks similar to the structure of the grammar in Chomsky's MP. The major difference between both frameworks can be related to the absence of a lexicon in DM, where lexical items are stored before they are picked to enter the computational system.

The lexicon is replaced by a bundle of features of two types: one that includes morphosyntactic features and one that includes roots or vocabulary items.

Morphosyntactic features include features such as [Det], [past], and [plural]. Morphosyntactic features are also morphemes that are attached to vocabulary items at Spell-out. Morphemes in DM are of two types: F-morphemes and L-morphemes.

F-morphemes are functional morphemes and include items that must be inserted at Spell-out. They denote grammatical properties and are paradigmatic. They do not carry meaning themselves but serve as the context for special meanings of roots.

L-morphemes are lexical morphemes and there is a choice at Spell-out concerning their insertion. They denote a language-specific concept (Harley and Noyer 1999: 7). They are also called roots and are identified by their phonological form and by their meanings. They have special meanings in particular syntactic environments. The set of meanings that a root has is listed in the encyclopedia. To illustrate the difference between F-morphemes and L-morphemes, take the example of the word, or vocabulary item, *destroy*. If *destroy* is licensed by the F-morpheme tense (s) it is considered to be a conjugated verb in the 3rd person singular. If it is licensed by a determiner, it is realized as the noun *destruction* (Harley and Noyer 1999: 7).

Vocabulary items contain incorporated properties such as [$\pm$ animate] and [$\pm$ count]. Vocabulary items establish a connection between a phonological string and the information where that string may be inserted (Harley and Noyer 1999: 5). The list of vocabulary items includes the set of

phonological signals available in a language in order to express abstract morphemes. Here is an example from Harley and Noyer (1999: 5):

(43) /kæt/ $\leftrightarrow$ [_{DP} D [_{LP} _____]]

Root inserted in a nominal environment

/kæt/ is the phonological string and [_{DP} D [_{LP} _____]]

is the information concerning the place where this string may be inserted.

The encyclopedia contains entries of words once they are defined by both morphosyntactic features and roots. These words are called idioms. Idioms relate vocabulary items to meaning. Idioms in DM are different from the conventional use of the word in the English language. "In DM, idioms are represented as subparts of the encyclopedic entry for the root which is involved." (Harley and Noyer 1999: 8). To illustrate, the word *kick* in the expression *kick the bucket*, means *die*. *Die* is a specific use of the root *kick* that is interpreted as *die*. The encyclopedic entry for the vocabulary item *kick* depends on the environment in which it is used.

At the morphosyntactic level, there are various operations through which words and sentences are generated in DM. Morphosyntactic operations take place in overt syntax. They are Merge, Move, and Copy. They operate in DM in a similar fashion as they do in the Minimalist framework. In overt syntax, only functional morphemes are merged. A placeholder for any root in the form of a symbol is also generated.

At the level of morphophonology, there are several possible operations. A feature insertion operation occurs when purely morphological features are available. These features have phonological realizations but have no LF interpretation and this is why they are not inserted as early as overt syntax. Vocabulary insertion operations consist of inserting the vocabulary item that best fits the derivation, which will prove relevant to the distribution of the particle *illi* in chapter 7. A third operation includes morphological merger. It occurs in cases such as rebracketing of English possessives as in [the queen of England]'s hat which becomes [the queen of [England's]] hat (Harley and Noyer 1999). Another operation, impoverishment, deletes morphological features; however it is not relevant to this thesis.

In DM, there are three interfaces that words and sentences go through in their formation process: the generative interface (the syntax) and the interpretative interfaces (the Morphophonological Form and the Logical Form).

The syntax level contains the sole generative engine that DM uses to relate sound to meaning. At this level, basic syntactic operations take place in order to merge syntactic features (F-morphemes) together and prepare the place where the root will be inserted at the morphosyntactic level.

The two remaining interfaces function as interpretative platforms at which morphophonological content as well as semantic content are interpreted and represented. At the morphophonological interface, the root is inserted and the content of the phonological string is analyzed. At LF,

meaning is not actually interpreted. This interface merely represents certain meaning-related relations such as quantifier raising (Harley and Noyer 1999: 9). Harley and Noyer (1999) add to the model of the grammar a conceptual interface to which they link the encyclopedic content of words, and they assume that meaning is interpreted in such an interface, which is basically deeper than the LF interface.

2.4 Conclusion

In this chapter, I have outlined the theoretical framework that will serve as a background for discussion in the next chapters. I have opted for recent ideas sketched in the Minimalist Program (1995b) and more recent works of Chomsky (1999, 2000, 2001). I have also introduced basic tenets of the theory of DM because it offers interesting principles that can be used in a focus morpheme approach to wh-movement in EA.

CHAPTER 3: SOME RELEVANT VIEWS ON WH-IN SITU

3.1 A historical account of wh-movement analyses

In this chapter, I review the literature on wh-movement that is of interest to the main proposal of this thesis. Since Chomsky's (1977) paper on wh-movement, many interesting research proposals have been written. This chapter only reviews works which focus on wh-in situ and which help foster research on the topic of this thesis.

Chomsky's (1977) main proposal on wh-constructions could be summarized as "Move wh-phrase into COMP "(Chomsky 1977: 85). This proposal on wh-movement has the following general characteristics:

(the process) leaves a gap; where there is a bridge, there is an apparent violation of subadjacency, PIC (Propositional Island Condition) and SSC (Specified Subject Condition); it observes

CNPC (Complex Noun Phrase Constraint); it observes wh-island constraints" (Chomsky 1977: 86).

This was an important step in generalizing wh-movement in question formation, in relative clause formation, and topicalization as Chomsky states himself:

We can eliminate from the grammar rules of comparative deletion, topicalization, clefting, object-deletion and "tough movement" rules for adjective and adjective-quantifier complements, and others in favor of the general rule of wh-movement that also yields direct and indirect questions (finite and infinitival) and finite and infinitival relative clauses, several rather general rules of interpretation, and some language-specific properties of base and surface structure. (1977: 110)

In subsequent works, Chomsky's (1977) proposal on wh-movement has been refined. Works on interrogative constructions that parallel Chomsky's (1977) have taken into consideration that in some languages, one wh-phrase is obligatorily moved (Rochmont 1986 for English), in other languages, all wh-phrases are fronted (Rudin 1988 for Bulgarian and Serbo-Croatian), in some other languages, all wh-phrases remain in situ (Watanabe 1992 and Aoun and Li 1993 for Chinese) and still in some other languages, more than one strategy is adopted (Bošković 1998 and Boeckx 1999 for French).

Baker (1970) and Wachowicz (1978) represent early studies to find correlations between wh-movement and the

type of language. Baker (1970) proposes that wh-question movement is a universal principle that all languages share. He sets a correlation that states that languages that have a yes-no particle at an initial position move their wh-phrase to the beginning of a sentence (e.g., the particle *whether* in English is clause initial), while languages that place yes-no particles at the end of a sentence do not move their wh-phrases (e.g., Chinese). Baker proposes a mechanism to account for wh-movement in all languages, Wachowicz summarizes his proposal as follows:

(44)

- (a) There is an abstract Q-morpheme placed at the sentence initial position (for SVO and VSO languages) and at the end of a sentence (for SOV languages).
- (b) The Q-morpheme is replaced only once by movement of the wh-phrase
- (c) Lexical items such as *whether* and *if* are lexical realizations of the Q-morpheme.

(Wachowicz 1978: 156)

Based on languages such as Polish and Russian, which have the peculiarity of moving all wh-phrases to the beginning of the clause, Wachowicz (1978) counters Baker's (1970) universal account of wh-movement. Multiple question movement seems to contradict Baker's Q-morpheme hypothesis that offers a satisfying explanation to single wh-movement universally.

The general aim of works on wh-movement during the 1970's was to find a universal explanation that could group all instances of wh-movement in all languages. This concern led authors such as Huang (1982), Pesetsky (1987), and Aoun

and Li (1993) to focus on describing the various movements that characterize languages such as English and Chinese. These authors tried to explain why these movements differ and where the displaced element moves.

In the 1980's, works on wh-movement were influenced by the introduction of the LF interface. Linguists, at that time, viewed wh-in situ as a covert movement at LF. Some influential works that had this orientation include Huang (1982) and Pesetsky (1987). Huang (1982) suggests that wh-phrases in situ in Chinese undergo movement at LF in order to check the wh-feature. Pesetsky (1987) describes wh-in situ as checking the Q feature of C through covert feature movement at LF. Chomsky (1995b) proposes that feature movement can replace covert category movement for economy reasons since it is less costly to move features than to move a whole category. Pesetsky accounts for multiple wh-constructions in Bulgarian and Serbo-Croatian arguing that the reason for moving more than one wh-phrase is not for checking the same feature (the Q-feature) but for checking two distinct features: the Q feature of C and F feature of Focus.

Under the minimalist program, the research on wh-constructions has focused on the status of the Q feature, its strength and its interpretability and on whether the functional category C is inserted in overt syntax or LF. Works by Aoun and Li (1993), Cheng (1997), Watanabe (1992), Boeckx (1999), Boškovic (2000), Denham (2000), and Simpson (2000) illustrate this trend. In what follows, I review these works on wh-in situ. Other works not reviewed below but are worth mentioning because they focus on the analysis of wh-in-situ under the minimalist program include Stroik (1992) and Reinhart (1998).

Since Chomsky (1977), it has been suggested that the formation of wh-questions is a matter of moving the wh-phrase to a [+wh] [Spec, CP] position, the checking domain of C, where the wh-phrase is licensed. This way of licensing wh-phrases has been common and is included among the principles of Universal Grammar. However, it has been shown that many languages such as Chinese, Japanese, Romanian, and Serbo-Croatian do not exhibit this principle concerning wh-question formation. In Chinese and Japanese, the wh-phrase does not move to a [+wh] [Spec, CP] position but stays in situ. In contrast, in Romanian and Serbo-Croatian, all wh-phrases in one given sentence are raised.

This situation has raised the following questions: Why do some languages leave their wh-phrases in situ? How are wh-phrases in situ licensed? Can licensing of wh-phrases be based on a universal principle? Are there parameters in the licensing of wh-phrases? Moreover, once these questions are dealt with, more difficult ones surface: How can we deal with languages that apparently use both wh-movement and wh-in situ strategies? How can we handle optionality of movement under the Minimalist Program? How different are the two options? Do they present two different interpretations at the syntactic as well as the semantic levels? These questions have been raised in connection with wh-questions in languages that do not move wh-phrases to [Spec, CP].

3.2 Coindexation of wh-in situ (Aoun and Li 1993)

Aoun and Li's (1993) influential article 'Wh-elements in situ: Syntax or LF?' examines LF movement for wh-in situ and adopts a coindexation strategy. In order to account for

wh-in situ, the authors propose a question operator raised to [Spec, CP], this operator licenses the [+wh] feature on C:

- (45) [CP Q_i [IP he wonders [Qu_j [IP who_i bought what_j]]]]
(Aoun and Li 1993: 220)

Aoun and Li (1993) argue that there is no LF-movement of wh-phrases; what moves is the question operator *ne* in Chinese, or its null counterpart in other languages. The authors support their hypothesis with *only*. According to them, *only* can be used with an overt element but not its trace. *Only* can modify wh-phrases in situ, therefore there is no such thing as LF movement of wh-in situ:

- (46) Who only likes what?
(Aoun and Li 1993: 206)

For Aoun and Li (1993: 172), if the wh-phrase in situ *what* in (46) above undergoes LF movement, it becomes inaccessible to the adverb *only* according to the Principle of Lexical Association which states that "an operator like *only* must be associated with a lexical constituent in its c-command domain". In the case of LF movement of the wh-phrase in (46), *only* cannot be associated with its trace. For this reason, Aoun and Li claim that the wh-word cannot move at LF. Aoun and Li also derive island effects without LF movement in Mandarin Chinese using the Principle of Generalized Binding developed by Aoun (1981, for further details, see Aoun and Li 1993: 206).

3.3 The Typology of Wh-questions (Cheng 1997)

Cheng's (1997) work 'On the Typology of Wh-questions' has had a considerable impact on the view of 'the clausal typing hypothesis' applied to languages that exhibit different strategies in forming wh-questions. According to Cheng (1997: 22), "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, therefore typing a clause through C by Spec-head agreement". This means that languages that have syntactic wh-movement, such as English, use it to 'type' a sentence as interrogative, and languages that do not have syntactic wh-movement, such as Chinese, have another way to 'type' a clause as interrogative by using question particles. Moreover, no language can use both options described above based on the Principle of Economy. Consider the following examples from English and Chinese:

(47) [_{CP} Who_i [_{IP} t_i bought what]]

(48) Qiaofeng mai-le shenme ne
Qiaofeng buy-ASP what Q_{wh}
'What did Aiaofeng buy?'

(Cheng 1997: 22)

In both sentences, wh-words are licensed in the same way. In (47), the wh-phrase *who* moves to [Spec, CP] to type the clause as an interrogative. The wh-phrase *what* remains in situ because the clause is already typed by the wh-phrase *who*. Similarly, in sentence (48), the wh-phrase *shenme*

(what) remains in situ because the clause is already typed as interrogative by the wh-particle *ne*.

Cheng (1997) assumes that 'Clausal Typing' must occur as early as possible in the overt syntax. If a language has a wh-particle, it inserts it at S-structure to satisfy 'Clausal Typing'. These languages need not move their wh-phrases overtly because it is less costly to insert the question particle than to overtly move a wh-phrase. Cheng (1997) shares the views of Aoun (1981), May (1985), Huang (1982): If movement of wh-phrases occurs in these languages, it occurs at LF for some other reasons such as Scope, selection, or absorption. According to Cheng (1997), 'Clausal Typing' must be satisfied in overt syntax, and LF movement of wh-phrases does not satisfy 'Clausal Typing'; if it occurs, it must be for other reasons.

Optional wh-fronting languages appear to work "contrary to the prediction made by the Clausal Typing Hypothesis" (Cheng 1997: 43). But Cheng shows that they are not counterexamples to the Clausal Typing Hypothesis because the apparent wh-fronting in these optional fronting languages does not involve wh-movement of the wh-word to [Spec, CP]; rather, it is an instance of cleft movement in the case of arguments, or topicalization in the case of adjuncts. Consider the following example from EA which illustrates Cheng's analysis of optional wh-movement as an instance of cleft-structure:

- (49) [_{CP}[_{DP} **Miin_i**] [_{CP}OP_i illi [_{IP} Mona shaafit-uh_i]]]
 Who that Mona saw-him
 'Who did Mona see?'

(Cheng 1997: 53)

Cheng analyzes cases such as (49) as reduced clefts (see Cheng 1997: 50-53). A reduced cleft is different from a full cleft because the constituent in the focused position is not preceded by a copula and also because the definite NP in focus position is not preceded by the pronominal argument that normally appears before the definite NP (Cheng 1997: 51). Therefore, sentence (49) is analyzed as a reduced cleft because it lacks both a copula and a subject NP. However, sentence (49) still exhibits cleft properties. Cheng claims that the wh-phrase *miin* (who) represents the subject of the predicate [illli Mona shafit-uh]. Cheng explains that the use of *illli* is motivated by the existence of a predicate sentence.

Cheng (1997) gives some evidence to support her claim that in languages where there seems to be optional wh-movement such optionality is analyzed as an instance of wh-clefting. By doing so, Cheng ensures that every language has a unique strategy to type a clause as a wh-question.

3.4 LF insertion of [+wh] feature (Bošković 1998, 2000)

Bošković (2000) studies French simple and embedded questions to determine when the in situ strategy is allowed and to account for the limited distribution of such an option. The French data analyzed in this work is the following:

(50) Qui as-tu vu?

Who did you see?

(51) Tu as vu qui?

You saw who?

(52) *Pierre a demandé tu as vu qui

Pierre asked 'you saw who'

(53) Pierre a demandé qui tu as vu

Pierre asked 'who did you see'

The issue is how to account for the ungrammaticality of the in situ option in embedded questions in French as in (52) and at the same time explain its grammaticality in simple questions such as in (51). Both questions in (50) and (53) represent clause initial wh-phrases which are grammatical in simple as well as embedded questions.

As far as simple questions are concerned, Bošković proposes to insert C in LF so that it becomes possible to account for wh-phrases in situ as illustrated in (54)-(55) below:

(54) S-Structure: [_{IP} tu as vu qui]

(55) LF: [_{CP} qui C [_{IP} tu as vu]]

(Bošković 2002: 56)

In order to interpret wh-in situ, Bošković relies on the following minimalist assumptions: He considers that in simple questions where wh-phrases remain in situ, C is phonologically null as in (55)-(56) above. He also considers the [+wh] feature in French as being strong since overt wh-movement exists in this language.

Based on these two assumptions that seem to fit minimalist ideas, Bošković supports his proposal of LF insertion of C by stating that even though Merge generally takes place in overt syntax, it is acceptable to allow lexical insertion at PF and LF under certain conditions: Semantically null lexical elements can be inserted at PF and phonologically null elements can be inserted at LF. Since Bošković has already posited that C could be phonologically null in French, it is possible to insert it at LF without violating interpretability conditions. As for the strong [+wh] feature in French, he suggests that it is possible to insert elements with strong features at LF as long as they are checked immediately upon insertion, but he does not support this claim with clear data and the only notion he advances is that LF insertion of elements is possible in the minimalist system.

As for embedded questions in French, according to Bošković, it is not grammatical to leave the wh-phrase in situ as illustrated in (52) above, repeated here in (56).

(56) *Pierre a demandé tu as vu qui
Pierre asked you saw who

(57) Pierre a demandé qui tu as vu
Pierre asked who did you see

The ungrammaticality of (56) seems to contradict Bošković's interpretation of wh-in situ in simple questions where he proposed to insert C as late as LF. In fact, he explains that, in the case of embedded questions, Merge cannot occur as late as LF because it does not expand the tree of an

embedded sentence. Therefore, merge of C must occur in overt syntax and this will trigger overt movement of the wh-word as in (57) above. This proposal explains the ungrammaticality of (56) and suggests that overt wh-movement is the only option available in embedded questions.

However, Bošković's proposal for simple questions—to insert C at LF—is weakened since it does not apply to all types of questions in French as illustrated with embedded questions in examples (56-57) above.

Although obligatory insertion of C prior to LF in the case of indirect questions is attributed to an independent requirement concerning how tree expansion works, a recent proposal by Chomsky weakens Bošković's justification on why C is inserted prior to LF in the case of embedded questions. In his attempt to fit head movement in the bare structure proposal, Chomsky (2001: 12-13) proposes to have 'local merge' (head adjunction), which does not expand the tree. Chomsky proposes to reformulate Spec-Head relations as Head-Head relations and suggests that *there in there are men in the garden* may be just a head that is merged, not necessarily Spec-like. Therefore, if we consider Chomsky's new proposals, it seems that Movement and Merge need not necessarily expand the tree, so Bošković's justification loses some of its force.

Bošković (2000: 55-56) claims that to insert semantically null elements at PF and phonologically null elements at LF fits Minimalist principles. He considers that the [+wh] feature is phonologically null and that its insertion can be delayed until LF where it is checked immediately upon insertion. I think that Bošković's claim poses problems to Minimalist principles based on the reasons

driving wh-raising and the conditions of the Inclusiveness Rule.

In discussing the trigger behind movement, Chomsky (1995b) distinguishes two types of movement: feature-driven movements, which could be direct or indirect (e.g., subject raising) and non-feature-driven movements with a semantic effect such as Quantifier Raising and wh-movement. This categorization of 'the descriptive typology of movement' suggests that wh-movement is not necessarily driven by a feature as it has been claimed by many authors including Bošković. Bošković proposes to explain wh-raising through [+wh] feature-checking. However, as sketched above, I think that wh-raising is a movement with a semantic effect and may not involve [+wh] feature checking.

Moreover, Bošković's proposal violates conditions of Inclusiveness, which state that "No new features are introduced by C_{HL} " (Chomsky 2000: 113). Bošković claims that there is a [+wh] feature that is inserted as late as LF for wh-in situ so that optionality of movement is no longer a problem in languages such as French. In summary, Bošković's proposal for wh-in situ is problematic.

3.5 Insertion of "C" (Denham 2000)

Denham (2000) argues that Babine-Witsuwit'en (BW) has optional wh-movement. Fronting the wh-phrase or leaving it in situ does not lead to meaning change in this language. This means that BW seems to contradict the minimalist principle that states that only the most economical derivation must reach the interface level because fronting the wh-phrase or leaving it in situ does not make a

difference. Denham solves this contradiction by proposing that optionality in wh-questions arises at the point of selection of C from the lexicon; if C is selected, movement occurs and the wh-phrase is fronted. Denham illustrates this proposal through examples that show three possible positions for an argument wh-phrase: in situ as in (58), fronted in the matrix clause as in (59) or fronted in the embedded clause as in (60) or fronted in the matrix clause as in (61):

(58) Lillian **ndu** yunkët ?

Lillian what 3.S. buy.3.S.Past

'What did Lillian buy?'

(59) **Ndu** Lillian yukët ?

What 3.S. Lillian buy.3.S.Past

'What did Lillian buy?'

(60) George [**nditni** book Lillian yik' iyelhdic] yilhni ?

George which book Lillian 3s. read (opt). 3s 3s told. 3s

'Which book did George tell Lillian to read?'

(61) **Nditni** book George Lillian yik' iyelhdic yilhni ?

which book George Lillian 3s. read (opt). 3s 3s told. 3s

'Which book did George tell Lillian to read?'

(Denham, 2000: 201-207)

She states that optional selection of lexical items follows minimalist principles. She explains that the lexicon contains lexical items as well as functional items such as C. She also suggests that optionality is found in the

lexicon or more precisely in the numeration. This means that any item, whether lexical or functional, may or may not be selected. For Denham, the functional item C can either be selected or not for any particular derivation (2000: 207). The selection of C will prompt wh-movement, the non-selection of C will leave the wh-phrase in situ. As far as overt syntax is concerned, C is available in an embedded question (i.e., selected from the lexicon) only when the interrogative features of the matrix verb triggers such insertion; otherwise C is not present in overt syntax and is not present at all in covert syntax (LF).

By proposing this hypothesis to account for optionality of wh-movement in BW, Denham does not contradict the minimalist principle on economy of derivation. Namely, it is not possible for two identical sentences to have identical interpretations and both be grammatical since only one derivation must succeed in reaching the interfaces because it is the most economical one. Proposing to optionally select C from the lexicon leads to the creation of two different arrays for a sentence: one containing C and the other not. Both derivations are both grammatical since they are both the most economical derivations for that particular array (Denham 2000: 208).

Therefore, Denham proposes to solve the problem of optional wh-movement by allowing optional selection of C from the lexicon. "If C and its wh-feature appear in the numeration, it will prompt raising of a wh-feature and its accompanying wh-phrase to check off the wh-feature in C. If C does not appear in the numeration, then no wh-movement takes place" (Denham 2000: 287).

As for French, Denham considers this language as one which does not exhibit wh-movement except in embedded

questions. Optional wh-movement is apparent in simple questions in spoken French. She considers that the optional fronting of the wh-phrase in simple questions is due to the existence of a focus feature. In embedded questions, however, French exhibits overt wh-movement and the option of leaving the wh-element in situ is ungrammatical when the matrix verb is an interrogative verb. This restriction enables Denham to conclude that wh-movement is apparent in matrix clauses and is the only option available in French embedded questions if the matrix verb such as *demander* and *questionner* has some interrogative features. According to Denham, it is the interrogative feature on the matrix verb that triggers the selection of C from the lexicon which will also trigger overt movement of the wh-phrase in embedded questions. To sum up, Denham claims that "French does not have overt wh-movement except when the properties of the verb require it" (2000: 239).

Denham's analysis exhibits various advantages. For instance, it avoids problematic issues such as wh-feature strength and wh-feature interpretability at the interfaces, which do not provide convincing explanations. She does not claim that the wh-feature, when it is strong, triggers movement and when it is weak does not. Instead, she claims that movement of the wh-phrase is a matter of focus in the case of simple questions and of an interrogative feature of the verb that triggers the selection of C from the lexicon in the case of embedded questions. Finally, Denham proposes to analyze movement in wh-constructions in French as focus movement on the basis of cleft constructions. Since Denham believes that French exhibits no wh-movement in matrix clauses, she must provide solid arguments to explain why there is apparent overt movement of wh-phrases. Denham views

movement of wh-phrases in sentences such as (63) below as wh-clefting where the wh-element must move to C to satisfy a focus feature:

(62) Tu as acheté quoi?

You bought what

'What did you buy?'

(63) C'est quoi que tu as acheté?

It is what that you bought

'What is it that you bought?'

(64) Qu'est ce que tu as acheté?

What *est-ce-que* you bought

What did you bought?

Sentence (62) represents the option of leaving the wh-phrase in situ. Sentence (63) represents wh-clefting and sentence (64) represents wh-movement to satisfy a focus feature rather than a [+wh] feature. According to Denham, sentence like (63) constitute evidence for a focus interpretation of French wh-sentences.

Denham offers convincing arguments that French does not have overt wh-movement in simple questions but exhibits instead wh-focus movement. However, she does not seem to provide a comprehensive analysis of the various interpretations of French wh-focus movement. She does not analyze the two options of French, which are raising or leaving wh-phrases in situ in simple questions. Whether these two options are triggered by wh-features or focus features, there must be a specific interpretation for both

options, and in order for these two options to be licit, they must have different syntactic as well as semantic features (two different derivations that lead to two different interpretations). We will see in Chapter 5 how these questions are addressed.

3.6 Evaluating LF-movement of wh-in situ (Simpson 2000)

Theories that support LF-movement to explain wh-in situ take the view that languages that do not raise wh-phrases to [Spec, CP] such as Chinese still consider the [+wh] feature present on Comp and end up moving covertly to [Spec, CP] at LF. This has become a convincing explanation for wh-movement in languages that exhibit wh-in situ phenomena (Cole and Herman 1994). However, when studying the analyses of wh-movement of the 1980's and then comparing them with those of the 1990's, we can see that attitudes towards LF movement of wh-in situ have changed. 1980's analyses of wh-phrases in situ strongly supported LF movement, whereas 1990's analyses provide various other reasons to explain wh-in situ phenomena. It is worth mentioning that the development of Minimalist Principles during the 1990's has had a considerable role in questioning the relevance of LF-movement.

Simpson (2000) questions the need for LF as a level of representation where covert movement occurs. He argues against LF movement of wh-phrases in situ on the basis that covert LF wh-movement does not parallel overt wh-movement. He claims that wh-in situ is not subject to island effects, which confirms that it does not involve movement at LF.

Simpson examines various constructions where LF movement does not parallel movement in overt syntax. Let us consider some of these constructions.

First, Simpson argues that LF movement is not sensitive to the same island constraints as overt movement. For instance, the principle of subjacency relative to LF movement encounters serious problems. In Chinese, argument wh-phrases appear in situ and cannot be extracted overtly. In (65), topicalization (raising of the NP *Zhangsan*) violates an island, the relative clause. The construction in (66) represents a wh-in-situ construction. It is an acceptable structure because when the wh-phrase stays in situ, it does not violate the island represented by the relative clause

(65) *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'

(66) 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)

According to Simpson, if the wh-in situ in (66) undergoes movement at LF, its movement cannot be subject to the same locality constraints that apply to overt movement.

Second, Simpson states that LF movement does not parallel overt movement on the basis of interpretative differences. This claim is taken from Aoun and Li (1993) who state that *only* can only be associated with a lexical

element in its c-command domain (Simpson 2000: 17). Examine the following examples:

(67) He only likes Mary

(68) Mary_i, he only likes t_i (Simpson 2000: 17)

Sentence (67) can have two meanings: one where 'it is only Mary that he likes' and another one where 'his relationship to Mary is only that he likes her' (i.e., he doesn't love her). Sentence (68) can only have the second reading.

Now consider the following questions with *only*:

(69) Which girl said she only liked what?

(Simpson 2000: 17)

In order for sentence (69) to have the interpretation 'which girl said of which thing such that that thing was the only thing that she liked?', the wh-phrase in situ must not undergo raising at LF. If the wh-phrase in situ raises at LF and leaves a trace, the scope of *only* would be associated with the verb *like* not with the trace of the moved lexical item. Consider the following question where the wh-phrase raises:

(70) Who_i does Mary only like t_i?

(Simpson 2000: 17)

Sentence (70) cannot have the interpretation 'which person is such that he/she is the only person that Mary likes?' because *only* is only associated with the verb *like*.

Third, Simpson enumerates other constructions where LF movement differs from overt movement. These constructions are parasitic gaps and antecedent-contained deletion. Let us consider the licensing of parasitic gaps. In English, overt wh-movement to Comp licenses parasitic gaps, however, LF-movement of wh-in situ does not, as illustrated in (71-72) below.

(71) What_i did John send off without having copied e_i?

(72) *Who_i did John give t_i what_k without having copied e_k?

(Simpson 2000: 18)

"A Parasitic gap is a null element whose presence must be licensed by another gap in the sentence" (Haegeman 1994: 474). The null element e_i in (71) above is a parasitic gap that depends for its existence on the presence of another null element in the sentence which is located after the verb *send off*. Sentence (71) is repeated in (73) illustrating the gaps and how they are licensed:

(73) What_i did John send off e_i without having copied e_i?

Simpson (2000: 18) concludes that "only A' chains formed prior to Spell-out will allow for parasitic gaps". This confirms the asymmetry between wh-movement in overt syntax and wh-movement at LF.

Simpson is against LF movement of wh-phrases in situ because of the serious problems this approach presents. Simpson (2000: 66) claims that "LF wh-raising can be taken both to be theoretically unnecessary and virtually impossible to maintain in certain instances". In sum, the

distribution of wh-phrases in situ in islands is different from that of the raising wh-phrases in similar syntactic environment. Interpretative differences arise between fronted wh-phrases and wh-phrases in situ. The differences between overt movement of wh-phrases and LF movement of wh-phrase in situ make Simpson (2000: 66) conclude that "the interpretation of wh-phrases in in situ positions must be allowed for as a fully general possibility in language". I agree with Simpson on the status of LF movement and LF interpretation of wh-phrases in situ. My proposal which will be explained in the subsequent chapters (chapter 6, 7 and 8) offers an analysis of wh-phrases in situ that enables them to be interpreted in their base-generated position.

3.7 Conclusion

In this chapter, I have reviewed some analyses of wh-in situ that have direct implications for this dissertation. Authors such as Baker (1969) advocate a morpheme analysis of wh-movement. Subsequently, authors such as Huang (1982), Aoun and Li (1993), and Simpson (2000) argue in terms of locality constraints: Wh-in situ cannot simply be considered as moving at LF in a fashion that parallels overt movement. A newer vision on how to treat wh-movement and wh-in situ phrases crosslinguistically is evolving in Denham (2000). Mainly, these analyses set the tone for parametric variation as the sole explanation for the disparity in how wh-phrases are distributed. Parametric variation has been used before to explain the difference in forming wh-questions crosslinguistically but it was only based on the status of

the [wh] feature, being strong or weak. In chapter 5, I will discuss analyses of wh-phrases connected to focus.

CHAPTER 4: SOME RELEVANT VIEWS ON FOCUS

4.1 Introduction

In this dissertation, I analyze optional wh-movement in Egyptian Arabic using focus. I propose that wh-fronting as well as wh-in situ are two strategies of wh-question formation that can be accounted for by focus. Following various ideas from authors such as Belletti (2002), Boeckx (1999), Brunetti (2003), Cinque (1993), Kiss (1998), Reinhart (1995), Rizzi (1996), Rooth (1992), Vergnaud and Zubizarreta (2000) and Zubizarreta (1998, 2002), I claim that properties of focus can account for wh-interrogatives. I will show that features of focus can properly explain the particular way of forming wh-questions in languages such as EA.

In this chapter, I propose to explore focus, its properties, and its role in grammar. I present a review of what is meant by focus, the various types of foci, and how

focus is represented and interpreted. I also explore two well-known approaches to focus: the prosodic-based approach and the syntactic-based approach. I believe that focus must be analyzed by taking into consideration features of both the syntactic approach and the prosodic approach. The main purpose of this chapter is to outline how focus can account for optional wh-movement.

4.2 What is meant by 'Focus'?

Linguists such as Belletti (2002), Brunetti (2003), Chomsky (1971), Cinque (1993), Jackendoff (1972), Kiss (1998), Rochemont (1986), Reinhart (1995), and Zubizarreta (1998) generally define a focus constituent as "the new information in a sentence". Recent works on focus follow definitions first cited by Chomsky (1971) and Jackendoff (1972) revised recently by Rochemont (1986) Rochemont and Cullicover (1991) and Zubizaretta (1998).

Rochemont (1986) cites both Chomsky (1971) and Jackendoff (1972) and draws a comparison between the two. According to Chomsky (1971), the focus constituent represents "the new information" of the sentence. "Chomsky understands 'the new information' in a sentence to be that information that is not 'presupposed' in the context" (Rochemont 1986: 9). Jackendoff (1972), however, characterizes new information as 'the information in the sentence that is assumed by the speaker not to be shared by him and the hearer' (Rochemont 1986: 10). Although Chomsky underlines the importance of presupposition in the context and Jackendoff stresses the importance of the information shared by the speaker and the hearer to define focus, they

both agree that a focus constituent is the one that is characterized by the new information and that "being the new information in a sentence is both a necessary and sufficient condition for interpretation as focus" (Rochemont 1986: 10).

Zubizarreta (1998) also quotes Chomsky (1971) and Jackendoff (1972) but offers another definition. She agrees with both Chomsky and Jackendoff that focus is the non-presupposed part of the sentence, bearing in mind that presupposition is the shared assumption once the sentence is uttered in discourse by the speaker and heard by the hearer. However, she does not agree with Rochemont (1986) that old and new information are basic notions because she believes that the new/old dichotomy does not necessarily define focus as much as it leads to differentiate between various types of foci (to be explored in the following section). She supports her position with examples such as (74) (the stressed/focused phrases are indicated by capitals):

(74) John hit MARY, then SHE hit HIM.

(Rochemont, 1986: 51)

Sentence (74) shows that both old and new information could be focused in the same sentence. MARY represents new focused information but SHE and HIM are old focused information, which leads Zubizarreta to reject the new/old dichotomy proposed by Rochemont to define focus semantically. She adopts the notion of presupposition in order to distinguish between types of foci. Later, (in Rochemont and Cullicover 1990), Rochemont abandoned the new/old dichotomy and also proposed a distinction between types of foci as demonstrated below.

This dissertation uses focus to provide an explanation of optionality of wh-questions. Focus consists of the prominent element in a sentence that represents the new information that is not presupposed and is not shared by both the speaker and the hearer. In the case of wh-questions, focus is also taken to be the requested new information; it is the wh-phrase itself that represents the focused element in the question and it is also the answer to the wh-phrase that is prominent and therefore focused in the 'answer clause'. Consider the following example:

(75) WHAT did John do?

[John [ATE [the pie]]]

(76) WHAT did John eat?

[John [ate [THE PIE]]]

(Zubizarreta 1998: 3)

The most prominent element in the questions in (75-76) is the one containing the wh-phrase. The answer to these questions also represents the new information sought by the speaker. I can therefore draw a first assumption based on the definition of focus and the behaviour of wh-questions: Forming wh-questions is linked to focus.

4.3 Types of foci and their differences

Authors such as Chomsky (1971), Jackendoff (1972), Kiss (1998), Rochemont (1986), and Zubizarreta (1998) categorize focus in different classes. We can identify two major

classes of focus: information/presentational focus and contrastive/emphatic focus.

4.3.1 Information focus

As stated above, information focus expresses new information that is not presupposed. This type of focus is typically found in wh-questions where the wh-phrase represents the focus element and the answer provides the new information sought by the speaker. Example (77) below illustrates this type of focus:

(77) WHAT did John DO?

John ATE the pie (Zubizarreta 1998: 2-3)

In (77), the wh-phrase *what* represents the new information that the speaker is asking about. The answer contains the focused element which also represents the new information sought by the speaker who asked the question.

4.3.2 Contrastive focus

Contrastive focus expresses a contradiction of some information previously uttered. The speaker wants to correct the interlocutor's knowledge about something so the speaker puts the emphasis on the information he wants his interlocutor to correct. The sentences in (78) below illustrate this type of focus:

(78) John is wearing a RED shirt today (not a blue shirt)

→[John is wearing a blue shirt today] (context statement)

Sentence (78) makes a statement about the truth of a certain assertion introduced by its context statement. It negates certain aspects of this given assertion (Zubizarreta 1998: 7).

Zubizarreta concentrates on information focus and puts aside contrastive/emphatic focus on the basis that the last two types of foci are "meta-grammatical: they negate part of the presupposition" (1998: 44). By contrast, Rochemont gives attention to both information focus and contrastive focus and generalizes his theory of focus to these two types.

In this dissertation I am interested in the types of foci found in wh-questions. Contrary to common views in the literature, I will claim that wh-questions can contain both types of foci: information focus and contrastive focus. I will show that in EA, there are two types of wh-questions that correspond to the two type of foci described above. For now, let us consider the differences between information focus and contrastive focus by exploring Kiss's comparison between the two types of foci presented above. This will be useful when I analyze the semantic content of wh-questions in EA.

4.3.3 Comparing types of foci (Kiss 1998)

Kiss (1998: 248) differentiates between information focus and contrastive focus¹² with the following parameters:

¹² She uses the term identificational focus for contrastive focus

(79) Comparison between information focus and contrastive focus

	Information focus	Contrastive focus
Interpretative differences:		
(1) Representation of the focused/emphatic constituent	Marks the nonpresupposed nature of the information it carries	Expresses exhaustive identification
(2) Distributional restrictions	No restrictions concerning the types of constituents that can function as information focus	Some types of constituents such as <i>also</i> -phrases, <i>even</i> -phrases cannot function as contrastive focus
(3) Scope	Information focus does not take scope	Contrastive focus takes scope
	Information focus	Contrastive focus
Syntactic differences:		
(4) Position	Information focus does not involve movement	Contrastive focus moves to the specifier of a functional projection
(5) Syntactic category	Information focus can be a small or large constituent	Contrastive focus can only be an XP for operator movement
(6) Iteration and projection	Information focus is projected	Contrastive focus is iterated

Now consider the following Hungarian examples that demonstrate Kiss's distinction between information focus and contrastive focus:

(1) Representation of the focused/emphatic constituent

(80) (a) Mari ki nézett magának **EGY KALAPOT**

Mary picked for herself a hat

'Mary picked a hat for herself'

(b) Mari **egy kalapot** nézet ki magának

Mary a hat.Acc picked out herself.Acc

'It was a hat that Mary picked for herself'

(Kiss 1998: 249)

Sentence (80a) represents information focus where the focus constituent appears in situ in a postverbal position. Sentence (80b) is a contrastive focus construction where the focused constituent moves to a preverbal position. The contrastively focused constituent is a member of a set of alternative entities. Mary picked a hat and not anything else. The information focus in (80a) does not express exhaustive identification among the members of a set, it marks the nonpresupposed nature of the information it carries.

(2) Distributional restrictions

(81) (a) 'Kiket hívtál meg a születésnapodra

Who.Pl.Acc invited you Perf your birthday to

'Who did you invite to your birthday'

- (b) **EGY SZOMSZÉDOMAT** is àt hívtam
 A neighbor.my.Acc also over invited. I
 'I called ALSO A NEIGHBOR OF MINE'

Sentence (81b) represents an information focus where an *also*-phrase is used. The use of the *also*-phrase is ungrammatical when there is a contrastive focus in the sentence as in (81c) below

- (c) *Mari **egy kalapot is** nézett ki magának
 Mary a hat.Acc also picked out herself. Dat
 'It was also a hat that Mary picked for herself'
 (Kiss 1998: 251-252)

(3) *Scope:*

- (82) (a) Kikkel akartak tàncolni a fiúk?
 who.Pl. with wanted to.dance the boys
 'Who did the boys want to dance with?'
- (b) Minden fiú tàncolni akart A SZÉPSÉGGIRÀLYNOVEL
 Every boy to.dance wanted the beauty queen. With
 'Every boy wanted to dance WITH THE BEAUTY QUEEN'
- (c) Minden fiú **Marival** akart tàncolni
 Every boy Mary. With wanted to.dance
 'For every boy it was Mary that he wanted to dance with'
- (Kiss 1998: 254)

In (82b) the answer to the question (82a) does not contain an operator that could enter into a scope relation with the

universal quantifier. Information focus WITH THE BEAUTY QUEEN represents the nuclear scope of the universal quantifier. Sentence (82c) is an instance of contrastive focus, represented by MARY, the universal quantification takes scope over exhaustive identification.

(4) Position

Information focus involves no movement, whereas contrastive focus is characterized by movement to a functional phrase projection (FP) where the focused constituent occupies the specifier position and the head F is an abstract functional head with strong features. The complement of F is the sentence part over which contrastive focus takes scope. Consider sentence (83a) where there seems to be no movement of the focused element that denotes information focus, whereas movement occurs in (83b) where the focused element interpreted as contrastive focus moves to an FP projection:

(83) (a) [_{VP} Szeretném [_{CP} ha [_{FP} **Péterre**_i szavaznátok t_i]]]

I.would.like If Peter.on voted.you

'I wish it was Peter for whom you voted'

(b) [_{FP} **Péterre**_i szeretném, [_{CP} t_i ha szavaznátok t_i]]

Peter.on I.would.like if voted.you

'It is Peter for whom I would like you to vote'

(Kiss 1998: 256)

(5) *Syntactic category*

Movement of the contrastive focus entails that it is a major maximal projection and that the movement does not violate subjacency. There are even constraints on the category that can bear contrastive focus. For instance, *that*-clauses and infinitival clauses cannot be contrastively focused. For example:

- (84) *Jàanos [Spec-FP [(azt), hogy Mari elkésik]] súgta nekem t_i
 John that.Acc that Mary is.late whispered me
 It was that Mary would be late that John whispered to
 me' (Kiss 1998: 261)

(6) Iteration and projection

Contrastive focus can only be located in the specifier of a Focus Phrase. Information focus, however, can be positioned in any part of the sentence. Consider (85), an instance of information focus that can extend over the postverbal DP as an answer to (86a), over the VP as an answer to (86b) and over the whole clause as an answer to (86c):

- (85) [_{TP} Péter [_{VP} meg rendelt [_{DP} egy könyvet]]]
 Peter Perf ordered a book.Acc
 'Peter ordered a book'

- (86) (a) What did Peter order?
(b) What did Peter do?
(c) What happened? (Kiss 1998: 264)

Kiss's study concentrates on major properties distinguishing contrastive focus from information focus. The aim of her study is to defend the idea that studying the semantics of focus must not blur the differences between contrastive focus and information focus. On the contrary, an analysis of the semantics of focus must highlight that there exist two notions of focus: one is contrastive focus and the other is information focus. Kiss (1998) disagrees with studies such as Krifka (1984) where the same semantic structure is given to both types of foci and where the semantic definition of focus is based on features of information focus¹³. Kiss's study will be useful in the course of this thesis, in particular in regard to the semantic properties of both types of foci in the analysis of wh-questions in EA. The analysis of the semantic properties is, in turn, used to argue that wh-in situ is interpreted as information focus whereas a fronted wh-word is interpreted as contrastive focus.

4.3.4 Arnaudova (2003): Focus and the Bulgarian Clause Structure

Arnaudova (2003) examines the properties of the Bulgarian clause from a Minimalist perspective following Chomsky (1995b) and subsequent work, and also from the perspective of recent theories on focus and intonation as presented by Cinque (1993), Kiss (1998), and Zubizarreta (1998). She claims that word order is determined by two components of the grammar: the computational system and the

¹³ Brunetti (2003) criticizes Kiss (1998) and opts for a unifying analysis of focus. She rejects Kiss's distinction between information focus and contrastive focus based on Italian data where Kiss's parameters in table (78) above seem not to apply. I will revisit Brunetti (2003) in chapter 5.

level at which intonation and focus interact. She considers focus to be a predication function with two manifestations : one as predication focus and another one as argument focus. According to Arnaudova (2003), these two types of foci have direct impact on the structure of the clause in Bulgarian. Predication focus is realized in the VP and argument focus is realized as information focus and contrastive focus (Kiss 1998). Arnaudova studies the realization of information focus in Bulgarian in relation with sentential stress and syntactic structure. She raises the problem of whether sentence prosody has a relation to discourse and more specifically to focus and how this relation between semantic focus and phonological prominence is realized. She assumes that, in Bulgarian, stress is assigned directly to syntactic constituents by the Nuclear Stress Rule (as advocated by Cinque 1993 and Zubizarreta 1998, see section 4.5). Arnaudova examines contrastive focus in declarative clauses and shows how it interacts with wh-questions. She claims that there is a formal focus feature that triggers movement of the wh-phrase to the highest functional projection (in the field of the IP). Arnaudova's work represents another contribution to the analysis of the structure of a language, Bulgarian, using the reflex of focus. Her work examines various types of Bulgarian sentences ranging from declarative sentences to wh-questions.

4.4 Syntactic-based approaches to focus

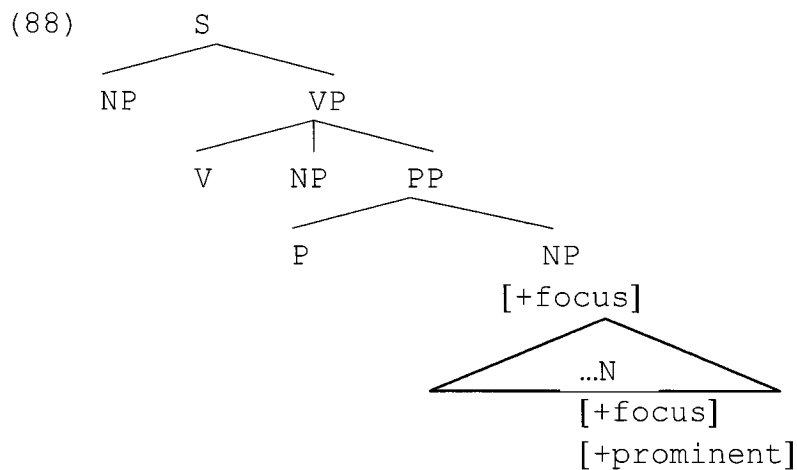
Rochemont (1986) and Rizzi (1997) opt for a syntactic-based approach to focus. These authors defend the idea that focus enters the computational system as a [+focus]

feature present in a Focus Phrase. The [+focus] feature needs to be checked in its checking domain so it drives movement of the focused element to the specifier of a Focus Phrase, which explains the position of focus at the left periphery of the sentence. The movement is done at LF in the case of information focus and in the syntax in the case of contrastive focus.

4.4.1 Rochemont (1986)

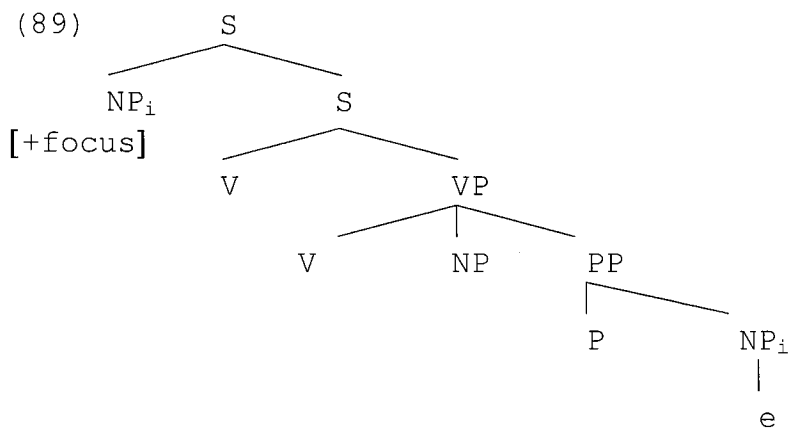
According to Rochemont (1986), a [+focus] constituent is assigned new information status in the sentence. A focus constituent is also determined by 'prominence'. Prominence refers only to focus related accents. Rochemont (1986: 33) identifies "any prominent item as focus" following the rule that states "if α is prominent (F), then α is [+focus]". Rochemont refers to this rule as Focus Assignment (FA). An application of this rule is illustrated in (88) below, corresponding to sentence (87). Since the noun phrase *the bedroom* is prominent, i.e., pronounced with a higher intonation, it is the focused element in the clause according to Rochemont's Focus Rule.

(87) Laurie followed Ralph into the BEDROOM.



(Rochemont 1986: 22)

According to Rochemont (following Chomsky 1977), the focus constituent is represented as in (88) and it undergoes Focus Raising at LF, and "the feature [+focus] is interpreted at LF as a quantified representation" (Rochemont 1986: 34). In Focus Raising, the focus constituent is raised at LF to the root S node as in (89)



In the figure in (89), the focused element adjoins to the root node S after moving step by step at LF from NP to PP then VP then S.

According to Rochemont, (1986) "it must be recognized that the LF representations derived by FR do not themselves

provide an interpretation for the [+focus] phrases" (Rochemont 1986: 35). In this thesis, I need to provide more than just a focus raising rule applied at LF in order to represent the semantic content of focus, an idea that I adopt and develop in chapter 8.

Rochemont interprets focus via the concepts of old and new information. For him, 'old information' means something 'under discussion', and something is under discussion if it is 'c-construable'. He defines c-construable as follows:

(90) "A string P is c-construable in a discourse δ if P has a semantic antecedent in δ " (Rochemont 1986: 47).

By semantic antecedent, Rochemont means the following:

(91) "A string P has a semantic antecedent in a discourse δ , $\delta = \{\phi_1, \dots, \phi_n\}$, if, and only if, there is a prior and readily available string P' in δ , such that the uttering of P' either formally or informally entails the mention of P" (Rochemont 1986: 47).

Consider the following statement:

(92) By the way, John is sending ROSE to Spain.

(Rochemont 1986: 47)

In Rochemont's view, sentence (92) is uttered by a speaker A who had told a story to speaker B some time before (92) was uttered. "A was telling B about a neighbor's plans to send his three daughters away to finishing school, two in Switzerland and one in Spain. A cannot remember which of the

daughters is going to Spain" (1986: 48). The discussion of this topic was dropped by both A and B, and after some time, A uttered (92) after he recalled which daughter was going to Spain.

The information that *John* is sending one of his daughters to *Spain*, as uttered in (92), is considered to be the information 'under discussion' and therefore is not focused. The speaker considers the information in (92) as c-construable in the discourse context given by his interlocutor. The hearer is able to interpret the information in (92) with the relevant discourse event.

Rochemont's analysis of focus has been refined and put into practice in joint work with Culicover. Rochemont and Culicover (1990) take up the theory of focus in order to analyze some English constructions that they call stylistic constructions such as the ones illustrated below:

- (93) (a) Into the room walked John. (locative inversion)
(b) Standing in front of her was Mary. (preposing)
(c) John invited to the party his closest friends.
(Heavy NP Shift)

(Rochemont and Culicover 1990: 1)

A property that the stylistic constructions in (93) all share is the identification of a focus phrase in the sentence. There is a systematic relation between sentence accent and focus; the accented constituent is also the focused one. Focus is also considered to be a property of discourse and context since the assignment of focus illustrates the well-formedness of a sentence in discourse.

The authors refine two basic notions presented in former work: the notion of c-construable and the notion of

presupposition. In Rochemont (1986), a c-construable constituent is not focused. However, it is not always true that a constituent that is c-construable is not focused. Consider (94-95) below:

(94) Who does John's mother like?

(95) John's mother likes JOHN. (Rochemont 1986: 41)

In (95), JOHN the focused element is already mentioned in the discourse and is c-construable. In order to solve this problem, the authors differentiate between contrastive and presentational focus. When the focused element is c-construable, it is interpreted as presentational focus, and when it is not c-construable it is interpreted as contrastive focus.

The notion of presupposition is also problematic for the theory of focus. Presupposition does not explain whether complements of factive verbs, which are generally presupposed, are focused or not. The fact that these complements are presupposed does not always render them unfocusable. The authors abandon presupposition in favor of c-construable, which better defines focus.

In sum, Rochemont (1986) and Rochemont and Culicover (1990) explore focus and opt for its syntactic encoding. They consider focus to be a property of syntax that must be encoded through the [+focus] feature and movement to a Spec-head configuration. A similar analysis is explored by Rizzi (1997) within the Minimalist program.

4.4.2 Rizzi (1997)

Rizzi also favors a syntactic encoding of focus and advocates a maximal projection called Focus Phrase (FocP) that hosts the focused constituent and its [+focus] feature. Using the Split-CP hypothesis, Rizzi positions the FocP next to Topic Phrase (TopP) and proposes the structure in (96) below:

(96) Split-CP structure:

... Force ... (Topic) ... (Focus) ... Fin IP

(Rizzi 1997: 288)

FocP is therefore part of the left periphery of the structure containing ForceP, TopP, and FinP.

Rizzi identifies two systems within C: the force-finiteness system and the topic-focus system. The force-finiteness system expresses the clausal type (Cheng 1997) or Force (Chomsky 1995b) of the clause. It also expresses finiteness.

Force is the outside information on C; it expresses whether the clause is a declarative, a question, a relative, etc. The complementizer can have an overt morphological specification of the force information like [+Q] or [+wh] morphemes.

Finiteness is the inside information on C. It illustrates the content of IP inside C. If IP is headed by a complementizer like *that*, then the verb inside IP is tensed. However, if IP is headed by a complementizer like *for*, then the verb inside IP is non-tensed. Taking into consideration such dependency between the type of complementizer heading C

and the type of verb in IP, Rizzi assumes that C contains information about finiteness.

On the other hand, the topic-focus system involves the articulation of topic and focus at the left periphery of the clause. The Topicalization Articulation is illustrated in sentence (98) below where the noun phrase *your book* is **topicalized** in order to stress the new information that the speaker would like to convey to the hearer. In (98) however, the speaker wants to correct the information that his interlocutor has on the subject matter, so the constituent *your book* is **focused**. (97) is an illustration of the Focus-presupposition Articulation. (98) is also an instance of contrastive focus:

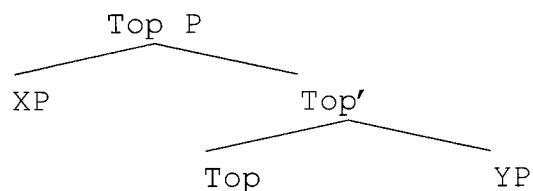
(97) Your book, you should give t to Paul (not to Bill)

(98) YOUR BOOK you should give t to Paul (not mine)

(Rizzi 1997: 285)

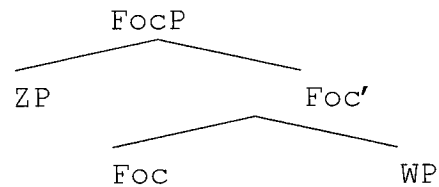
The Topicalization Articulation in (97) has the structure in (99) and the focus-presupposition articulation in (98) has the structure in (100)

(99)



XP = topic
YP= comment

(100)



ZP= Focus

WP= Presupposition

Both topic (XP in (99)) and focus (the ZP in (100)) occupy the left periphery of the clause. The complement of the topicalized element represents its comment, whereas the complement of the focus element represents its presupposition.

As far as the syntactic encoding of focus is concerned, Brunetti (2003) quotes Rizzi (1996, 1997) who assumes that a focus constituent must be in the checking domain of a focus head, i.e., it must enter a Spec-head agreement with the Focus head as soon as pre-Spell-out. Rizzi's proposal for the syntactic encoding of focus is similar to the syntactic encoding of wh-phrases. He proposes a Focus Criterion that resembles the Wh-Criterion.

(101) WH-Criterion:

- (a) A Wh-operator must be in a Spec-head configuration with an $X_{[+wh]}$
- (b) An $X_{[+wh]}$ must be in a spec-head configuration with a Wh-operator (Rizzi 1996: 64)

(102) Focus-Criterion:

- (a) A Focused phrase must be in a spec-head configuration with an $X_{[+Focus]}$

- (b) An $X_{[+Focus]}$ must be in a spec-head configuration with
a focused phrase Brunetti 2003: 58)

Rizzi proposes that the topic-focus system is integrated into the force-finiteness system by assuming that the latter is essential to the structure of C and that the former is present whenever needed, i.e., whenever a constituent bears a topic or focus feature that must be checked following the Spec-head criterion. He illustrates the structure of C in Italian:

(103) Credo *che loro apprezzerrebbero molto il tuo libro*

I-believe that they appreciate.Subj very-much the your book

'I believe that they would appreciate your book very much'

(104) Credo *di apprezzare molto il tuo libro*

I-believe of appreciate-Inf very-much the your book

'I believe 'of' to appreciate your book very much'

(105) Credo *che il tuo libro, loro lo apprezzeranno molto*

I-believe that the your book, they it appreciate-Subj very much

'I believe that your book, they would appreciate very much'

(106) Credo, *il tuo libro, di apprezzarlo molto*

I-believe the your book, of appreciate-Inf-it very much

'I believe, your book, 'of' to appreciate it a lot'

(Rizzi 1996: 288)

Rizzi notes that "in Italian, *che* always precedes and *di* always follows a left-dislocated phrase" (1997: 288). He assumes that with a theory that postulates the existence of a unique C, it is not possible to account for the force information that *che* manifests in (105) and the finiteness information that *di* manifests in (106). Rizzi's multiple layer approach enables *che* and *di* to occupy two distinct positions, the former occupies the force position and the latter occupies the finiteness position.

Rizzi does not explore focus in situ, which he briefly mentions in connection with Italian.

(107) Ho letto IL TUO LIBRO, (non il suo)

'I read YOUR BOOK, not his' (Rizzi 1997: 287)

Rizzi assumes that in (107) the focal element must move at LF to the left periphery to be in a Spec-head configuration and satisfy the Focus Criterion. From Rizzi's analysis, we can assume that an overt versus a covert movement of the focused phrase encodes the difference between contrastive and information focus. My treatment of EA wh-questions in this thesis does not adopt Rizzi's ideas on movement because they have the flaws already mentioned in chapter 3 (section 3.6 on LF movement) where I reviewed Simpson's (2000) ideas that LF movement of wh-phrases in situ does not parallel overt movement of the wh-phrase on the basis that both types of movement are constrained differently and that interpretative differences between the two types of movement are observed.

4.4.3 A critique of syntactic-based approaches to focus

Having introduced some syntactic-based analyses of focus, I will evaluate them in the light of recent principles of the generative framework.

First, according to Brunetti (2003), the focus feature violates Chomsky's Inclusiveness Conditions. This condition states that "any structure formed by the computation is constituted of elements already present in the lexical item selected for N, no new objects are added in the course of the computation apart from rearrangements of lexical properties" (Chomsky 1995b: 228). Zubizarreta (1998: 30) discusses the legitimacy of feature insertion in the computation in relation to the inclusiveness rule stated above. She proposes to weaken this principle in order to allow 'global relational properties' such as [+focus] to enter the computation. Since these elements cannot enter the computation and behave like lexical features that interfere in lexical rearrangement, they must be interpreted once the derivation is complete and sent for interpretation. Also, Zubizarreta (1998: 30) argues for a restructuring of the architecture of the grammar in order to create a level at which these features are defined. Although a revision of the architecture of the grammar and a reformulation of the inclusiveness rule are proposed, insertion of elements like 'formal' or 'global' as features are still considered to be lexical insertions since they contribute to the rearrangement of elements (such as wh-movement for focus).

Second, feature checking is now a process that involves matching of uninterpretable features with interpretable features of the same type (Chomsky 2000). If the [+focus]

feature must move to a checking domain (following feature movement as advocated by Chomsky 2000), it remains unclear with which features it matches in order for the feature checking process to take place.

A third problem is that the reason for optionality in movement remains unclear. Proposing a [+focus] feature seems to account easily for highly located focus in which the focus element is moved to check the [+focus] feature. However, this encoding of focus cannot explain low focus or focus-in situ unless LF focus movement is suggested, which may force us to consider a weak feature in the case of the LF movement proposed for optional wh-movement.

Fourth, syntactic encoding of focus by movement (overt or covert such as QR) or attaching a focus feature to a focus head does not explain restrictions on the two syntactic encodings and when to use one or the other. There has been no mention in the literature on how to treat movement of focus and how to constrain its occurrence.

Fifth, Simpson (2000: 113) discusses the status of the [+focus] feature and the way it must be checked in a fashion similar to any other feature. He gives the following examples:

- (108) (a) THAT BOOK I never read
 (b) THAT BOOK I gave to JOHN

(Simpson 2000: 113)

In sentence (108a), the [+focus] feature is checked prior to Spell Out by fronting the NP THAT BOOK to C or F. In (108b), however, there are two focused elements, THAT BOOK and JOHN. Simpson wonders whether the assumption that the first NP has

been fronted to check the [+focus] feature means that the second focused NP could check its focus feature locally at a distance from the checking domain. If this is so, why is it that the first NP has been raised at all? For this reason a [+focus] feature such as that in (108a, 1089b) above or that found with wh-interrogatives with optional movement in Rochemont (1986) and Rizzi (1997) does not provide us with a complete account of how [+focus] features are licensed.

Having discussed the syntactic-based approach to focus and concluded that it has many imperfections, I now explore the prosodic-based approach to focus to see if it offers advantages to the analysis of EA optional wh-interrogatives.

4.5 Prosodic-based approaches to focus

Prominent advocates of a prosodic approach to focus are Cinque (1993), Reinhart (1995), and Zubizarreta (1998). They postulate that focus is intimately linked to some version of the Nuclear Stress Rule (NSR) which assigns main stress to a sentence. In what follows, I discuss these approaches by drawing attention to the relationship between focus on wh-phrases and stress assignment. Bear in mind that these authors mainly discuss information focus and how it could be accounted for through NSR.

4.5.1 Cinque (1993)

Chomsky and Halle's (1968) Nuclear Stress Rule (NSR) states that the main stress falls on the rightmost constituent of the sentence. The NSR proposed by Halle and

Vergnaud in (1987) is stated in (109), borrowed from Cinque (1993: 242):

(109) Nuclear Stress Rule:

- (a) Parameter settings on line N ($N \geq 3$) are [-Bound, +HT, right].
- (b) Interpret boundaries of syntactic constituents composed of two or more stressed words as metrical boundaries.
- (c) Locate the heads of line N constituents on line N+1.

Consider the following example taken from Reinhart (1995: 22-23). It illustrates how the NSR, stated in (109) above, functions. The asterisks correspond to the stress assignment and each line represents a cycle where a new constituent is added. First, the stress is assigned to each word. Then, once a new cycle is added, the stress is located at the most prominent element, i.e., the head of the constituent. The main stress of the sentence falls on the most embedded constituent *book*.

(110) [I [read [the **book**]]]

- (a) Line 1 (word line) [* [* [*]]]
- (b) Line 2 (VP cycle) [[*]]
- (c) Line 3 (IP cycle) [*]

(Reinhart 1995: 22-23)

Halle and Vergnaud's NSR includes a set of parameter settings that can be stated as follows:

- Boundedness (+bound) is whether a constituent is bound or unbounded.
- Head Terminal (+HT) refers to whether a constituent has a terminal head or not. If yes, the position of the head is constructed from left to right or vice versa.

Cinque questions such parameters and wonders whether it is accidental that the NSR assigns prominence to the right-most constituent of a phrase in languages where branching direction is to the right (like English and Italian) and to the left-most constituent in languages (like German) where branching direction is to the left.

Cinque believes that there is a relation between syntactic branching and the stress assignment system. He proposes to simplify Halle and Vergnaud's (1987) NSR as follows:

(111) Null Theory Stress Rule:

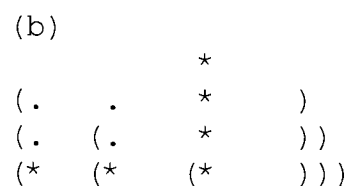
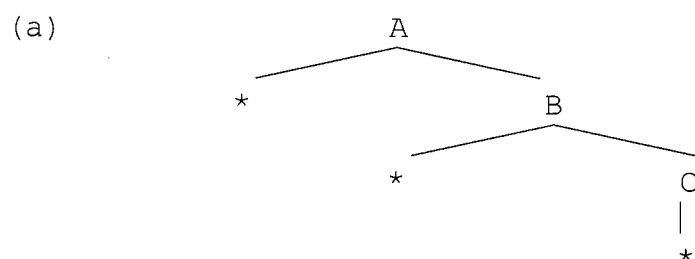
- (a) Interpret boundaries of syntactic constituents as metrical boundaries.
- (b) Locate the heads of line N constituents on line N+1.
- (c) Each rule applies to a maximal string containing no internal boundaries.
- (d) An asterisk on line N must correspond to an asterisk on line N-1.

(Cinque 1993: 244)

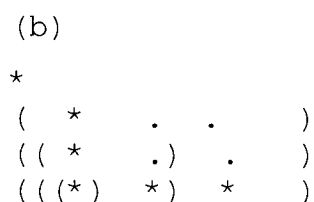
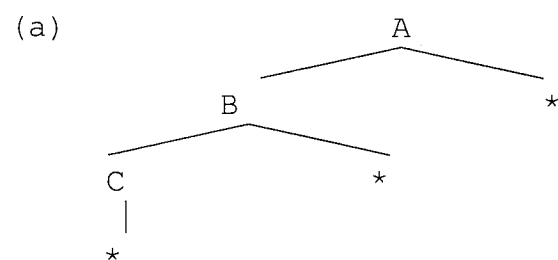
Cinque eliminates all of Halle and Vergnaud's parameter settings, i.e., +bound, +HT, and left/right. Instead, he simplifies point (b) of rule (111) and focuses on the

relation between syntactic structure and metrical structure, considering that boundaries of syntactic structure are interpreted with metrical boundaries as illustrated below in (112-113). Cinque also adds point (c): the rule applies to a maximal projection or to a complete cycle such as VP, NP, or IP.

(112) Right-branching structure and grid



(113) Left-branching structure and grid



(Cinque 1993: 245)

Cinque illustrates the structure of the right-branching grid with an English example, but he does not discuss the left branching grid.

(114) [Jesus [preached to the [people of Judea]]]

```

      ( .           .           .           *       )
      ( .           ( .           .           *       ) )
      ( *           *           ( *           *       ) ) )

```

(Cinque 1993: 246)

Cinque's NSR version is simpler than the one proposed by Halle and Vergnaud (1987). With regard to the relation between stress and focus, Cinque does not differ from Chomsky (1971), Jackendoff (1972), or Rochemont (1986). Focus falls on the constituent that is assigned NSR. However, since Cinque's NSR is different from previous versions, the focus relation to stress differs. According to Cinque, focus falls on the most embedded constituent since this constituent receives NSR.

Cinque claims that focus falls on the stressed constituent and adds that focus and stress are both assigned to the most embedded constituent in a clause. If a language is left-branching, then focus and stress fall on the leftmost embedded constituent. If a language is right-branching then focus and stress fall on the rightmost embedded constituent.

Cinque's Null Theory seems to offer a fine analysis of the relation between stress and focus but nevertheless fails to account for some data without a close relation between stress and focus. Consider the examples in English (115-116) below:

- (115) (a) What did John do?
(b) John LEFT

- (116) (a) Who left
(b) JOHN left (Cinque 1993: 256)

The answer to (115) seems to fit Cinque's Null Theory where both stress and focus fall on the most embedded rightward constituent, but the answer to (116) seems to contradict his theory since both stress and focus, though sharing the same constituent, do not fall on the rightmost embedded constituent of the clause. This exception does not seem to cause problems for focus assignment since it is supposed to follow stress. However, stress assignment in both of the answers above seems to follow the focused element in the clause rather than the most embedded element of the clause as the theory dictates.

To solve that problem, Cinque points to sentences with complex subject and predicate¹⁴ as in (117) below:

- (117) (a) Any news of John?
(b) [Our poor CHILD] [is in bed with a flu]
(Cinque 1993: 258)

As we can see from the answer to the question (117a), the NSR applies to the most embedded element of the NP [Child], which is in turn the focused phrase in the clause. This situation suggests that the NSR still applies to the most embedded element in a phrase and that focus still follows

¹⁴ Cinque uses the term complex for both subject and predicate to refer to a multi-word subject as well as a multi-word predicate.

stress. However, this seems to be an indirect solution to the problematic data in (117) because the embedded element is contained in the second part of the sentence [is in bed with a flu] .

Cinque's explanation undermines the application of NSR within a clause since the data shows that NSR is better applied within a phrase. NSR is also weakened when, in examples like (115-116), it depends on focus location rather than on the syntactic structure of the language (syntactic branching and the most embedded constituent in a clause).

Cinque explores solutions to some other problematic data to his Null Theory. Sentence (118) below is another illustration that focus and stress do not fall on the same constituent and that stress is not always assigned to the most embedded constituent in the clause:

(118) I'd give the money to Mary, but I don't TRUST her.

(Cinque 1993: 259)

Following the Null Theory, main stress in (118) should fall on *Mary*, but instead it falls on *trust*. Cinque considers that sentence (118) is a case of destressing. This occurs when the most deeply embedded constituent of a focus phrase bears old information qualifying it as part of the presupposition rather than as part of focus (Here in 118, *her* is the most embedded constituent but it is not the one that bear main stress). Bearing old information and being part of the presupposition lead to the destressing of this constituent. This destressing moves focus and stress to the most embedded constituent to the left of the destressed one, i.e., from *her* to *trust* in (118) above. According to Cinque,

destressing occurs when a constituent becomes 'marginalized' because it becomes part of the presupposition.

Having explored Cinque's analysis on how focus could be accounted for from a prosodic point of view based on conditions dictated by NSR, let us now explore another analysis that seems to take the same stream of thought with a refinement.

4.5.2 Reinhart (1995)

Reinhart (1995) adopts most of Cinque's ideas and assumptions in her discussion of Dutch Object Scrambling to account for the relation between stress assignment and focus. In Dutch, object scrambling confirms that focus is determined by prosody. Reinhart (1995) shares Chomsky's idea (1971) that focus is a property of the PF interface. Being a property of PF signifies that once sentence stress is assigned independently at PF, the focus and the presupposition structure of the sentence are interpreted at this same interface by relating them to the sentence context. Reinhart finds that Chomsky's (1971) definition and interpretation of focus at PF does not make a clear distinction between what she calls 'normal stress' and 'marked stress' required by discourse, and refines Cinque's approach. She proposes that sentence main stress is determined by the set of possible foci of that sentence. She generalizes Cinque's focus rule in (119) to (120):

(119) The focus rule (Cinque)

The focus of IP is a constituent containing the main stress of IP, as determined by the stress rule. (Reinhart 1995: 26)

(120) The focus rule (Reinhart)

The focus set of IP contains any sequence of constituents of IP, which includes the main stress of IP. (Reinhart 1995: 40)

To illustrate how the rule in (120) determines how each constituent can serve as focus, consider (121-123) where bold marks the main stress and underlining marks the focus:

(121) What's the noise?
My neighbor is building **a desk**

(122) What's your neighbor doing?
My neighbor **is building a desk**

(123) What's your neighbor building?
My neighbor is building **a desk**

(Reinhart 1995: 27)

Using Cinque's metrical notation, the answer to the questions in (121-123) above is as follows:

(124)

[My neighbor [is building [a desk]]]

NP cycle:	[	*	]
VP cycle:	[	*	]
IP cycle:	[	*	]

(Reinhart 1995: 27)

In the structure above, the main stress is assigned to the same constituent, the most embedded one, [a desk] in the three contexts. However, focus assignment changes from the NP to the VP to the IP depending on the context. Focus assignment could fall on a constituent that does not belong to the set of possible foci as we can see from the two different contexts in (125-126) below:

- (125) a. Has your neighbor bought a desk already?
 b. *My neighbor is building **a desk**

- (126) a. Who is building a desk?
 b. *My neighbor is building **a desk**

(Reinhart 1995: 27)

Sentences (125-126) show that in some contexts, other constituents not belonging to the set of possible foci are assigned focus, forcing the main stress to be relocated in order to have an acceptable answer. In order to account for the above sentences, the marked focus rule in (127) is proposed:

- (127) Marked focus rule:
 Relocate the main stress on a constituent you want
 to focus

(Reinhart 1995: 28)

Once the marked focus rule is applied to answers to questions (125) and (126) above, we get acceptable answers to these questions:

- (128) My neighbor is building a desk
 (answer to (125a))

- (129) My neighbor is building a desk
 (answer to (126a))

(Reinhart 1995: 28)

The marked rule corresponds to Cinque's destressing rule which applies whenever the sentence main stress rule cannot apply. When this rule applies, it erases the sentence main stress by destressing the constituent that is supposed to bear the main stress. Focus selection is restricted to sentence main stress. However, sometimes discourse properties interfere with the displacement of the main stress and assign it to another constituent. This leads Reinhart to distinguish between two types of prominence rules: one at the sentence level and the other at the discourse level. When the latter occurs, sentence stress is destressed.

The marked stress rule is considered to be an illegitimate operation because it is costly since it involves more operations than the main stress rule. However, it is still used in languages such as English, where word

order is strict in comparison with Romance languages such as Italian.

- (130) (a) Johnson **died**
(b) **Johnson** died
(c) *Died **Johnson**
- (131) (a) Johnson e' **morto**
(b) E' morto **Johnson**
(c) ***Johnson** e' morto (Reinhart 1995: 34)

In the English example in (130), strict word order does not respect main stress assignment at the most embedded constituent and leads to the use of the marked focus rule. In the Italian example in (131), word order allows to switch the focused constituent to a position where it becomes the most embedded element in the sentence where it gets sentence stress. Whenever a language does not allow a focus structure that respects main stress assignment, the marked focus rule is required.

However, Brunetti (2003) notes that in English as well as Italian it is possible to apply both the unmarked rule and the marked rule, contra Reinhart's (1995) assumption that the NSR and the Marked Focus rule are in complementary distribution. Consider Brunetti's argument based on English data (the bold element is the one that is most prominent):

- (132) (a) I **passed** that exam
(b) That exam, I **passed** it.
(Brunetti 2003: 42)

In (132a), the NSR cannot apply, but it could be available through left dislocation of the object as in (132b). This confirms that the NSR and the Marked Focus Rule are both

available in the same structure contradicting Reinhart's prediction.

To sum up, Reinhart's proposal for a Marked Rule that assigns focus whenever the NSR cannot apply, although applicable to Dutch data, does not apply to English as shown in (132).

Let us now examine Zubizarreta's account for the prosodic approach to focus.

4.5.3 Zubizarreta (1998)

Zubizarreta rejects Rochemont's quantifier raising approach to focus on the basis that the focus in a sentence is not necessarily linked to a syntactic constituent as illustrated in (133-134) below:

- (133) (a) What did John eat?
 (b) John ate [THE PIE].
- (134) (a) What happened to the pie?
 (b) [JOHN] [ATE] the pie.

(Zubizarreta 1998: 3)

In sentence (133b) the focus is on the constituent [the pie] whereas in sentence (134b) the focus is on both elements [John] and [ate]. It seems that what is extracted via QR is not the focused element, rather it is the presupposed element which could be more than one single constituent.

In contrast to Rochemont, Zubizarreta places the interpretation of focus at a level that comes after LF because LF does not offer the necessary environment for

interpretation. In (134) it is not possible to represent the focus of the sentence at LF using Quantifier Raising because the focus does not correspond to a constituent but to an event. Focus involves bound variable configurations that are handled at a level called Assertion Structure (AS) which is derived from LF by a set of interpretive rules. Assertion Structure offers a solution for the constituent issue illustrated in (134). Zubizarreta proposes to represent sentences containing two focused constituents with two assertion structures: the background assertion (A_1) and the main assertion (A_2). The background assertion involves the presupposition obtained from a context question. The main assertion is an equative relation between a definite variable and a value. This equative relation is represented by the equal sign. The presupposition of the context question represents the restriction of the definite variable. The assertion structure of sentences (133-134) above is illustrated in (135-136) below:

- (135) A_1 : there is an x , such that John ate x .
 A_2 : the x , such that John ate x = the pie

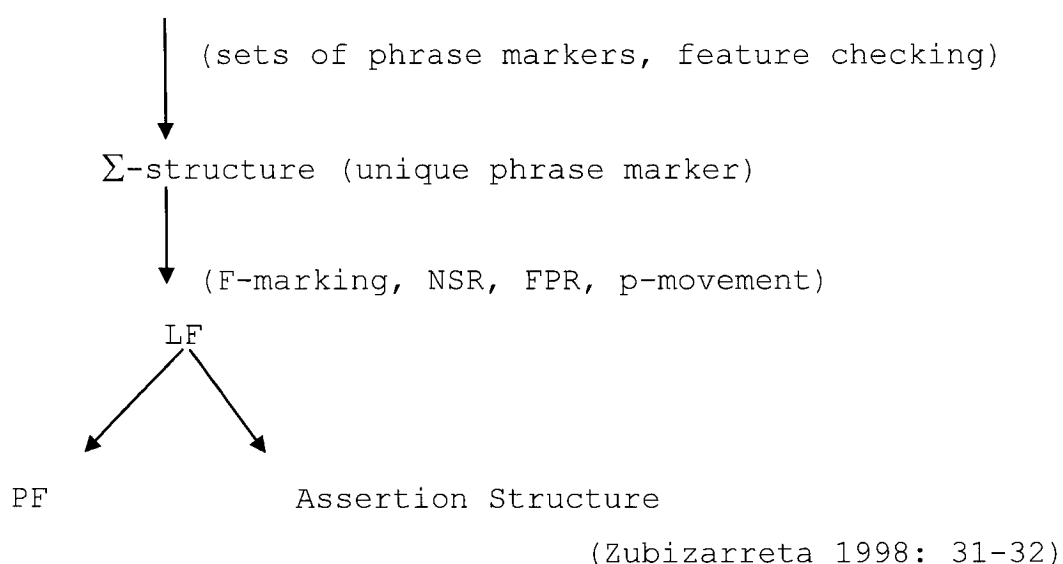
- (136) A_1 : there is an x , such that x happened to the
 pie
 A_2 : the x , such that x happened to the pie=[John
 [ate it]] (Zubizarreta 1998: 5)

In (135), the focus is a single constituent [the pie] and in (136), the focus is a proposition [John [ate it]]. The relation between A_1 and A_2 is compared to a relation between

an E-type pronoun and its antecedent where the definite description in A_2 picks up the referent introduced by A_1 .

Zubizarreta views Assertion Structure as a level, distinct from LF, where the Focus Prominence Rule, which refers to semantic features, and the NSR, which refers to phonological features of prominence, apply. Zubizarreta (1998: 31-32) proposes the following model of grammar :

(137) The architecture of the grammar:



At Σ -structure all syntactic rules and operations (merge and move) take place and prepare the input for post LF operations which are mainly the NSR and the Focus Prominence Rule. The NSR states that the main stress of a sentence is realized at the right periphery of a sentence (Chomsky and Halle 1968).

Zubizarreta discusses how focus is identified through prosody in Germanic languages (e.g., English and German) and Romance languages (e.g., French, Spanish). She builds her analysis on Chomsky (1971) and Jackendoff (1972) in order to

determine the relation between prosody and focus crosslinguistically using NSR, the rule responsible for locating the most prominent constituent in the sentence in the case of information focus¹⁵.

Zubizarreta claims that a revised version of NSR (called a modularized version) can successfully determine the relation between prosody and focus, bearing in mind crosslinguistic variation. The author shows that the NSR proposed by Chomsky and Halle (1968) and later by Chomsky (1971) and Jackendoff (1972) does not seem to hold when taking into consideration crosslinguistic variation. Consider the Focus Prosody Correspondence Principle, Zubizarreta's reformulation of the NSR that she adjusted in order to highlight focus feature and its relation with NSR:

- (138) Focus prosody correspondence principle:
The focused constituent (or F-marked constituent) of a phrase must contain the intonational nucleus of that phrase.

(Zubizarreta 1998: 38)

The NSR is an algorithm that considers boundaries of constituents to be metrical domains where the main stress is assigned to the rightmost word of these domains in a cyclic fashion:

- (139) ((The cat(in the blue hàt)) (has written (a book (about ráts))))

(Zubizarreta 1998: 38)

¹⁵ Contrastive focus does not seem to apply to the NSR; see below for Zubizarreta's analysis of contrastive focus.

In (139) above, following NSR, the primary stress is assigned to *rats* and the secondary stress is assigned to *hat*. Taking into consideration asymmetric c-command in the sense of Kayne (1994), Zubizarreta reformulates the NSR because she finds that the linear ordering of constituents reflects asymmetric c-command:

(140) Constituent-driven NSR (C-NSR):

Given two nodes C_i and C_j that are metrical sisters, the one lower in the syntactic asymmetric ordering is more prominent.

(Zubizarreta 1998: 34)

The C-NSR seems to predict the position of the Nuclear Stress when it falls on the rightmost constituent. However, in the following examples, the C-NSR seems not to apply:

(141) The baby's crying.

(142) The spider jumps.

(Zubizarreta 1998: 68)

The Nuclear Stress seems to fall on the subject when the VP contains only a predicate. In order to accommodate these data within NSR, Zubizarreta explains that Nuclear Stress is assigned in (141-142) following selectional ordering of constituents¹⁶ or S-NSR and not following C-NSR:

¹⁶ Selectional ordering is the order in which constituents appear after being selected by a head such as the verb. For instance, the verb *give* selects first a noun phrase and second a prepositional phrase.

- (143) Selection-driven NSR (S-NSR):
Given two sister categories C_i and C_j , if C_i and C_j are selectionally ordered, the one lower in the selectional ordering is more prominent.
(Zubizarreta 1998: 19)

Here is another application of S-NSR in German:

- (144) Das Táxi kommt.

- (145) The taxi is coming.

(Zubizarreta 1998: 18)

According to S-NSR, it is the lowest argument in the selectional ordering that receives the Nuclear Stress.

To sum up, Zubizarreta's reformulation of the NSR makes the NSR applicable to the problematic data that she has given in (141-142). When it is not possible to apply the C-NSR, the S-NSR applies. This has been confirmed in Germanic languages (e.g., English and German) as in (144-145) above.

Let us consider French and Spanish data where it seems that only the C-NSR applies and the S-NSR is never activated:

- (146) *Le bébé pleure. (versus Le bébé pleure)
'The baby's crying'

- (147) *L' araignée sauté. (versus L' araignée saute)
'The spider jumps'

- (148) *El bebé llora. (versus El bebé llora)
'The baby's crying'

- (149) *La araña salta. (versus La araña salta)
'The spider jumps'
(Zubizarreta 1998: 75)

From these examples we can deduce that S-NSR is not active, and that only the C-NSR applies in order to assign the Nuclear Stress to the most prominent constituent. A modularized version of the NSR allows a better understanding of the linguistic variation between Germanic and Romance languages.

Let us consider how Zubizarreta resolves some problems to the modularized version of NSR. Zubizarreta notes that in Germanic languages (e.g., English and German) there are some defocalised phrases that are metrically invisible making the application of the NSR impossible to such type of phrases. Consider the application of the NSR in the following example:

- (150) Mary walked in.
(151) (a) John kissed *her*.
(b) John kissed *hér* (and not Martha).
(Zubizarreta 1998: 47)

If the Nuclear Stress falls on the pronoun, we get the meaning in (151b) that John kissed Mary and not Martha. Zubizarreta proposes that anaphoric phrases such as (151) above are metrically invisible¹⁷ and the NSR does not apply. Apart from anaphoric constituents, functional categories and empty categories are also metrically invisible for NSR application.

¹⁷ Metrically invisible phrases are represented in italics following Zubizarreta (1998: 47).

In general, metrical invisibility is not present in Romance. However, French differs from Spanish and Italian in that it permits metrical invisibility, like German and English as illustrated in (152-153) below:

(152) *Juan comió una manzana.
 Juan ate an apple

(153) *Gianni a mangiato una mela.
 Gianni has eaten an apple

(154) Jean a mangé une pomme.
 Jean has eaten an apple

(Zubizarreta 1998: 20)

The concept of metrical invisibility, proposed by Zubizarreta allows to conclude that in German, English, and French, where metrical invisibility is possible, the Nuclear Stress assigned to the initial phrase is interpreted as non-contrastive, whereas in Spanish and Italian, where metrical invisibility does not occur, when the Nuclear Stress is assigned to the initial phrase it is interpreted as contrastive focus. However, the data in (152-153) from Spanish and Italian causes a mismatch between the NSR and the Focus Prominence Rule (FPR) illustrated below:

(155) Focus Prominence Rule (FPR):
 Given two sisters C_i (marked [+F]) and C_j (marked [-F]), C_i is more prominent than C_j .

(Zubizarreta 1998: 21)

Zubizarreta assumes, following Chomsky (1971) and Jackendoff (1972), that contrastive focus is assigned through an independent rule different from NSR. Zubizarreta defines contrastive focus¹⁸ as a stress that has metagrammatical function denoting correction or repair. Consider the following example denoting contrastive focus:

(156) The CAT wrote a book about rats (not the dog).

(Zubizarreta 1998: 45)

Since contrastive focus does not fall under the NSR, Zubizarreta considers it to be freely assigned.

Both the NSR and the FPR rule coexist, but data such as (152-153) above present a contradiction that Zubizarreta solves by arguing that defocalized constituents undergo prosodically motivated movement (P-movement).

(157) P-movement:

Affect the nodes α and β iff these nodes have contradictory prosodic properties.

The notion of prosodic contradiction is understood as:

. . . [α ph*][β ph*] , where *ph* stands for phonological content.

(Zubizarreta 1998: 139-140)

So, the problematic sentences in (152-153) above repeated here in (158-159) could be explained through the P-movement rule in (157):

¹⁸ Zubizarreta's work deals primarily with information focus. She only mentions contrastive focus to show how it is excluded from the NSR. See Zubizarreta (1998: 44).

(158) *Juan comió una manzana.
 Juan ate an apple

(159) Comió una manzana Juan
 Ate an apple Juan

In (158) *Juan* is not the focalized element since it does not occupy a position that enables the NSR to apply. P-movement in (159) copies *Juan* but deletes it in the position where it can get focus. In (159), the defocalized constituent *Juan* undergoes p-movement through copying and deletion. The non-focused copies are deleted and only the copy that occupies a position that enables NSR to apply is left.

Since focus is the non-presupposed part of a sentence, it is natural to expect the wh-phrase to be the focus element in a question. However, according to Zubizarreta (1998), wh-phrases are not always subject to the FPR as defined in (139) repeated in (160):

(160) Focus prosody correspondence principle:
 The focused constituent (or F-marked constituent)
 of a phrase must contain the intonational nucleus
 of that phrase. (Zubizarreta 1998: 38)

Zubizarreta claims that the FPR does not apply to wh-phrases in C but does apply to wh-in situ, based on English questions such as the ones illustrated in (161-162):

(161) (I wonder) what did John READ?

(162) *(I wonder) WHAT did John read?
 (Zubizarreta 1998: 92)

In (161) the Nuclear Stress is assigned to in the presupposed part of the sentence, whereas in (162) it cannot be in the non-presupposed part of the sentence, i.e., the wh-phrase. She also observes that focus can be licensed through various grammatical mechanisms pertaining to prosody, morphology, or syntax. In the case of wh-movement, Zubizarreta (1998: 92) concludes that "in Germanic and Romance the focus is (...) syntactically licensed in questions":

- (163) A fronted wh-phrase is licensed by virtue of occupying the specifier position of a functional category with the feature [+wh] (i.e., via the feature checking mechanism). (Zubizarreta 1998: 93)

Interestingly, however, Zubizarreta considers that wh-in situ is licensed prosodically through FPR, based on English multiple questions such as (164).

- (164) I wonder who ate WHAT.
(Zubizarreta 1998: 93)

In (164) the Nuclear Stress is contained on the wh-phrase in situ which confirms that wh-in situ is licensed prosodically and not through feature checking.

Having proposed that FPR applies mainly to wh-in situ in multiple wh-questions, Zubizarreta reformulates the FPR to cover questions:

- (165) Revised FPR: Given two sister categories C_i (marked [+F]) and C_j (marked [-F]), C_i is more prominent than C_j ,

unless C_i is a wh-phrase and is syntactically licensed by the wh-head of C_j .

(Zubizarreta 1998: 93)

She also makes the assumption that in Germanic and Romance languages wh-phrases are licensed either syntactically as in raised wh-phrases or prosodically as in multiple wh-phrases, but not both (1998: 93).

Zubizarreta's (1998) work *Prosody, Focus, and Word Order* offers novel ideas on how to apply these complex notions to Germanic and Romance languages. Although her work seems to offer a complete picture on how such complex notions operate in the grammar, it seems to say little about wh-question formation.

Following Zubizarreta, I claim that wh-phrases represent the non-presupposed part of the question, therefore, they represent the focus element of the question. Whether the wh-phrase has moved to the left periphery of the sentence or stayed in situ in EA, it is still interpreted as the focus, but it could be information focus or contrastive focus depending on the degree of presuppositionality in the context (see chapter 7 for further analysis). Unlike Zubizarreta, I claim that wh-question formation in all its types is driven by focus in EA.

4.5.4 A critique of prosodic-based approaches to focus

Prosodic approaches to focus require a serious revision of the architecture of the grammar. If focus is triggered by phonological rules (mainly the NSR) then PF rules generate elements with syntactic consequences such as focus. This relation between stress and focus entails that in order for

focus to reach LF, it has to be the output of PF first and then the input of LF, which also suggests that the two interfaces, PF and LF, interact. The Minimalist model has been modified by Chomsky in more recent work (2000), but the division of labour has remained the same without interaction of the interfaces PF and LF. The main changes consist in sending elements to the required interfaces right after they are located in their proper position whenever a cycle is complete. That is, after each cycle or phase, the elements are sent to the appropriate interface for interpretation. However, modifications such as the one proposed by Zubizarreta (1998) are more radical since a new interface is added to the model (the assertive structure) and the PF interface has a particular status that is different from LF.

A second problem for a purely prosodic approach to focus comes from the asymmetry between stress assignment and focus structure. The position of focus is not always that of the sentence main stress as assigned by NSR. Focus remains independent of stress assignment and the position of stress coincides with the position of focus only when focus is on the rightmost constituent of the clause (note that Reinhart 1995 proposed the marked rule and Cinque 1993 proposed the destressing rule to account for examples such as 127 and 128), a position that is supposed to be filled with the sentence main stress too. Prosodic rules such as the NSR seem inadequate to explain the higher focus known as contrastive.

The leftward position or movement of focus weakens the prosodic approach since Cinque (1993), Reinhart (1995), and Zubizarreta (1998), among others, must rely on complementary

stress rules in order to unify their prosodic approach to focus.

4.6 Conclusion

In this chapter, I have reviewed some major works on focus and established the distinction between two types of foci: information focus and contrastive focus. I have also presented two major approaches to the analysis of focus: the syntactic-based approach and the prosodic-based approach. The syntactic-based approach to focus as advocated by Rochemont (1986) and Rizzi (1997) proposes to encode focus in the syntax following a feature checking of a [+focus] feature. Following Brunetti (2003), I have shown that this approach has many flaws from a minimalist perspective. For instance, positing a strong [+focus] feature that triggers movement does not offer a detailed explanation on how focus movement is constrained and what it targets in terms of syntactic position and feature matching. The prosodic-based approach of Cinque (1993), Reinhart (1995), and Zubizarreta (1998) posits that focus is related to stress assignment as set by Chomsky and Halle (1968) through the NSR. I have shown that although this approach to focus provides tools for language variation in stress assignment and focus, there is still asymmetry between focus structure and stress assignment. Having explored and evaluated some existing theories on focus, I propose to use features of both approaches to account for wh-movement in EA. Focus can account for the semantics of wh-questions in EA and explain why there are two ways to form wh-questions each of which

has a different meaning. The semantics of wh-questions will be analyzed in chapter 8.

CHAPTER 5: SOME PROPOSALS ON FOCUS IN QUESTIONS

5.1 Introduction

This chapter has two aims. One aim is to introduce the idea that focus corresponds to a morpheme, where each type of foci is represented by a different morpheme. A second aim is to claim that the semantics of wh-questions may involve two types of focus: information focus and contrastive focus. In order to support the first proposal, I review some works that have adopted a morpheme analysis for constructions involving wh-question formation (Cheng and Rooryck 2000) and for unifying types of foci (Brunetti 2003). The idea of a Q-morpheme responsible for the licensing of questions goes back to Baker (1970). Baker claimed that a Q-morpheme in the initial position of the clause triggers wh-phrase movement. Recently, some authors have revived Baker's ideas. Cheng and Rooryck (2000) adopt the morpheme analysis in order to account for French wh-in situ. Brunetti (2003), however,

uses the morpheme analysis in order to account for focus in Italian. What follows are the basic ideas in these two main studies relevant to the dissertation.

To introduce the idea that wh-questions correlate with different type of foci, I examine some works (e.g., Boeckx (1999, 2000), Boeckx et al. (2001), Mathieu (2004), and Zubizarreta (1998, 2002)) on interpretative differences between wh-questions on the syntactic as well as the semantic level. These authors claim that the two options available to form wh-questions in French represent two different syntactic structures that convey distinct meanings.

5.2 Intonational-morphemes for wh-questions and focus

5.2.1 Cheng and Rooryck (2000) on French questions

According to Cheng and Rooryck (2000), French wh-in situ is not licensed by a [+wh] feature as it is in English. Neither is it licensed by a Q morpheme in C as it is in Chinese. French wh-in situ is licensed by a root Q-morpheme that is manifested through intonation. Empirical evidence to support this claim is based on French yes/no questions as patterned in (168).

According to the authors, in French¹⁹, questions are marked by insertion of *est-ce-que* as in (166), inversion as in (167), intonation as in (168) or in situ as in (169).

¹⁹ The authors only consider standard forms of forming questions in French. They do not include non-standard varieties of French.

- (166) Quel livre **est-ce que** Jean a acheté ?
 Which book est-ce que Jean has bought
 'Which book did John buy?'
- (167) Quel livre Jean **a-t-il** acheté?
 Which book Jean has-he bought
 'Which book did John buy?'
- (168) Jean a acheté un livre? [rising tone]
 Jean bought a-book
 'Jean has bought a book?'
- (169) Jean a acheté quoi? [rising tone]
 Jean has bought what
 'Jean has bought what?'
- (Cheng and Rooryck 2000: 4)

Cheng and Rooryck compare the marking of the French yes/no question in (168) and the wh-question in situ in (169) and conclude that both types of questions are marked similarly, i.e., through intonation.

According to Cheng and Rooryck, there is another similarity between the yes/no question in (168) and the wh-in-situ question in (169) and that is that both take a presuppositional context (Chang 1997)²⁰. In order to answer

²⁰ Chang (1997) is the first to propose that French optional wh-movement is characterized by interpretative differences. Such differences lie in the degree of presuppositionality that characterizes the in situ option but not the fronted option. Authors such as Boeckx and Zubizarreta base their findings on Chang's work on French, others such as Mathieu depart from Chang's work on the basis that it is not empirically well-supported. A detailed analysis of this controversy in French data is provided in chapter 8.

question (169), we need to have details of an already established situation, which is that Jean has bought something. The answer *rien* (nothing) to question (169) is not possible. This particularity also applies to a yes/no question such as the one in (170): Details about what is going to be cooked are needed.

(170) You are cooking tonight?

(Cheng and Rooryck 2000: 4)

Cheng and Rooryck (2000: 6) claim that the intonation marking yes/no questions and *wh*-in situ is represented as an intonational morpheme in overt syntax with a PF spell-out in the form of a rising yes-no intonation. The authors then explore the licensing of the intonational morpheme which can be specified or underspecified. The question Q-morpheme can be specified as a *wh*-question morpheme with a [wh] feature and it can also be specified as a yes/no morpheme with a [yes/no] feature, as follows:

(171)

(a) Underspecified Q: [Q:]

(b) Specified with a [wh] feature: [Q: wh]

(c) Specified with a [yes/no] feature: [Q: y/n]

(Cheng and Rooryck 2000: 6)

An intonational yes/no question as in (168) is assigned a [y/n] value by a default operation and the same operation

occurs in the case of a wh-in situ construction yielding a wrong interpretation at LF, as in (172-173) below:

(172) Jean a acheté un livre
[Q : y/n]

(173) *Jean a acheté quoi?
[Q : y/n]

(Cheng and Rooryck 2000: 6)

To solve the problem in (172-173), Cheng and Rooryck opt for feature movement at LF in order to adjust the interpretation of the wh-phrase²¹. Movement of the wh-feature at LF sets the value [Q: wh].

The intonational morpheme analysis is further supported by embedded clauses, an environment where wh-in situ is not possible. This is because the intonation Q-morpheme that licenses wh-in situ is a root morpheme that appears in matrix clauses and only has matrix scope. This is confirmed with intonational yes/no questions such as (174) where the speaker is enquiring about the truth value of the matrix question, i.e., whether Jean said or did not say that Guy bought a book:

(174) Jean a dit que Guy a acheté un livre?
Jean has said that Guy has bought a book
(Cheng and Rooryck 2000: 12)

²¹ According to Chomsky (1995b), only features are allowed to move at LF.

To sum up, Cheng and Rooryck claim that French *wh-in situ* is triggered by a root intonational Q-morpheme that licenses both yes/no questions and *wh*-questions *in situ*. Movement of the *wh*-feature at LF is needed in order to set the underspecified [Q:] into [Q: *wh*], which will be otherwise specified by default as [Q: *y/n*].

The authors do not address optionality in French *wh*-questions in depth because they consider it to be apparent. Optionality is explained by the presence or absence of the intonational Q-morpheme in the Numeration. If the intonational Q-morpheme enters the numeration, it merges with C and the *wh*-phrase remains *in situ*. If the intonation morpheme is not in the numeration, the *wh*-phrase moves to check the Q-feature on C.

Boeckx (2000) claims that there are various problems with Cheng and Rooryck's intonational Q-morpheme analysis.

First, the analysis considers that parametric variation is based on phonology. That is, the existence of an intonational Q-morpheme in French is a parameter that appears at this point to be exclusive to French data and seems to be different in Chinese (see Cheng and Rooryck 2000) for arguments on Chinese *wh-in situ*). This departs from minimalist assumptions on parametric variation which is viewed as a reflex of morphology.

Second, Cheng and Rooryck's claim that the *wh*-feature must move to disambiguate the interpretation of the *wh*-phrase and readjust the [Q: *y/n*] into a [Q: *wh*] suggests that movement is not morphosyntactically driven as required in the minimalist program but is instead driven by the need to adjust interpretability.

Third, Boeckx opposes the use of underspecification claiming that it is a problematic mechanism in phonology that does not seem necessary for wh-in situ. A morphologically-based parameter is preferred to the analysis of wh-in situ (as proposed by Boeckx et al. 2001). The underspecification mechanism has been critically viewed by Mohanan (1991) but Boeckx (2000) suggests that even if Mohanan's criticism of the underspecification mechanism is ignored, its use for wh-in situ remains unnecessary. Under minimalist syntax (Chomsky 2002), it not clear how underspecified elements can act as attractors.

Besides Boeckx's theoretical points, it seems that, on the empirical level, the intonational Q-morpheme is not really a root morpheme which explains why wh-in situ phrases are not grammatical in embedded clauses. This is because wh-in situ is acceptable in embedded clauses when an overt complementizer is present as in (175-176)²²:

(175) Pierre a demandé si tu as vu qui.
 Pierre has asked whether you have seen who
 'Pierre asked who you saw'

(176) Pierre se demande si Marie aime qui.
 Pierre wonders whether Marie loves who
 'Pierre wonders who Marie loves'

(Boeckx et al. 2001: 60)

²² Francophone readers of this thesis find it difficult to accept sentences (175-176) above. However, Boeckx claims that 'according to our judgements and those of our informants, embedded questions are fine with wh-in-situ irrespective of the nature of the embedding verb' (Boeckx et al 2001: 60). He also clarifies in a footnote that not all speakers of French accept these sentences and adds that some varieties of Belgian French accept these sentences.

Sentences (175-176) suggest that neither the existence of a root intonational Q-morpheme (as suggested by Cheng and Rooryck 2000) nor the nature of the embedding verb (as suggested by Bošković(1998)²³ can explain the grammaticality of these two embedded questions with wh-in situ.

5.2.2 Brunetti (2003) on focus in Italian

Brunetti's main objective is to unify the interpretation of focus based on Italian. She shows that both the syntactic approach and the prosodic approach to focus, outlined in chapter 4, fail to provide a clear and complete picture of the way focus must be accounted for in Italian and proposes an intonational focus morpheme to unify types of foci. According to Brunetti, the main motivation behind opting for a focus morpheme is to match stress and focus, which seem to be related. Brunetti makes the following proposal: "[T]he intonational contour that always accompanies focus is a morpheme present in the lexicon as an independent lexical entry" (Brunetti 2003: 182). The intonational contour analysis is exempted from the flaws of the prosodic and syntactic approaches to focus discussed in chapter 4.

Brunetti supports the focus morpheme analysis with evidence from Italian and Somali. In Italian coordinate sentences such as (177), the predicate is the focused element. Since the predicate of the second part of the clause is elided, it is replaced by the particle *anche*, which represents a realization of the focus morpheme:

²³ Bošković (2000) suggested that the in situ strategy in embedded clause is not possible because the complementizer does not bear a [+wh] feature.

- (177) Bill mangia e Paulo anche
Bill eats and Paul too

(Brunetti 2003: 186)

If this particle is deleted the sentence becomes ungrammatical:

- (178) *Bill mangia e Paulo
'Bill eats and Paulo' (Brunetti 2003: 186)

Its obligatory presence motivates Brunetti to consider the particle *anche* a realization of the focus morpheme since the predicate that originally bears the focus is elided.

Somali is one of the languages that has an obligatory marker of focus. Whenever an element is focused the marker *buu* is used as in (180).

- (179) Cali yuu dilay?
Cali whom-Focus marker-3_{SG} beat._{Past}
'Who did Cali beat?'
- (180) Cali Maryam **buu** dilay
Cali Maryam Focus marker-3_{SG} beat._{Past}
'Cali beat Maryam'

(Brunetti 2003: 188)

Evidence from Somali suggests that the realization of focus can be materialized in the form of a focus morpheme.

According to Brunetti (2003), the matching between stress and focus that seems very obvious in Somali can only be accounted for by positing that there is an intonational morpheme that enters the computational system as an independent lexical item. This analysis is capable of

capturing the various manifestations of focus without being confronted with the problems of other approaches to focus, such as the purely syntactic encoding of focus or the genuine prosodic approach to focus discussed in chapter 4²⁴.

Based on Italian data²⁵, Brunetti claims that focus is a single phenomenon that must be accounted for by an analysis that highlights its unifying character. The prosodic-based approach to focus and the syntactic encoding of focus led to the assumption that two forms of foci exist, one that occupies a low position and one that is high in the clause (Rizzi 1997, Cinque 1993). It also led to the assumption that two types of foci exist, one that is interpreted as information focus and one that is interpreted as contrastive focus (Kiss 1998, Zubizarreta 1998). Italian data show that the two positions available for focus host the same focused element, a non-presupposed information focus. Brunetti claims that focus is a single phenomenon that does not display interpretative differences in Italian. She supports this claim by showing that Kiss (1998)'s interpretative differences and syntactic differences used to distinguish between information focus and contrastive focus in Hungarian are not supported by Italian data (see chapter 4 for a description of Kiss's analysis on types of foci). She argues that when focus expresses contrast in Italian, it is an effect of discourse that has no relation to semantics.

Having briefly described Brunetti's approach, I would like to highlight what I find appealing in her analysis that I use to support my focus morpheme analysis of EA

²⁴ The focus morpheme analysis is void of some empirical flaws from which both the prosodic and syntactic approaches suffer. These empirical flaws are discussed in chapter 4

²⁵ I refer the reader to Brunetti (2003) for a discussion of the counter-examples from Italian to Kiss's (1998) analysis of focus.

wh-interrogatives. First, I agree that the existence of an independent focus morpheme in the lexicon is a well-motivated proposal that accounts for the distribution of wh-phrases in situ as well as in the left periphery of the clause. Such a morpheme contains a bundle of features that explains the syntactic and semantic input of derivations containing wh-words²⁶, i.e., syntactic features of the intonational morpheme clarify the morpheme's position in the clause and semantic features of the intonational morpheme enlighten its interpretation in the semantics. In the case of EA, I posit that there are two distinct focus morphemes that enter the derivation: one that contains information focus features and one that contains EPP and contrastive focus features.

However, as much as I agree with Brunetti and adopt an intonational morpheme to account for wh-formation in EA, I disagree on the view that there is only one kind of focus in languages. Brunetti claims that in Italian focus is always represented and interpreted as a non-presupposed informational focus that involves movement to the left-periphery of the clause. But this does not entail that focus must be analyzed as a unique phenomenon crosslinguistically. Perhaps some parameters in Italian (the fact that Italian is a pro-drop language for instance) enable focus to behave in a uniform way but such parameters do not exist in languages like English, EA and many others where it has been confirmed that there are syntactic as well as interpretative differences that distinguish two types of foci (Boeckx 1999, 2000, Boeckx et al. 2001, and Chang 1997 for French, Zubizarreta 1998, 2002 for Romance and Germanic

²⁶ Later in chapter 7, I will further support the focus morpheme analysis adopting the Distributed Morphology definition of features and morphemes.

languages). Therefore, I will adopt the idea that EA is one of many languages that formally distinguish between information and contrastive focus.

5.3 Interpretative differences in wh-questions

5.3.1 *The empty D analysis (Boeckx et al. 2001)*

Boeckx (1999, 2000) and Boeckx et al. (2001) state that in French there are interpretative differences between the fronted wh-phrase strategy and the wh-phrase in situ strategy. According to Boeckx, the wh-in situ strategy corresponds to detailed information seeking, whereas fronted wh-phrases correspond to general information seeking. Boeckx bases these interpretative differences on the fact that answers to wh-in situ questions and fronted wh-questions in French differ, as we can see from sentences (181-182) below:

(181) Qu' a acheté Jean?
 Un livre/une voiture/rien

(182) Jean a acheté quoi?
 Un livre/une voiture/*rien (Boeckx 2000: 1)

Chang (1997)²⁷ states that the answer *rien* to the question with the fronted wh-phrase in (181) is grammatical whereas this same answer is not possible to the question with wh-in situ (182).

²⁷ Chang's proposal on French has been stated in various works. I give each author's description of Chang's proposal because the examples differ and are accompanied with each author's comment.

Boeckx (2000) takes over Chang's claim that interrogative strategies in French have interpretative differences. He suggests that the situation in (182) requires a familiarity of a particular type. The situation is that the discourse participants know that *Jean* bought something when he went shopping. However, in (181) the question with a fronted *wh*-phrase is comparable to an opening sentence in a discourse where the participants share no background information before that utterance. Boeckx concludes that questions with a fronted *wh*-phrase require no familiarity with the background information and relates familiarity to definiteness. To explain further, the interpretative differences between the two strategies to form interrogative questions in French are based on presuppositionality. If the context is presupposed, i.e., the speaker and the hearer share background information about the question, the question is interpreted as contrastive focus. If the context is not presupposed, i.e., the speaker ignores what the hearer knows about the background of the question, the question is interpreted as information focus.

Since questions with *wh*-in situ involve presupposition, Boeckx (2000) states that there should be no equation between *wh*-in situ and echo-questions which involve presupposition too. The main difference between the two types of questions lies in the fact that the answer to the echo question is already part of the discourse, but, it is an answer that is not accepted by the speaker for various reasons such as surprise, failure to hear, etc. However, answers to *wh*-questions in situ remain unknown to the speaker.

reflected in their morphological make-up and propose that the focused wh-phrase in situ is headed by a phonologically null definite Determiner head (D head). The D head is not present when the wh-phrase undergoes movement. The internal structure of the focused wh-phrase in situ is given below:

(187) [DP D [Wh-phrase]]

(Boeckx et al. 2001: 64)

The role of the D head is to account for the existence of the presupposition in the in situ strategy. In the case of an in situ wh-question, the D head has a D feature that can check the Q feature of the interrogative complementizer once located on [Spec, CP] through an A'-head movement. In this case, the wh-phrase remains in situ and gets the presuppositional interpretation as in (188) below:

(188) Jean a acheté quoi?

Jean has bought what

(Boeckx et al. 2001: 65)

Boeckx et al.²⁸ (2001) support the empty D proposal with embedded questions under the verb *savoir* (know):

(189) Jean sait qui Pierre a embrassé.

Jean knows who Pierre has kissed

²⁸ Some francophone readers of this thesis expressed their disagreement with Boeckx et al.'s judgement on data such as (189-190) above. Boeckx et al. (2001:59-60) clarifies also that only speakers of some varieties of French Belgian accept this type of data. I will consider this disagreement in chapter 8, section 8.3 where I will compare French and EA using various judgements expressed by authors reviewed in this chapter.

'Jean knows who Pierre has kissed'

- (190) Jean sait que Pierre a embrassé qui.
Jean knows that Pierre has kissed who
'Jean knows who Pierre kissed'
(Boeckx et al. 2001: 67)

Boeckx et al. (2001: 67) argue that the *know* class of verbs take an exhaustive interpretation. Sentences (189-190) have a presupposition that Pierre kissed someone and that for every person that Pierre kissed, Jean knows that Pierre kissed that person. Although both sentences (189-190) have the same interpretation, they are derived differently, on the semantic as well as the syntactic level. In (190), the D head has the wh-phrase as its complement and presupposes its content. The presence of the D head in (190) implies that Jean has knowledge about each person being kissed by *Pierre*. Sentence (189) has a different derivation since the wh-phrase is 'bare'.

Boeckx et al. (2001) further support the empty D proposal with other types of embedded clauses. Consider (191-192) below:

- (191) Jean sait où acheter de l'essence pour sa voiture.
Jean knows where buy-INF some gas for his car
'Jean knows where to buy gas for his car'

- (192) *Jean sait acheter de l'essence où pour sa voiture.
'Jean knows to buy gas for his car'

(Boeckx et al. 2001: 67)

Sentence (191) is grammatical because the presupposition requirements are satisfied as the speaker claims that *Jean*

knows at least one place where he could buy gas for his car. The speaker does not need to know the complete set containing all possible names of places where *Jean* could buy gas. In (192), however, applying the empty D proposal, the speaker needs to know about the maximal set of possible referents for *where*. The impossibility of this knowledge predicts the ungrammaticality of (192).

In sum, Boeckx (2000) and Boeckx et al. (2001) account for the interpretative differences between the *in situ* strategy and the fronted strategy to form *wh*-questions using presuppositionality. Their proposal captures the semantic differences between variants of French questions which seemed to have only superficial syntactic differences.

5.3.2 Exhaustivity and intervention effects: Zubizarreta (2002)

In a recent article, Zubizarreta²⁹ (2002) further explores French *wh-in situ* based on proposals by Boeckx (1999, 2000) and Boeckx et al. (2001), who claims that French *wh-in situ* constructions have three properties: exhaustivity, sensitivity to intervention effects, and locality. Zubizarreta (2002) develops her proposal based on the first two properties.

Zubizarreta shows that French *wh-in situ* constructions are associated with exhaustivity and are interpreted as containing a contrastive focus. Fronted *wh*-constructions,

²⁹ Zubizarreta's judgement on French which will be analyzed in this section has raised lots of disagreement among readers of the thesis. As mentioned with Boeckx's work on French, chapter 8 raises this issue of controversial judgement on similar French data. Here, I only focus on reviewing the author's work.

though, lack exhaustivity and are interpreted in terms of information focus. Consider the following examples:

(193) Pierre a parlé à qui?
Pierre talked to whom?

(194) C'est à qui que Pierre a parlé?
It was who that Pierre saw?

(195) À qui est-ce que Pierre a parlé?
To whom did Pierre talk?

(Zubizarreta 2002: 2)

Sentence (193) is a wh-in situ construction, sentence (194) is a cleft construction, and sentence (195) is a fronted wh-construction. Zubizarreta applies four tests to these three constructions: (1) minimal answer, (2) negative answer, (3) use of 'aussi à', and (4) use of 'par exemple' and 'entre autres'.

The answer in (196) represents a minimal answer to the questions (193-195) above.

(196) C'est à Marie que Pierre a parlé.
(Zubizarreta 2002: 2)

This answer is possible in the case of the wh-in situ construction in (193) and the cleft construction in (194), but it is not a natural answer to the fronted wh-construction in (195) because it gives too much information in comparison with what is requested.

Second, let us consider the negative answer in (197) below:

(197) Pierre n' a parlé à personne.

Pierre did not speak to anybody.

(Zubizarreta 2002: 3)

It is a felicitous answer to the fronted wh-construction in (195) but not to the wh-in situ construction in (193) and the cleft construction in (194)

Third, using the expression 'et aussi à Paul' (and also to Paul) to continue the answer in (196) above repeated here in (198) seems possible with the fronted wh-construction but not with the wh-phrase in situ construction and the cleft construction:

(198) C' est à Marie que Pierre a parlé et aussi à Paul.

It is Marie that Pierre talked to and also to Paul.

(Zubizarreta 2002: 3)

Fourth, the use of 'par exemple' (for example) and 'entre autres' (among others) seems to be grammatical with the fronted wh-construction but not with the wh-in situ construction and the cleft construction. Consider the examples (199-202) below:

(199) Qui par exemple est-ce que Pierre a invité?

Whom for example did Pierre invite?

(200) *Pierre a invité qui par exemple?

Pierre invited who for example?

(201) Qui est-ce que Pierre a invité, entre autres?

Who did Pierre invite, among others?

(202) *Pierre a invité qui, entre autres?

Pierre invited whom, among others?

(Zubizarreta 2002: 3)

The behaviour of wh-in situ constructions tested in the examples above using the four properties confirms that these constructions are related to the property of exhaustivity. Wh-in situ constructions are also interpreted as contrastive focus as opposed to the information focus reading of fronted wh-constructions.

Zubizarreta further shows that wh-in situ constructions differ from fronted wh-constructions in French based on properties of intervention effects. When using Quantifier Phrases (QP) such as 'chaque NP', 'beaucoup NP', 'tous NP', only the individual reading is available in wh-in situ constructions. In the fronted wh-constructions both the individual reading and the pair-list reading are available. Consider the following examples where the QP 'chacun NP' (each of NP) is used:

(203) Qui est-ce que chacun d'entre eux devrait inviter?

Who should each of them invite?

(204) Chacun (d'entre eux) devrait inviter qui?

Each of them should invite whom?

(205) Pierre devrait inviter Marie, Jean devrait inviter
Sophie. . . .[Pair-list reading]

Pierre should invite Marie, Jean should invite
Sophie

(206) Chacun d'entre eux devrait inviter son meilleur
ami. [Individual reading]

Each (of them) should invite his best friend.

(Zubizarreta 2002: 5)

Sentence (203) is interpreted as having a pair-list reading as in (205) or an individual reading as in (206). Sentence (204) can only have an individual reading as in (206). According to Zubizarreta, the constraint in interpretation of possible answers to wh-in situ constructions, where we have seen that only the individual reading is available, confirms the property of exhaustivity³⁰ that characterizes these constructions.

Zubizarreta further confirms the contrastive focus interpretation that characterizes wh-in situ constructions in French. Consider the following data where the use of the floated quantifier 'mais' (but) which is contrastively focused gives rise to an intervention effect:

(207) *JEAN a parlé à qui? (mais pas à Pierre)
JOHN talked to whom? (but not Pierre)

(208) *Pierre a donné un LIVRE à qui? (mais pas un
disque)
Pierre gave a BOOK to whom? (but not a record)

³⁰ By exhaustivity, Zubizarreta means that the semantics of questions is analyzed as a structured set of alternatives. This set has two alternatives for a disjunction: An inclusive disjunction is interpreted as information focus and an exclusive disjunction is interpreted as contrastive focus.

(Zubizarreta 2002: 6)

Other floated quantifiers such as 'tous' (all) can sometimes have contrastive focus as in (207) and sometimes not as in (208) :

(209) Ils ont tous mangé quoi?
 They have all eaten what

(210) *Ils ont TOUS mangé quoi?
 They have ALL eaten what?

(Zubizarreta 2002: 5)

Data in (209-210) above confirm that only elements that are contrastively focused stand for intervenors to wh-in situ constructions.

On the other hand, contrastively focused elements do not seem to give rise to intervention effects in the case of fronted wh-constructions as illustrated in (211-212) below where *mais* and *tous*, the contrastively focused element, represent the intervenors :

(211) À qui est-ce que JEAN a parlé? (mais pas
 Pierre)
 To whom did JEAN talk? (but not Pierre)

(212) Qu'est ce qu'ils ont TOUS mangé?
 What did they ALL eat? (Zubizarreta 2002: 6)

The exploration of French above could be summarized as follows: (Note how the main properties of exhaustivity and

intervention effects distinguish between the wh-in situ constructions and the fronted wh-constructions.)

(213) The French wh-in situ construction:

- (a) It has the property of exhaustivity
- (b) QP are not intervenors but block the pairlist answer form
- (c) Contrastively focused elements are intervenors

(214) The fronted wh-construction:

- (a) It lacks the property of exhaustivity
- (b) QP/wh-interaction give rise to the pairlist answer form
- (c) Contrastively focused elements are intervenors

(Zubizarreta 2002: 7)

Consider (215) below. Zubizarreta defines information focus in (215b) as a disjunction with a logical structure as in (216c) constituted of a set of alternatives called the wh-set as in (217), where only one alternative is true, the rest are undefined.

- (215) (a) What did John read?
(b) John read ASPECTS

- (216) (a) {Aspects, LSLT...} $\rightarrow$ John read x
(b) {Th₁, Th₂ ...} $\rightarrow$ John read x
(c) {John read Aspects (T), John read LSLT (U), ...}

- (217) {John read Th₁ (T), John read Th₂ (U), ...}

$$\begin{aligned} &\{\text{John read Th}_1 \text{ (U), John read Th}_2 \text{ (T), ...}\} \\ &\{\text{John read Th}_1 \text{ (T), John read Th}_2 \text{ (T), ...}\} \\ &\text{(Zubizarreta 2002: 12)} \end{aligned}$$

Contrastive focus occurs when a contrastive operator, that Zubizarreta calls 'A-not-A' operator, is attached to the sentence as in (218) below:

(218) [A-not-A]_i [John read Aspects_i] (not LSLT)
(Zubizarreta 2002: 13)

The focused constituent to which the operator 'A-not-A' is attached introduces a set of alternatives composed of two subsets, TP and not TP, and each subset is assigned the value True as in (219c). According to Zubizarreta, this definition captures the exhaustive nature of contrastive focus.

(219) (a) {Aspects, LSLT} → [A-not-A_x [John read x_i]]
(b) {[John read Aspects], [John read LSLT]}
(c) {[John read Aspects](T), Not[John read LSLT] (T)}
(Zubizarreta 2002: 13)

Having defined the semantics of wh-in-situ constructions which are interpreted as contrastive focus because the wh-phrase in situ is bound to the A-not-A operator, let us consider how this definition applies to French:

(220) (a) [A-not-A]_i [Jean a lu quoi_i]?
'Jean read what?'

(b) {Th₁, Th₂} → [A-not-A_i [Jean a lu x_i]]

$$\{[\text{Jean a lu Th}_1](T), \text{Not } [\text{Jean a lu Th}_2](T)\}$$

(Zubizarreta 2002: 15)

The wh-in situ question in (220a) above is mapped into a set of propositions composed of two subsets. The A-not-A operator partitions this set into TP and not TP and a True value is assigned to both TPs as in (220b).

Zubizarreta (2002) acknowledges that the properties described in French wh-in situ do not apply to all speakers of French. A similar problem has been brought forward by Mathieu (2004), who criticized Chang's (1997) proposal on French wh-in situ because it does not fit speakers of French in France. Zubizarreta (2002) proposes another solution and speculates that the non-convergence between data from various dialects of French is a key to an ongoing language change that is taking place in the French spoken in France.

Having explored Zubizarreta's account of French wh-in situ constructions, let us examine a critical review of her work together with Boeckx's work since they are dealing with the same data.

5.3.3 Wh-in situ as split-DP construction (Mathieu 2004)

Mathieu (2004) has studied French wh-phrases in a dialect of French spoken only in France (excluding francophone countries), particularly in Paris. In his work, Mathieu claims that the two alternatives available in French to form wh-questions have two distinct readings, a fact that confirms that there is no optional wh-movement in French. On the contrary, there is always movement of the wh-operator

which is syntactically driven by a strong EPP feature on C. What remains optional is the fronting of the wh-word³¹ itself, which could also stay in situ. The author claims that wh-constructions in French are instances of split-DP constructions where a bare operator is separated from its associated nominal in the course of the derivation. Here is an illustration of such an analysis:

- (221) [spec-CP Op_i Tu vois t_i qui ce soir]
 You see who this evening
 'Who are you seeing tonight?'
 (Mathieu 2004: 1093)

In (221) the bare operator is phonologically null, the stranded nominal *qui* remains in situ. The bare operator could also be overt as in (222a) below:

- (222) (a) Combien_i as-tu lu t_i de livres?
 How-many have you read of books
 'How many books have you read?'
 (Mathieu to appear: 1093)

In (222b), full movement of the wh-phrase occurs:

- (b) Combien de livres_i as-tu lu t_i?
 How-many of books have you read
 'How many books have you read?'
 (Mathieu to appear: 1093)

The two alternatives available in French to form wh-questions correspond to two different forms, one

³¹ Mathieu uses the term nominal to refer to the wh-word

constructions where a wh-operator, which moves to check the EPP feature on C, is associated with the stranding nominal, which remains in situ. Where it is positioned, the stranded nominal is interpreted as a non-specific indefinite that introduces a new discourse referent. Full raising of the wh-question refers to a specific entity.

Mathieu (2004) borrows such ideas from the theory of semantic incorporation as proposed by Van Geenhoven (1998). Van Geenhoven claims that when an indefinite has a narrow scope, it is interpreted as a property. It becomes part of the verb rather than the argument of that verb. To illustrate, a transitive sentence that has the structure *x does y* becomes an intransitive sentence that has the structure *x y-does*. Consider sentence (224) below, where the nominal *books* has a restricted semantics, it is interpreted as the incorporated element that is non-specific in reference:

(224) I bought books

(Mathieu, 2004:1107)

The nominal *books* is a non-specific indefinite that has a narrow scope and can only be interpreted as a property. The narrow scope reading of the nominal *books* is achieved via semantic incorporation of this nominal into the verb.

Now consider how Mathieu uses Van Geenhoven's proposal in order to explain the semantic differences between the two wh-questions in (225-226) below focusing on the scope freezing properties of the wh-phrase:

(225) Ils ont tous fait quoi?
They have all done what

'What did they all do?'

(226) Qu'est-ce qu'ils ont tous fait t_i ?

What that they have all done

'What did they all do?'

(Mathieu 2004: 1110)

In (225), it is not possible to interpret the wh-phrase in situ with a wide scope reading though a pair-list reading is not ruled out. In (226), the question gets a wide scope reading and is associated with an individual/specific reading. According to the author, the choice of one form over another is determined by discourse properties and not by pure syntax.

Now consider the scope freezing properties of stranded nominals in split *combien de* constructions.

(227) (a) Combien_i ont-ils tous lu t_i de livres?

How-many have they all read of books

'How many books have they all read?'

(b) Combien de livres_i ont-ils tous lus t_i ?

How-many of books have they all read

'How many books have they all read?'

(Mathieu 2004: 1109)

In (227a) the universal quantifier takes scope over the wh-phrase. The question can only have a pair-list reading. Also in (227a), the wh-operator *combien* takes wide scope, whereas the nominal *de livres* takes narrow scope. In (227b), two interpretations are possible. The universal quantifier can have wide scope and a pair-list reading is available. It can

also have a narrow scope and an individual reading is available.

Fronting the *wh*-word is adequate in a prominent context, whereas leaving the *wh*-word in situ is only felicitous in a non-prominent context. Consider the following examples:

(228) *Combien_i as-tu lu t_i DE LIVRES?*
 How-many have-you read of books
 ‘How many books have you read?’

(229) *Op_i Tu as vu t_i QUI?*
 You have seen who
 ‘Who have you seen?’

(230) *Tu veux boire quoi?*
 You want drink-INF what
 ‘What do you want to drink?’

(Mathieu 2004: 1126)

The nominals *de livres* and *qui* in (228) and (229) are considered as stranded nominals that are not presupposed, which is why they receive main stress. In (230), the *wh*-phrase in situ is not prominent because the question is about the whole event and not just about the drink. There is no need to presuppose the existence of a set of drinks. Foregrounding the nominal causes the question to be interpreted as a question about a drink and not about the event of drinking, as we can see in (231) below:

(231) *Qu’est ce que tu veux boire?*
 What is-this that you want to drink
 ‘What do you want to drink?’

To sum up, Mathieu postulates that wh-phrases in situ are interpreted as Split-DP constructions where a phonologically null operator is associated with the wh-phrase in situ. The stranded wh-phrase in situ is interpreted as a non-specific indefinite, introduces a new discourse referent, and is not a prominent entity. Fronted wh-phrases, on the other hand, involve full movement of the wh-phrase. They refer to a specific entity and since they are higher-order topics, they are prominent entities.

The analyses proposed by Boeckx (1999, 2000), Boeckx et al. (2001), Zubizarreta (2002) and Mathieu (2004) on French wh in situ are interesting for my focus morpheme proposal. The proposals explored above share the following ideas: Optionality of movement is not theoretically relevant to minimalist assumptions, therefore what seems to be optional wh-movement in French is no more than an *apparent* optionality. Both strategies available to form wh-questions in French involve different derivations computed in two different ways.

Differences between the two strategies available in French are syntactic as well as semantic. There are two distinct syntactic derivations: one with a fronted wh-word and one with a wh-word in situ. There are also interpretative differences detected. They are observed through exhaustivity, scope, and specificity: The fronted wh-question lacks exhaustivity, can have both a pair-list reading or an individual reading, and represents a specific entity, whereas the wh-phrase in situ has an exhaustive reading, can only have an individual reading, and is a non-specific entity.

Ideas of the authors reviewed in this section can be used for my focus morpheme analysis. I claim, with Boeckx, that there is a morpheme that enters the derivation and is computed in order to provide the input for the interpretation of the wh-phrase to which it is attached. I also claim, with Zubizarreta, that interpretative differences arise and are explained through focus. On the other hand, Mathieu claims that the fronting option favors a specific interpretation whereas the in-situ option favors a non-specific interpretation, a claim that goes with the analysis that I propose for EA wh-question formation.

5.4 Conclusion

In this chapter, I have reviewed two types of works. First, I have summarized Cheng and Rooryck (2000) and Brunetti (2003) who propose a morpheme analysis of focus, an analysis that I intend to follow in chapter 7 in my discussion of wh-question formation in EA. Second, I have discussed three recent analyses on French wh-questions conducted by Boeckx, Zubizarreta, and Mathieu. Following these analyses, we can see that French wh-questions behave like EA wh-questions in the sense that both exhibit an apparent optionality of wh-movement. In chapter 8, I will use the various tests proposed by Boeckx, Zubizarreta, and Mathieu on EA data in order to compare EA and French and I will apply other tests to confirm the interpretative differences between the two options of forming wh-questions.

CHAPTER 6: SOME GRAMMATICAL FEATURES OF EGYPTIAN ARABIC

6.1 Introduction

Egyptian Arabic (EA) is the most common dialect of Arabic spoken in Egypt. According to McGuirk (1986: 1), "it is the colloquial form spoken natively by about a third of all Arabs". It is also a dialect that is widely understood by most Arabs in the world. One of the reasons is that "Egyptians play a leading cultural role in exporting their movies, TV programs, songs, etc., spoken in EA, to the entire Arab world" (McGuirk 1986: 1).

In this dissertation, I am concerned with the analysis of wh-questions in EA since they exhibit an interesting behavior. The analysis of Egyptian data will follow the theoretical framework given in the preceding chapters. The EA data used in this thesis is an amalgamation of genuine sentences uttered by native speakers of EA or collected from

grammar books of EA (Abdel-Malek 1972, Gamal-Eldin 1967, Megally 1993) and syntactic studies on EA (Wahba 1984).

As most dialects of Arabic, EA has the various grammatical features of Modern Standard Arabic (MSA). In this chapter I would like to introduce some grammatical features of EA that are relevant to the purpose of this thesis, such as word order, sentence structure, and general principles of question formation.

6.2 Word Order: SVO as preferred order

In EA, both SVO order and VSO order are observed. In order to understand the basic word order in EA I propose to correlate features of MSA to EA³². A similar methodology has been used by authors such Aoun et al. (1994), Shlonsky (1997a) and Akkal (1993) for the analysis of Lebanese Arabic, Palestinian Arabic and Moroccan Arabic respectively. Let us consider the preferred order in MSA and EA:

MSA:

- (232) Daraba ?a-rrijaal-u ?al-awlad-a.
Hit.3.m.s the-men-NOM the-boys-Acc
'The men hit the boys'. (Mahfoudhi 2002: 3)

EA:

- (233) Ir-riggala darabu il-iyal.
the men-Nom hit.3.m.s the-boys-Acc
'The men hit the boys'.

³² Grammar books on EA do not offer a precise treatment of word order in this language this is why I propose to briefly explore this issue based on findings in Standard Arabic, a language more studied from various aspects (including word order).

Sentences (232-233) show that in MSA the preferred order is VSO and in EA it is SVO. This distinction is also present in embedded sentences as illustrated in (234-235) below:

MSA:

- (234) ?arad-tu ?an ya-?-ukla ?a-rrajul-u tuffaHa-tan.
wanted-I that 3m.s.-eat-subj the-man-Nom an apple.Acc
'I wanted the man to eat an apple'.
(Mahfoudhi 2000: 3)

EA:

- (235) ?ayiz ir-ragil yakul tuffaha.
wanted-I the-man-Nom 3m.s.-eat-subj an apple.Acc
'I wanted the man to eat an apple'.

Although VSO order is the preferred order in MSA, proposals by Aoun et al. (1994), Benmamoun (2000), Bolotin(1995), Fassi-Fehri (1993), Koopman and Sportiche (1991), Majdi (1990), Plunkett (1993), Shlonsky (1997a) and Shlonsky (1997b) suggest that MSA has SVO as the basic order where the subject is base generated in VP. These proposals derive support from the crosslinguistic evidence in Sportiche (1988) and Koopman and Sportiche (1991). Based on structures from English and French quantifiers like 'all', which are located between the auxiliary and the main verb, Sportiche demonstrates that the subject has moved from the VP. The floating quantifier moves with the NP from the VP leaving a trace or the NP moves leaving the quantifier in situ. Here is an illustration of Sportiche's (1988) analysis:

- (236) (a) [_{IP} Tous les garçons ont [_{VP} t_i lu ce livre.]]
 (b) [_{IP} Les garçons ont [_{VP} t_i tous lu ce livre.]]

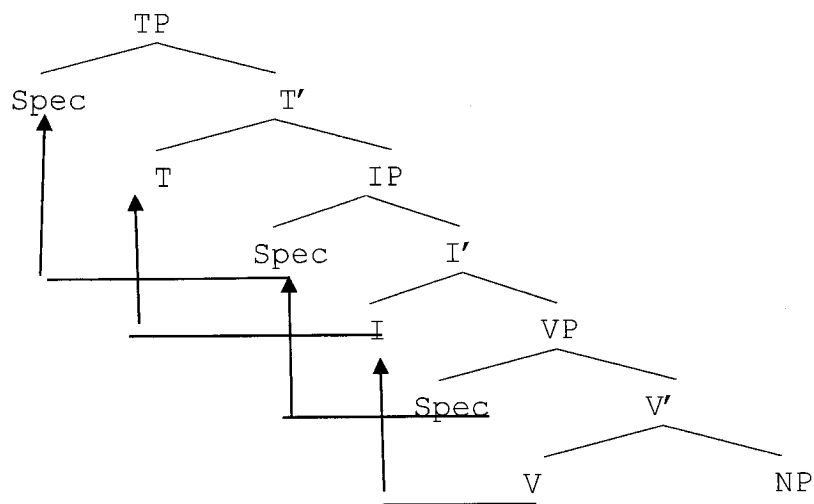
The fact that the quantifier *tous* in (236b) stays in situ and only part of the NP moves supports the claim that subjects are base-generated in the specifier of the VP. The subject then moves to satisfy some feature requirements, mainly EPP features.

According to the authors mentioned above, in MSA, VSO order is derived by movement of the verb to I. Another analysis proposed by Akkal (1996) considers that the verb raises to Tense.

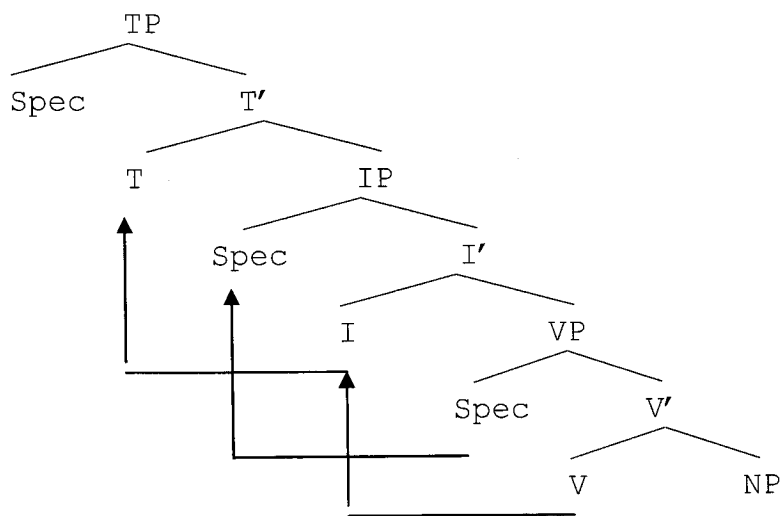
According to the same authors listed above, SVO order is derived by movement of the subject to [Spec, IP] when the subject is focused or topicalized. There have been various proposals on the landing site of the subject. Some adopt a [Spec, FP] position (Ouhalla 1997), some others adopt a position called G (Shlonsky 1997a), others suggest the [Spec, TP] position (Akkal 1996).

EA exhibits a different behaviour with regard to word order. SVO order seems to be the preferred order in EA but VSO order is also used with less frequency than SVO order (Gamal-Eldin 1967). SVO order is obtained by movement of the subject from [Spec, VP] to [Spec, IP], motivated by the need to satisfy the EPP feature. VSO order is obtained by movement of the verb to Inflection (I) or Agreement (Agr) then to Tense (T). The following representations summarize word order variation in EA:

(237) SVO Order³³



(238) VSO Order



Following the proposal of Mahfoudhi (2002), both SVO and VSO orders are motivated by the need to check the EPP feature. This means that either the NP subject or the verb

³³ When representing focus structure in the subsequent chapters, I will only represent IP and dispense with Agreement Phrase (AgrP) and Tense Phrase (TP). Movement of the subject from inside VP targets I and Focus movement targets FP.

can check the EPP feature. Indeed, the rich morphology of a pro-drop language such as MSA and all its dialects (EA included) allows the verb to check the EPP feature (see Alexiadou and Anagnostopoulou 1998 for further discussion). Although Mahfoudhi's proposal on word order variation in MSA and in Tunisian Arabic (TA) offers a nice account that respects the principles of the Minimalist Program (Chomsky 1995b, 2000), it has some limitations. One of these limitations is in allowing the verb to move to T, which brings into question the necessity of the [Spec, TP] position in this case. A possible answer to this would be to reserve the [Spec, TP] position for a focused or topicalized element in the sentence that should occur higher in the tree than the moved verb. Having briefly discussed word order in EA, let us consider how sentences are formed in EA.

6.3 Sentence structure

Based on the grammar by Gamal-Eldin (1967), here is a description of sentence formation in EA. We can distinguish three types of sentences: non-verbal sentences as in (239), verbal sentences as in (240), and fragments and introducers as in (241).

- (239) ?il bint sikirtera.
 the girl secretary
 'The girl is a secretary'. (Gamal-Eldin 1967: 31)

- (240) huwwa simi? Il-kalam.
 he hear.3.S.Past the-words
 'He heard the words'. (Gamal-Eldin 1967: 57)

- (241) tabʔan
 'of course' (Gamal-Eldin 1967: 89)

In the present study, I am interested in describing the syntactic behaviour of the first two types, mainly because they are the appropriate environment for wh-question formation. What follows is a description of the three types of sentences in EA (the first two are of interest to our analysis and the third type is presented for the sake of giving the reader a complete picture of types of sentences in EA).

A non-verbal sentence is defined as a clause that has a subject position filled by a definite nominal and a predicate filled by a nominal, an adjectival, or a particle word or phrase (Gamal-Eldin 1967: 30). Sentences (242-244) below represent instances of non-verbal sentences in EA:

- (242) Il-?om riyada. [with nominal predicate]
The-swimming sport
'Swimming is a sport'.
- (243) Ibn-i ?ayyan. [with adjectival predicate]
son-my sick
'My son is sick'.
- (244) Il-ba?i ?ala-chanak. [with particle word]
the-rest for-you
'The rest is for you'. (Gamal-Eldin 1967: 31-32)

Wh-questions can be formed by using non-verbal sentences with interrogative words such as *kam* (how much),

miin (who), *iih* (what), *izzay* (how). The following examples illustrate some applications³⁴ of interrogatives with non-verbal sentences:

- (245) **Kam** issa?a ?
 What time
 'What's the time?' (Gamal-Eldin 1967: 53)
- (246) **Miin** da ?
 Who this.3.S.M
 'who's that?' (Gamal-Eldin 1967: 53)
- (247) **?izzay** il-hal ?
 how the-things
 'How are things (with you?)' (Gamal-Eldin 1967: 53)

Let us now consider verbal sentences. A verbal sentence is composed of a noun phrase that functions as subject, a verb, and if the verb is transitive, a noun phrase that functions as an object. The preferred order in EA verbal sentences is SVO order as described in the previous section. Examples (248-250) below illustrate features of verbal sentences in EA:

- (248) Huwwa xarag
 He go.3.S.M.Past
 'He went out' (Gamal-Eldin 1967: 59)

³⁴ In non-verbal environment, wh-phrases occur clause initially as in examples 239-241. According to native speakers of EA, it is not common to formulate questions with wh-phrases in situ in a non-verbal environment.

- (249) Il-bint namit
the-girl sleep.3.S.F.Past
'The girl slept' (Gamal-Eldin 1967: 60)
- (250) katabit id-dars
write.3.S.F.Past the-lesson
'She wrote the lesson' (Gamal-Eldin 1967: 60)

Sentences (248-249) illustrate the SVO order in EA where I assume the subject moves from inside V to [Spec, IP] and then to [Spec, TP], and V moves to I and then to T. Sentence (250) illustrates an instance of pro-drop in EA.

In verbal sentences, questions are formed using all types of question words such as *kam* (how much), *miin* (who), *iih* (what), *izzay* (how). Question words can be fronted or stay in situ (this will be discussed in section 6.4 of this chapter). Examples (251-254) below are instances of interrogatives in verbal sentences:

- (251) ?amalt **iih** imbarih ?
do.2.S.M.Past what yesterday
'What did you do yesterday?'
(Gamal-Eldin 1967: 87)
- (252) **Iih** illi hasal ?
what *illi* happen.3.S.Past
'what happened?'
(Gamal-Eldin 1967: 87)
- (253) **Miin** ?al ilkalamda ?
who say.3.S.M.Past the-words-these
'Who said this?'
(Gamal-Eldin 1967: 88)

- (254) Wasalt **imta ?**
 arrive.2.S.M.Past when
 'when did you arrive ?'
 (Gamal-Eldin 1967: 88)

We notice in (252) the presence of the element *illi*, which does not appear with all fronted wh-phrases.

Finally, a third type of sentence in EA is called fragment or introducer³⁵. They occur with sentence stress and an intonation contour, which explains why they are ranked as sentences. Fragments can be vocative sentences as in (255), response sentences as in (256), greetings as (257), and exclamations as in (258):

- (255) Ya ?axina
 'Hey fellow !'
- (256) hagi tab?an
 'I am coming, of course'
- (257) haniyyan
 'hope you enjoyed it' (for a meal)
- (258) chi? Garib
 'stange thing!' (Gamal-Eldin 1967: 91)

Introducers can be verbal as in (259), nominal as in (260), or particle words as in (261) :

³⁵ This sentence type does not permit question formation and as mentioned in the text, I present this third type here for the sake of describing all types of sentences in EA and providing a complete picture of sentence formation in EA for the reader.

- (259) Ya?ni
 'That is'
- (260) ?ilha?i?a
 'the fact'
- (261) ?ala kida
 'Well then' (Gamal-Eldin 1967: 92)

Having described the way EA sentences are structured, let us consider now the strategies available in EA to form wh-questions.

6.4 Wh-question formation

In EA, wh-questions are formed following two structural strategies: clause initial wh-phrase strategy or clause final wh-phrase strategy, i.e., in situ. In EA, there are eight basic wh-phrases: *miin* (who), *iih* (what), *fiin* (where), *ay* (which), *imta* (when), *issay* (how), *kam* (how much/how many) and *liih* (why). The following examples illustrate the use of each one of these wh-phrases.

- (262) **Miin** illi ga ?
 Who that come.3.S.M.Past
 'Who came?'
- (263) **iih** illi Mona ?arit-uh ?
 what illi Mona read.3.S.F.Past
 'What did Mona read?'

- (264) **fiin** il-kitab ?
 where the-book
 'Where is the book?'
- (265) **ay** kitab ?aritu ?
 which book read.2.S.M.Pres.Perf.
 'Which book have you read?'
- (266) **imta** yigi l-atr ?
 when come.3.S.M.Pres. the-train
 'When does the train come?'
- (267) **izzay** git hina ?
 How come.2.S.M.Past here
 'How did you come here?'
- (268) **Kam** talib fil-fasl ?
 How many students in-the-classroom
 'How many students in the classroom?'
- (269) **liih** irragil da gih ?
 why the-man this come.3.S.M.Past
 'Why did this man come?'

As we can see from examples (262-269), clause initial wh-phrases seem to be possible with all types of wh-phrases. The examples in (262-269) have been used to evaluate the grammaticality of the wh-in situ strategy according to the judgement of native speakers of EA. Here are the results:

- (270) *ga **miin** ?
 Come.3.S.M.Past who

'who came?'

- (271) Mona ?arit **iih** ?
Mona read.3.S.F.Past what
'What did Mona read?'
- (272) il-kitab **fiin** ?
the-book where
'where is the book?'
- (273) ?aritu **ay** kitab ?
read.2.S.M.Pres.Perf. which book
'which book you have read?'
- (274) el-atr yigi **imta** ?
the-train come.3.S.M.Pres. when
'When does the train come?'
- (275) git hina **izzay** ?
come.2.S.M.Past here How
'How did you come here?'
- (276) fil-fasl fi **Kam** talib ?
in-the-classroom there-is How many students
'How many students are in the classroom?'
- (277) irragil da gih **liih** ?
the-man this come.3.S.M.Past why
'Why did this man come?'

The option of leaving the wh-phrase in situ is possible with examples (271-277) above. The same elements

constituting wh-questions in situ are also used to form the clause initial wh-questions. However, it is not possible to leave the wh-in situ in example (270) because subjects cannot be post-verbal and the wh-phrase in (270) functions as subject. A preliminary assumption would be that a wh-phrase which functions as a subject cannot stay in situ, i.e., inside the VP. In the next section I will present an explanation of the behaviour of wh-phrases functioning as subject.

Another observation to be made is that in the examples with clause initial wh-phrases (262-269) there is no overt *illi*, except in (262-263). The element *illi* is often present when the wh-phrase is clause initial as in examples (278-279) below.

(278) **iih** illi hasal ?
 what *illi* happen.3.S.Past
 'What happened?'

(279) **miin** illi ?al ilkalamda ?
 who *illi* say.3.S.M.Past the-words-these
 'Who said this?'

The particle *illi* cannot be present when the wh-phrase functions as adjunct as in (280-281) below:

(280) ***Fiin** illi Mona rahit ?
 Where illi Mona go.3.S.F.Past
 'Where did Mona go?'

(281) ***Liih** illi ?amalt kida ?
 Why *illi* do.3.S.M.Past like-this

'Why did you do this?'

Removing the particle *illi* makes the sentences grammatical:

- (282) **Fiin** Mona rahit ?
Where Mona go.3.S.F.Past
'Where did Mona go?'
- (283) **Liuh** ?amalt kida ?
Why do.3.S.M.Past like-this
'Why did you do this?'

Before developing my focus morpheme proposal for wh-questions in EA, let us evaluate the status of the particle *illi* which I consider to play a role in wh-question formation.

6.5 The particle *illi*

The particle *illi* is used in relative constructions, cleft constructions, and wh-questions. Consider these examples:

- (284) Ir-raagil **illi** Mona shaafit-uh [Relative clause]
The-man that Mona saw-him
'The man that Mona saw'
- (285) Dah muhammad **illi** gih [Cleft construction]
this Mohammad that came
'It is Mohammad who came?'

- (286) Iih **illi** Mona ?arit-uh ? [fronted Wh-question]
 what that Mona read-it
 'What did Mona read?'

(Cheng 1997: 44)

In sentence (284), the particle *illi* can be analyzed as a relative pronoun that refers to the antecedent *ir-ragil* (the man). It has been proposed by Badawi³⁶ (1988) that in relative constructions a relative pronoun can be overt as in (287) or empty as in (288):

- (287) Chuft irragil [**illi** ichtara l-arabiya]
 See.1.S.the-man illi buy3.S.M. the-car
 'I saw the man who bought the car'

- (288) Chuft ragil [Ø ichtara l-arabiya]
 See.1.S.man Ø buy3.S.M. the-car
 'I saw a man who bought the car'

(Badawi 1988: 614)

The particle *illi* is the only particle that exists in EA to form relative clauses so I will assume that it can be empty when its content is recoverable from its antecedent.

Let us consider the second type of construction in which *illi* is used, the cleft construction in (285), repeated here as (289):

³⁶ Badawi (1988) describes the particle *illi* as a relative pronoun without providing any analysis to support such claim. As a traditional grammar book, Badwi (1988) uses the word 'relative pronoun' as a descriptive device without implying any analytical work as those done by Obenauer (1977) and Kayne (1977) on French. In this section, I will consider some of these works that provide substantial facts to claim that French *que* is a complementizer not a relative pronoun, and apply them on the particle *illi*.

(289) dah muhammad **illi** gih ?
 this Mohammad that came
 'It is Mohammad who came?'

In (289), *illi* functions as a complementizer for the cleft construction. In analyzing wh-question in EA, Cheng³⁷ (1997: 49) argues that wh-fronting is an instance of clefting. She proposes a wh-cleft analysis where the fronted wh-phrase is base generated as the subject of the cleft sentence. She supports such an analysis based on the similarities between the two structures, fronted wh-questions and cleft constructions, which reside in the use of the particle *illi*³⁸.

The third type of construction where the particle *illi* is used, repeated here in (290), is an instance of clause initial wh-question.

(290) Iih **illi** Mona ?arit-uh ?
 what that Mona read-it
 'What did Mona read?'

Let us consider some more examples of this third type of construction where *illi* is found. The particle *illi* is used only when the wh-phrase functions as subject as in (291) or object as in (292).

³⁷ Both Cheng (1997) and Wahba (1984) use the word complementizer to qualify the status of the particle *illi* but again without providing a significant analyses that explain such orientation.

³⁸ Cheng (1997) treats argument wh-phrases as instances of wh-clefts because of the apparent use of the particle *illi*, which she considers the equivalent of the English relative pronoun *that* in a cleft construction. In the case of adjunct wh-phrases where *illi* is not overt, she treats the fronting of the wh-phrase as an instance of topicalization of an NP. Cheng's account does not represent a unifying analysis of EA wh-questions. I refer the reader to chapter 3 for a review of Cheng.

(291) Miin **illi** kassar il-vasa ?
Who that break.3.S.M.Past the-vase
'Who broke the vase?'

(292) Miin **illi** Mona darabit-uh ?
Who illi Mona beat.3.S.F.Past-him
'Who did Mona beat?'

The presence of *illi* is obligatory with object wh-phrases since removing *illi* makes the sentence ungrammatical as in (293). It is apparently optional, but not ungrammatical, with subject wh-phrases as in (294):

(293) *Miin Mona darabit-uh ?
Who Mona beat.3.S.F.Past-him
'Who did Mona beat?'

(294) Miin kassar il-vasa ?
Who break.3.S.M.Past the-vase
'Who broke the vase?'

The particle *illi* cannot be used with adjunct wh-phrases as in (295). Adjunct wh-phrases can appear clause initial without an overt *illi* as in (296):

(295) *Fiin **illi** Mona rahit ?
Where illi Mona go.3.S.F.Past
'Where did Mona go?'

(296) Fiin Mona rahit
Where illi Mona go.3.S.F.Past
'Where did Mona go?'

The particle *Illi* cannot be used with wh-phrases functioning as object of prepositions as shown below³⁹:

(297) *Ma'a miin **illi** Mona raahit il-Qahira ?
With whom illi Mona went to-Cairo
'With whom did Mona go to Cairo?'

(298) Ma'a miin Mona raahit il-Qahira ?
With whom Mona went to-Cairo
'With whom did Mona go to Cairo?'

These observations about the distribution of the particle *illi* in wh-questions make us wonder about the following issues: Why is the particle *illi* absent from clause initial adjuncts? Why is it obligatory with clause initial objects? And why is it optional with clause initial subjects? Is the presence of the particle *illi* related to movement of the wh-phrase to the clause initial position? If yes, does this suggest that argument wh-phrases undergo movement that leads to the insertion of the particle *illi* as opposed to the adjunct wh-phrases whose lack of movement does not allow the insertion of the particle *illi*? If adjunct wh-phrases do not undergo movement, how do they end up in clause initial position? Is it through a process of adjunction? In chapter 7 and 8, I will try to answer these questions.

³⁹ Cases of wh-phrases functioning as objects of preposition are not analysed separately in the thesis. I have just introduced them in chapter I and here I mention their behavior with the particle *illi* to conclude that I propose to analyze them as applicatives and not as arguments of the verb. By behaving as applicatives, they become the equivalent of adjuncts; therefore, the analysis that applies to wh-phrases functioning as adjuncts is also applicable to wh-phrases functioning as objects of preposition as I will show in section 7.4.

Before we focus on the role of the particle *illi* vis-à-vis wh-question formation, let us clarify how we intend to treat this element grammatically speaking. I propose to examine some facts used for French complementizer *que* to figure out whether the particle *illi* must be treated as a complementizer or as a relative pronoun. These facts are taken from Hirschbühler (1980), Kayne (1977) and Obenauer (1977). These authors claim that French particle *que* is a complementizer and not a relative pronoun. They provide a list of facts that characterize the syntactic distribution of complementizers and show how the French particle *que* has a syntactic distribution of a complementizer. These facts have become accepted as a diagnosis for complementizer status in the literature.

It is agreed among linguists such as those listed above that French *que* is a complementizer because it has at least the three distributional properties listed below:

- a. It occurs in all embedded tensed sentences.
- b. It is incompatible with wh-words in interrogatives and relatives.
- c. It is incompatible with infinitives.

The following examples illustrate the distributional properties of French *que* listed above:

(299)

- (a) Elle a dit **que** tout irait bien
- (b) Je suis sûr **qu'ils** sont venus

(300)

- (a) Elle ne sait pas **où** elle habite
- (b) La fille avec **qui** tu parlais s'appelle Marie
- (c) *La fille avec qui **que** tu parlais s'appelle Marie

(301)

- (a) *Elle cherche quelqu'un **que** photographier
- (b) *Jean voudrait **que** partir

Sentences (299a-b) are examples of the distribution of French *que* in embedded tensed sentences. Sentences (300a-b) are examples of an interrogative and a relative where French *que* is absent because of the presence of wh-words *où* and *qui*. Sentence (300c) is ungrammatical because French *que* cannot be present when there is an overt wh-word. Sentences (301a-b) are ungrammatical because French *que* appears with infinitives.

Having provided a short description of some facts that illustrate the syntactic distribution of French *que* that qualify it as a complementizer, let us now focus on the particle *illi* and examine its distributional properties to see if we could qualify such particle as a complementizer.

Using the distributional properties listed above, consider the following examples from EA, translated by my informants who provided also their judgement on the grammaticality of the examples:

(302) *Illi* in embedded tensed sentences

- (a) Hiya ?alit illi kullu ?ayimchi kwayyis.
She say.3.S.F.Past illi all go.3.S.M.Fut. good
'She said that everything will be all right'.
- (b) ?ana mit?akkid illi humma guh.
I sure.1.S.M.Adj. illi they come.3.P.M.Past
'I am sure that they came'.

Sentences (302a-b) illustrate that the particle *illi* can occur in embedded tensed sentences as the French complementizer *que*.

(303) *Illi* with interrogatives and relatives

(a) Ma te?rafchi hiya tiskun fiin.

Not know.3.S.F.Past she live.3.S.pres. where

'She does not know where she lives'.

(b) Il bint illi kallimtaha ismaha Meriem.

The-girl illi talk-to. 2.S.M.Past named Mary

'The girl to whom you talked is named Mary'.

Sentences (303a) is an example of an interrogative with an adjunct wh-phrase. The particle *illi* is absent. If the particle *illi* is added the sentence becomes ungrammatical. This distributional property of complementizers is delicate because in EA, the particle *illi* is compatible with wh-words functioning as subject and object but not with adjunct wh-words. Sentence (303b) however shows that the same particle *illi* is used in a relative clause. Given that the particle *illi* is the only element used in EA to construct relative clauses, we cannot judge its incompatibility as a complementizer with relatives.

(304) *Illi* with infinitives

(a) *Biddawwar ?ala had illi tsawwaru

look.3.S.F.Pres. for someone illi photograph

'She is looking for someone to photograph'.

- (b) *Ahmad ?ayizz illi yrawwah
Ahmad want.3.S.M.Past illi go-home.3.S.M.Past
'Ahmad wants to go home' .

Finally, sentences (304a-b) illustrate the incompatibility of the particle *illi* with infinitives. If the particle *illi* is absent from this syntactic environment, the sentences become grammatical.

Having explored how the particle *illi* behaves with distributional properties that apply to the French complementizer *que*, let us now sum up our treatment of this particle. First, as described in the beginning of this section, the particle *illi* seems to be the unique element that plays various key roles in the EA grammar. It is the only element that is used to construct relatives, clefts and wh-questions. Second, applying some properties of the French complementizer *que* on the particle *illi* has shown that the particle *illi* introduces embedded tensed sentences as complementizers do. It is also incompatible with infinitives but not with interrogatives and relatives. These facts encourage us to treat the particle *illi* as a complementizer.

However, in this dissertation, the particle *illi* plays the role of a focus marker since I claim that movement of subject/object wh-phrases triggers the insertion of the particle *illi* and that merger of adjuncts lead to a non-marking of the particle *illi* which remains in this case non-overt. Also, for wh-questions formation, I claim that the particle *illi* has a bundle of features that ranges from focus features (informational or contrastive), EPP features, Q features, etc., these features fit more to a focus marker.

To sum up, in this dissertation, I consider the particle *illi* a complementizer because as shown above it has

various syntactic properties that are common in complementizers. However, when dealing with the role of the particle *illi* in forming wh-questions (in chapter 7 and 8), I will be using the term focus morpheme and focus marker to indicate that the particle *illi* is a lexical realization of some features of the contrastive focus morpheme (see section 7.4 for details).

6.6 Conclusion

In this chapter, I have described some grammatical properties of EA that are useful to my analysis of wh-questions in EA. I have claimed that EA observes both SVO and VSO order, SVO being the preferred order. I have also listed types of sentences in EA and described the distribution of wh-phrases within these types. I then postulated that the particle *illi* has an important role in forming wh-questions in EA. For this matter, I have differentiated between two types of particle *illi*, a relative pronoun that intervenes in forming relatives, and a particle *illi* that intervenes in fronting wh-questions. I have described the distribution of *illi* with subject/object/adjunct wh-phrases and observed that the particle *illi* is present with object and subject clause initial wh-phrases but not with adjunct initial wh-phrases. The following chapters give the reasons behind such distribution.

CHAPTER 7: A SYNTACTIC ANALYSIS OF WH-QUESTIONS IN EGYPTIAN ARABIC

7.1 Introduction

In this chapter, I analyze the distribution of wh-questions in EA using the focus morpheme proposal outlined in chapter 1 and described in detail in the following section. I offer a syntactic analysis of wh-phrases in this chapter and a semantic analysis of wh-phrases in EA in the following chapter since I believe that the syntactic distribution of wh-phrases is related to the types of meaning available for interpretation in the semantic component. I claim that EA, like many other languages such as English and Spanish (Zubizarreta 1998), uses leftward positions in the clause to denote contrastive focus whereas information focus is expressed in situ. Therefore, I postulate that initial wh-phrases are interpreted as contrastive focus and in situ wh-phrases are interpreted as information focus. The immediate benefit of

such a hypothesis is that optional wh-movement in EA is only apparent and does not go contra minimalist premises.

The organization of this chapter is as follows: in section 7.2, I outline the focus morpheme proposal. I describe the two types of focus morphemes that underlie the two forms of wh-questions: an information focus morpheme that accounts for the wh-phrase in situ and a contrastive focus morpheme that explains the clause initial wh-phrase form. In section 7.3, I explore the behaviour of wh-questions in relation to subjacency first by reviewing and criticizing Wahba's (1984) claim that all types of wh-questions in EA undergo movement and second by using Cinque's redefined island constraints to show that only argument wh-phrases in EA undergo movement, whereas adjunct wh-phrases are adjoined to the structure in late syntax. In section 7.4, I examine the distribution of subject/object/adjunct wh-phrases in EA proposing an analysis for each category. In section 7.5, I propose an analysis of the particle *illi* that accounts for its presence with fronted argument wh-phrases but not with initial adjunct wh-phrases. Section 7.6 concludes this chapter.

7.2 The focus morpheme proposal

The focus morpheme hypothesis that I propose is characterized by the assumption that a morpheme indicating focus enters the derivation prior to Spell-out in order to serve as input for both interfaces, PF and LF. There are two different morphemes available in the lexicon to indicate focus in wh-questions in EA: one denoting information focus and one denoting contrastive focus. The focus input, whether

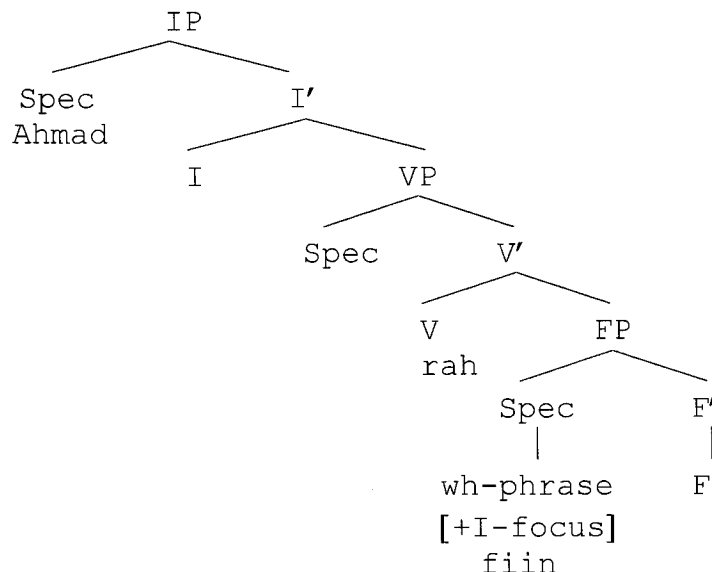
informational or contrastive, must be interpreted prosodically and semantically. On the prosodic level, stress is a manifestation of focus and on the semantic level, different types of foci. The focus morpheme proposal provides adequate tools for the analysis of optional wh-movement in EA.

Once the focus morpheme enters the derivation, a focus phrase is generated. The focus morpheme occupies the head F and the focus phrase occupies the Specifier of the focus phrase. There are two distinct focus morphemes that prepare the input for the sentence focus interpretation at the interfaces. The first focus morpheme F projects a head F and a Specifier, where the wh-phrase is hosted. The derivation ends with a focused-wh-phrase in situ that is interpreted as information focus. The second focus morpheme enters the derivation with Q, which is base-generated in a leftward position of the clause because of its operator-like function and which also bears the contrastive focus features. The particle Q can be overt or null. When the wh-phrase moves to acquire a contrastive focus interpretation, the particle *illi* is inserted prior to the mapping to PF and induces a contrastive focus reading on wh-phrases (subject and object wh-phrases). When the wh-phrase is merged postcyclically in the derivation, the particle *illi* is not inserted in Q but the features [+C-focus] and the EPP feature are still activated. The null Q attributes the contrastive focus reading to wh-phrases (wh-adjuncts).

When the focus morpheme enters the derivation as F, it projects the focus phrase leaving the sister position for the focused phrase, which could thus be called a complement or a specifier. Consider (305-306) below:

- (305) Ahmad rah **fiin**
 Ahmad go.Past.M where
 'Where did Ahmad go?'

- (306) Focus-in situ

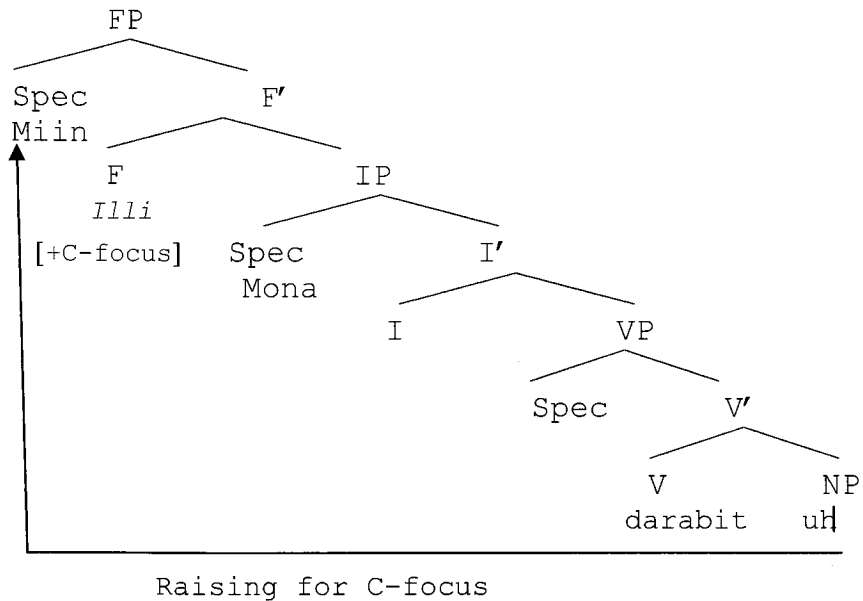


In (305), the focus morpheme occupies the Head and the focused phrase occupies the Specifier position [+I focus] stands for information focus). It is the focus head that expands the focus phrase by creating a specifier position to host the wh-phrase *fiin*.

Now consider an example of fronted wh-phrase. Sentence (307) below has its representation in the tree in (308):

- (307) **Miin** illi Mona darabit-uh ?
 Who illi Mona hit.3.S.F.Past-him
 'Who did Mona beat?'

(308) The raising focus form



Having illustrated how focus morphemes behave once in the derivation, let us now put forward some motivating arguments supporting my proposal.

The reviews of Cheng and Rooryck (2000) and Brunetti (2003) in chapter 5 show that positing a focus morpheme that enters the derivation early is not a new idea. At this point, I need to support my claim that a focus morpheme provides an adequate account for optional wh-movement in EA. For this reason, I will explore motivations behind the choice of this analysis.

In the generative framework, we find various proposals claiming that elements as small as morphemes are independently part of the lexicon and are computed in the derivation like any other lexical item. In this dissertation, I will describe the status of such morphemes

using the theory of Distributed Morphology⁴⁰. According to this theory, the items that enter the computational system are lexical items taken from a lexicon since it is claimed that there is no lexicon, but rather they are a bundle of features. These features could have semantico-syntactic content and/or morphophonological content.

I claim that the focus morpheme that accounts for wh-question formation in EA has semantico-syntactic content as well as morphophonological content. The semantic content of the focus morpheme is the input for wh-question interpretation. It also contains syntactic information of the focused wh-phrase, i.e., whether the wh-phrase is located at the left periphery of the sentence as would be by features such as EPP or a contrastive focus feature, or whether it stays in situ, as would be by an information focus feature.

The information focus morpheme is a variable that is bound to the focused constituent in-situ. Figure (309) illustrates the morphophonological features of the information focus morpheme:

(309) The morphophonological features of the information focus morpheme

$$\left(\begin{array}{l} +I\text{-focus} \\ \text{null } Q \end{array} \right) \rightarrow \left(\begin{array}{l} +\text{information focus} \\ - \text{EPP} \\ -\text{contrastive focus} \end{array} \right)$$

⁴⁰ The reader is referred to chapter 2 section 2.3 for a description of Distributed Morphology.

The contrastive focus morpheme contains an operator-like feature Q. It is located in the leftward position of the clause because it has scopal properties and EPP features which attract the wh-phrase:

(310) The morphophonological features of the contrastive focus morpheme

$$\left(\begin{array}{l} +C\text{-focus} \\ \text{null } Q \end{array} \right) \rightarrow \left(\begin{array}{l} +\text{contrastive focus} \\ +\text{EPP} \\ -\text{information focus} \\ +Q \end{array} \right)$$

(A more detailed analysis of the intonational differences manifested by both types of foci is given by Arnaudova (2003). This dissertation supports such analysis on intonational features of focus)

The focus morphemes are inserted in the computational system at the syntactic level in order to enable the syntactic features to fuse with other syntactic elements and to enable the semantic features to be sent to LF for interpretation. The morphophonological features of the focus morpheme are sent to PF for interpretation.

The syntactic features of the focus morpheme generate the focus head which builds up a focus phrase in one of the cycles of the computational system. The semantic features contain information about the type of focus interpreted in LF once the derivation is complete. The semantico-syntactic features are interwoven. The syntactic projection of the focus phrase will determine the type of focus in the semantics. However, the syntactic projection of the focus

phrase will also depend on the syntactic environment. A derivation that contains the element *Q* will certainly differ from a derivation that does not contain this element. The derivation that contains the element *Q*, triggered by a contrastive focus feature on *Q*, moves to [Spec, FP]. Movement of the wh-phrase in the syntax activates the insertion of the particle *illi* at PF. The derivation that does not contain the element *Q* leaves the wh-phrase in situ which will be interpreted as information focus.

There are various advantages to the analysis of focus in terms of an abstract morpheme. Not only does this analysis enable us to account for wh-question formation in EA, but it also allows us to follow basic tenets of the Minimalist Program (Chomsky's 1995b version), such as the architecture of the grammar, the uniformity conditions, and optionality of movement, that other analyses contradicted⁴¹.

First, the focus morpheme analysis maintains the architecture of the grammar in the Minimalist program. It is not necessary to revise the T model of grammar in order to present the relation between PF and LF as proposed in the prosodic-based approach to focus (Reinhart 1995 and Zubizarreta 1998). In the focus morpheme analysis, the focus morpheme enters the computation early providing the input for both PF and LF. Focus phonological interpretation (stress assignment) occurs at PF and Focus semantic interpretation (type of focus) occur at LF.

Second, this analysis preserves uniformity conditions whereby no new items are inserted in the derivation once the

⁴¹ The reader is referred to chapter 4 where the two approaches to focus: the syntactic-based approach and the prosodic-based approach are discussed. Chapter 3 also explores other analyses of wh-questions and discusses the limits of these analyses in terms of violation of minimalist assumptions.

first numeration is chosen⁴². There is no strong [+focus] feature, that is inserted later in the syntax and plays the role of a trigger, that would explain wh-movement versus the non-movement of the wh-phrase when a [+focus] feature is not inserted (Rizzi 1997, Rochemont 1986). I claim that the fronted wh-form is interpreted as contrastive focus and has its proper intonation form (lowering tone). The wh-in situ form is interpreted as information focus and has another distinct intonation form (rising tone). This claim entails that there is no optionality in wh-movement.

Third, this analysis treats optionality of movement as only apparent. There are two distinct forms to construe wh-questions in EA, each form is pronounced differently at PF and each form is interpreted differently at LF. Also, there is no choice in terms of which derivation will carry on to the interfaces. There is only one optimal derivation that succeeds in reaching the interfaces and that satisfies all output conditions.

Having described the focus morpheme proposal and enumerated its advantages, let us now explore how it accounts for the distribution of wh-questions in EA. In the following section, I show that wh-question formation in EA involves movement of the wh-phrase in at least some cases, namely when the wh-phrase is a subject or an object.

⁴² The late insertion of the particle *illi* at PF is different from late lexical insertion of features or lexical items because the features of the particle *illi* (EPP features, contrastive focus feature, Q feature) have already been introduced to the numeration at an early stage (prior to Spell-out) and have contributed to the make up of the derivation.

7.3 Wh-questions and movement in EA

In this dissertation, I claim that the initial wh-phrase option is obtained through movement in the case of argument wh-phrases or through Merge in the case of adjunct wh-phrases. Given that I postulate that one of the options available in EA to form clause initial wh-questions is obtained through movement in the case of objects and subjects but not adjuncts, I need to provide evidence that argument wh-questions but not adjunct wh-questions show signs of movement. In order to show the presence of movement in wh-question formation, a diagnostic known in the literature as subjacency and island sensitivity is used (Chomsky (1977), Cinque (1990), Ross (1967), among others). In section 7.3.1, I review Wahba's (1984) analysis of wh-movement in EA based on the traditional island constraints as outlined by Ross (1967) and Chomsky (1977), and in section 7.3.2, I review Cinque's (1990) redefined weak versus strong island constraints and propose to apply them to EA. I finally claim that forming wh-questions with left peripheral wh-phrases in EA is realized through movement with argument wh-phrases but not with adjunct wh-phrases. Adjunct wh-phrases are merged postcyclically in their position and do not move.

7.3.1 Wahba (1984) on wh-questions and islands constraints

Wahba (1984) explores whether wh-constructions in EA show movement symptoms. She uses traditional signs of movement such as the wh-island constraint and the Complex NP

constraint. She illustrates the behaviour of argument wh-phrases as well as adjunct wh-phrases using island constraints.

The wh-island constraint, which states that, among other cases, it is not possible to extract a wh-phrase out of an indirect question, is observed in EA wh-questions. Consider the following sentences where it is not possible to extract a subject wh-phrase as in (311) or an object wh-phrase as in (312):

(311) ***[Miin_i illi [Mona te' raf [fiin [huwwa rah t_i]]]]**?

Who that Mona know where he go.3.S.M.Past

'Who does Mona know where he went?'

(312) ***[Anhi kitab_i illi[Mona te' raf [miin illi[t_isara?uh]]]]**?

which book that Mona knows who that steal.3.S.M.Past

'Which book does Mona know who stole?'

(Wahba 1984: 50)

In (311), it is not possible to extract the subject wh-phrase *miin* (who) from the indirect question [Mona te' raf [fiin [huwwa rah t_i]]. In (312), it is not possible to extract the object wh-phrase *anhi kitab* (which book) from the indirect question [Mona te' raf [miin illi[t_i sara?uh]].

Now let us consider how wh-phrases in EA behave in relation to complex NPs. There are two types of complex NPs in EA: one headed by a specifier and one that lacks a specifier. The first type is called a construct structure and expresses genitival relations (313) and the second type is formed out of an NP that includes a relative clause (314).

(313) Kitaab il-walad

Book (of) the-boy

'the boy's book'

(Wahba 1984: 51)

(314) il-walad illi darab

il-kalb hirib

the-boy who hit.3.S.M.Past the-dog escape.3.S.M.Past

'the boy who hit the dog escaped' (Wahba, 1984: 54)

Extraction out of construct structures is allowed as in (315) but extraction out of a relative clause is not as in (316). A possible answer to questions (315-316) is given in (317):

(315) **Miin** illi il-walad sara? kitaab-uh?

Who that the-boy steal.3.S.M.Past book-his

'Whose book did the boy steal?' (Wahba 1984: 54)

(316) ***Miin** illi A sara? il-kitaab illi Mona iddatu-uh lii-ha?

Who_i that Ali stole the-book that Mona gave-it to-her_i

'Who that Ali stole the book that Mona gave it to her?'

(Wahba, 1984: 55)

(317) Ali sara? Il-kitaab illi Mona iddatu-uh li-Nadia.

Ali stole the book that Mona gave to Nadia.

'Ali stole the book that Mona gave to Nadia'.

(Wahba 1984: 55)

According to Wahba (1984: 55), the reason why extraction out of a construct structure is possible but not out of a relative clause is due to the fact that the first structure

lacks a specifier. Wahba considers that an NP that lacks a specifier can no longer be a bounding node.

Let us consider how Wahba deals with adjunct wh-phrases in terms of subjacency conditions. She claims that adjunct wh-phrases can freely be extracted from an embedded tenseless clause as in (318) but cannot be extracted out of an embedded tensed clause as in (319). Notice that Wahba considers tensed and non-tensed lower clauses as islands that she uses to examine locality requirements observed by adjunct wh-phrases.

(318) **Fiin_i** [Mona hawlit [in-na[ha truuh t_i]]]?

Where Mona tried that she to-go

'Where did Mona try to go?' (Wahba, 1984: 26)

(319) ***Imta_i** [iftakarit Mona [inn [baba xarag t_i]]]?

When think.3.S.F.Past Mona that father left

'When did Mona think that father left?'

(Wahba 1984: 27)

Having shown that both argument and adjunct wh-phrases in EA are sensitive to subjacency, Wahba concludes that movement is involved in the formation of wh-questions. This is plausible even if we find constructions like (320) below where the wh-phrase resembles a left dislocated phrase coindexed with a resumptive pronoun:

(320) **Miin** illi Mona darbait -uh ?

Who that Mona hit.3.S.F.Past -him

'Who did Mona hit?'

Sentence (320) resembles a relative construction as in (321).

- (321) Il-raagil illi Mona shaafit-uh
The-man that Mona saw -him
'The man who Mona saw' (Cheng 1997: 51)

Let us compare relative constructions and wh-questions on the basis of subjacency conditions. Consider the following sentence taken from Cheng (1997):

- (322) Dah il-beet illi baba ye' raf il-raagil illi bana-ah.
This the-house that father knows the-man that built-it
'It is the house that my father knows the man who built it.'
(Cheng 1997: 52)

Sentence (322) shows that relative constructions in EA are not subject to island violations which means that relative constructions do not involve movement. If we assume that wh-questions are formed like relative constructions because both structures look alike, as in (321) and (322) above, then we can suppose that wh-questions involve no movement. According to Wahba, this would be wrong since, as she shows, wh-questions in EA are sensitive to subjacency conditions. In relative constructions, the pronoun *-uh* is analyzed as a resumptive pronoun (Wahba 1984 and Cheng 1997). The existence of a resumptive pronoun and the use of the particle *illi* represent two manifestations shared by fronted wh-questions and relative constructions, but this does not mean that their derivation is the same.

On the other hand, sentence (323) below shows that wh-fronting is sensitive to island constraints a fact that

helped Wahba to conclude that sentence initial wh-phrases involve movement.

(323) ***Miin** illi Mona te'raf feen huwwa raah?

Who that Mona knows where he went

'Who does Mona know where he went?'

(Cheng 1997: 52)

Since wh-fronting in questions is sensitive to island violations, what then is the status of the pronoun *uh*? Wahba advocates that it is a spell-out of a trace. Wahba (1984: 55) assumes that there is a rule of wh-movement from which a wh-question is derived. Movement of the wh-phrase leaves a trace. This trace undergoes a morphological rule called lexicalization. This rule spells out the wh-trace as a resumptive pronoun; it makes the wh-trace phonologically overt. Wahba supports the spell out rule of the wh-trace by the fact that the resumptive pronoun has the same features of gender, number, and person as the moved wh-phrase⁴³.

Therefore, sensitivity to Subjacency and the existence of a trace as a resumptive pronoun are used as signs that in EA, wh-questions involve movement. In the next section, I reexamine wh-questions in EA in terms of island constraints using a revised version of the diagnostics proposed by Cinque (1990).

7.3.2 A reconsideration of movement symptoms

Cheng (1997: 52-53) questions the validity of Wahba's (1984) conclusion. She states that, for some native speakers, (309) is grammatical. Cheng explains this by the

⁴³ Wahba refers to Chomsky (1981) who argues that a trace has grammatical features of number, person, and gender.

fact that the island in (317) is considered a weak island, following Chomsky (1986) and Cinque (1990). I apply Cinque's redefinition of island constraints and examine whether questions in EA are sensitive to strong islands. My conclusion will be that argument wh-questions are sensitive only to strong islands whereas adjunct wh-questions are not always ill-formed with both strong and weak islands. This suggests that only argument wh-phrases undergo movement and that adjunct wh-phrases do not undergo movement.

First, let us review Cinque's formulation of island constraints. Cinque revises Chomsky's (1986) *Barriers* where he unifies constraints on wh-movement. Cinque claims that the analysis of islands developed in *Barriers* shows that some islands can block extraction; however, there are others from which extraction becomes possible. This has led to the distinction between strong and weak islands, on one hand, and the distinction between argument movement and adjunct movement, on the other hand. Cinque adopts the distinction made between two types of wh-movement: long wh-movement and successive cyclic wh-movement. The difference between these two types is based on how they behave with respect to island constraints. Long wh-movement⁴⁴ is subject to strong islands only and successive cyclic wh-movement⁴⁵ is subject to both strong and weak islands. Cinque follows Rizzi (1990) on how traces are identified. Traces of long wh-movement are identified through binding (binding is not a local relation)

⁴⁴ Long wh-movement refers to the movement of the wh-phrase crossing two CPs in one step.

⁴⁵ Successive cyclic wh-movement refers to movement of the wh-phrase crossing two CPs in more than one step (in a cycle fashion, where intermediate traces are created). According to Cinque (1990: 55), successive cyclic wh-movement is available when conditions on long wh-movement are absent.

and traces of successive cyclic wh-movement are identified through antecedent government (which is a local relation).

Let us go back to the distinction between strong islands and weak islands. Cinque makes such a distinction based on the fact that complement extraction from wh-islands leads to a weak or mild ill-formedness, whereas adjunct extraction from islands leads to strong ill-formedness. Cinque identifies subject islands, complex NP islands, and adjunct islands as strong islands. The following examples illustrate that violation of strong islands by both long wh-movement and cyclic wh-movement leads to ungrammaticality:

(324) Subject islands

- (a) *Which books did [talking about t] become difficult?
- (b) *How would [to behave t] be inappropriate?

(325) Complex NP island

- (a) *To whom have you found someone who would speak t?
- (b) *How have you found someone who would fix it t?

(326) Adjunct island

- (a) *To whom did you leave without speaking t?
- (b) *How was he fired after behaving t?

The wh-questions in (a) represent violations of strong islands in long wh-movement. The wh-questions in (b) represent violations of strong islands in successive cyclic movement.

Weak islands are inner islands, factive islands, and extraposition islands. Weak islands are not barriers for

long wh-movement but they block successive cyclic movement.
Consider the following examples:

(327) Inner island

- (a) To whom didn't you speak t
- (b) *How didn't you behave t

(328) Factive island

- (a) To whom do you regret that you could not speak t
- (b) *How do you regret that you behaved t

(329) Extraposition island

- (a) To whom is it time to speak t
- (b) *How is it time to behave t

The wh-words in (a) are extracted through long movement from weak islands and the sentences are grammatical. The wh-questions in (b) represent violations of weak islands through successive cyclic movement.

Let us now explore how strong islands and weak islands behave in EA based on judgments of native speakers:

Subject islands

(330)

- (a) Ay kutub illli [il kalam ?alihum t] ba?a sa?b ?
which books illi the-talking-about become difficult
'Which books did talking about t become difficult?'
- (b) ?Izzay yikun ittasarruf ghir mazbut ?
How would the-behaviour not-appropriate
'How would [to behave t] be inappropriate?'

Complex NP island

(331)

- (a) ?Miin illi la?it-uh illi titkallim ma?a-h ?
Who illi find.2.S.M.Past-him that speak.2.S.M-to-him
'To whom have you found someone who would speak t?'

- (b) ?izzay la?it had illi gayiz yisallahu ?
how find.2.S.Past someone that would fix.3.S.M.-it
'How have you found someone who would fix it t?'

Adjunct island

(332)

- (a) Miin illi xaragt min-ghir ma-tkallim-uh ?
Who illi leave.2.S.M.Past without not-speaking-him
'To whom did you leave without speaking t?'

- (b) *Izzay itrafad ba?d ittasarruf ?
How fire.3.S.M.Past after the-behaviour
'How was he fired after behaving t?'

Long wh-movement of arguments through strong islands is ungrammatical as illustrated in the (a) examples but successive cyclic movement of adjunct wh-phrases is not strongly ungrammatical. As illustrated in the (b) examples, extraction of adjunct out of subject islands and Complex NP islands seems to be acceptable.

Let us now explore how weak islands behave in EA:

Inner island

(333)

- (a) Miin illi matkallimtuch ?
Who not-speak.2.S.M.Past-him

'To whom didn't you speak t?'

(b) Izzay matsarraftich ?

How not-behave.2.S.M.Past

'How didn't you behave t?'

Factive island

(334)

(a) ?Miin illi nadman innak ma?dirtich titkallim ma?ah?

who illi regret that not-could speak.2.S.M.Past-with

'To whom do you regret that you could not speak t?'

(b) *Izzay inta nadman innak tsarraft ?

How you regret that behave.2.S.M.Past

'How do you regret that you behaved t?'

Extraposition island

(335)

(a) Miin illi ga wa?t itkallim-uh ?

To illi who come the-time speak.2.S.M.Past-him

'To whom is it time to speak t?'

(b) *izzay ga wa?t tasarruf ?

How come time to-behave

'How is it time to behave t?'

Extraction from weak islands of both arguments as in (a) and adjuncts as in (b) seems to be weakly ungrammatical. Although extraction of adjunct wh-phrases from inner islands as in (327b) is acceptable, it is not the case with factive islands and extraposition islands in (328b-329b).

Therefore, in view of judgments of apparent wh-movement of adjuncts out of strong islands in (324b-326b) above, it

seems that extraction of adjuncts out of such islands does not give rise to strongly ill-formed structures. This suggests that wh-adjuncts do not undergo movement in overt syntax, but they adjoin to the derivation postcyclically. This idea will be developed in section 7.4.3 when I will tackle adjunct wh-phrases.

In sum, the results I have attained after applying island constraint diagnostics to wh-questions in EA show that argument wh-phrases undergo movement in overt syntax, a result that reflects Wahba's claim that wh-questions in EA undergo movement because they are sensitive to island constraints. However, redefined island constraints (Cinque 1990) have also shown that adjunct wh-phrases do not undergo movement. I postulate then that they are adjoined to the structure postcyclically in two different positions: either in the clause initial position or in some internal clause position. Thus, I disagree with Wahba's proposal that all wh-phrases in EA undergo movement (see section 7.4.3 for a detailed analysis of the distribution of adjunct wh-phrases in EA).

I now propose to explore how wh-phrases are distributed in EA based on their function in the clause. Wh-questions are formed using the in situ strategy or the movement strategy depending on the function of the wh-phrase. Particularly, the movement strategy is grammatical only when the wh-phrase plays a subject or an object function. Adjunct wh-phrases can also appear in situ or clause initially. I will claim that both positions of adjunct wh-phrases are derived through Merge and not through Move. The following sections explore these issues.

7.4 Analysis of argument and adjunct wh-questions in EA

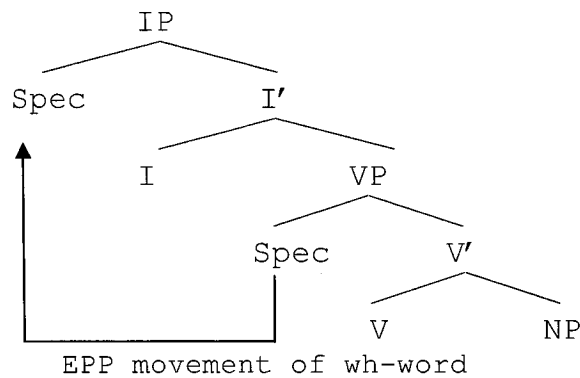
In this section, I will categorize and interpret the various types of wh-questions in order to explain the reason behind the apparent optional movement phenomenon. I will claim that wh-phrase function in the clause plays a key role in determining the strategy used to form the wh-question. I will also conclude that movement of the wh-phrase, which is possible only with argument wh-phrases, accounts for the presence of the particle *illi*, which is responsible for assigning a contrastive focus reading to the fronted wh-phrase. I will also claim that a null-Q operator remains in a derivation to license adjunct wh-phrases, which lack movement because they are not sensitive to island constraints. I assume that adjunct wh-phrases are adjoined to the structure postcyclically, and that this late adjunction explains the absence of the particle *illi*, which I will posit is inserted in the derivation as a result of argument wh-phrases movement. Similar treatment is required for wh-phrases functioning as objects of preposition. They are considered as applicatives, therefore they are treated as adjuncts.

7.4.1 Wh-phrases as subjects

In EA subject wh-phrases are clause initial but can appear with the particle *illi* or without *illi* as in (336a) and (337a):

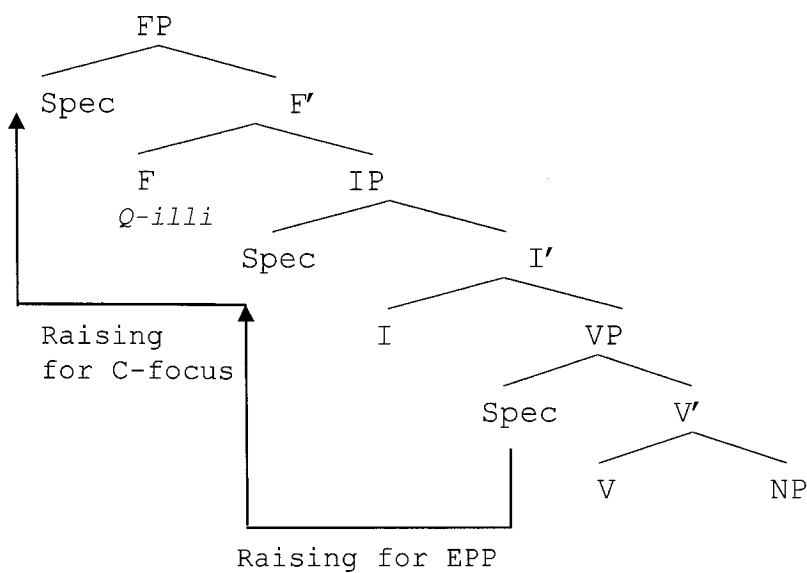
- (336) (a) **Miin** kassar il-vasa ?
 Who break.3.S.M.Past the-vase
 'Who broke the vase?'

(b) Subject wh-in situ



- (337) (a) **Miin** illi kassar il-vasa ?
 Who illi break.3.S.Past the-vase
 'Who broke the vase?'

(b) Subject fronted wh-phrase with *illi*



I will argue that in both instances the wh-phrase moves but for different reasons. A subject wh-phrase moves for two reasons. It moves from [Spec, VP] to [Spec, IP] in order to satisfy an EPP feature of I, and it moves from [Spec, IP] to [Spec, FP] in order to get a contrastive focus reading. A subject wh-phrase without *illi* then occupies [Spec, IP] as opposed to a subject wh-phrase with *illi*, which undergoes movement to [Spec, FP], which ensures a contrastive focus reading. The structure in (336b) illustrates how a wh-phrase functioning as subject behaves in the derivation. The derivation in (336b) above suggests that subject wh-phrases stay in IP after having raised for EPP features. There are no other motivating reasons for movement. If we compare the derivation in (336b) with a derivation where the wh-phrase raises to get a contrastive focus reading as in (337b), we can see that the wh-phrase as subject moves to [Spec, IP] from [Spec, VP] for an EPP feature and then moves to [Spec, FP] in order to get a contrastive focus reading. Movement of the wh-phrase is triggered by Q and results in the insertion of *illi* to be spelled out at PF (later in section 7.5, I will discuss the morphological rule that accounts for the insertion of the particle *illi*).

With this general idea, let us turn to some examples in more detail.

7.4.1.1 Wh-phrase *miin* (who) as animate subject in a verbal environment

When the wh-phrase is an animate subject the wh-word *miin* (who) is used. The wh-word *miin* cannot stay in VP and

has to move to [Spec, IP] to check the EPP feature. Consider the following questions in (340-341) compared to the declaratives in (336-339):

(338) **Ahmad** ga.
 Ahmad come.3.S.M. Past
 'Ahmad came.'

(339) *Ga Ahmad.
 Come.3.S.M.Past Ahmad
 'Ahmad came.'

(340) **Miin** ga ?
 Who come.3.S.M.Past
 'Who came?'

(341) *ga **miin** ?
 come.3.S.M.Past
 'Who came?'

The ungrammaticality of both the declarative in (339) and the subject wh-question in (341) show that it is not possible to leave subjects inside the VP and that they have to move for EPP reasons. This is applicable for declarative as well as interrogative structures. What is interesting is that movement of subject wh-questions as in (340) is triggered by an EPP feature only, which accounts for movement of the subject wh-phrase from [Spec, VP] to [Spec, IP]. As far as wh-movement is concerned, the subject wh-phrase in (340) does not undergo any other movement because it is in an interrogative environment. The

similarity between the declarative structure in (338) and the interrogative structure in (340) suggests that subjects, whether declarative or interrogative, move for the same reason, to check an EPP feature, and to the same position, [Spec, IP]. The parallel ungrammaticality of (339) and (341) confirms such observations.

The positions of *miin* in (340) and *Ahmad* in (338) are similar, so I claim that movement of the subject wh-phrase does not continue to [Spec, FP] in question (340). The wh-phrase stays in [Spec, IP], so the wh-question is interpreted with an information focus reading as we will see in more detail in chapter 8.

Now consider (342):

- (342) (a) **Miin** illi ga ?
 Who illi come.3.S.M.Past
 'Who came?
- (b) [_{FP}Miin_i [_F illi [_{IP} t'_i [_{VP} t_i [_V ga]]]]]

The wh-question has a contrastive reading, and the subject wh-phrase continues to [Spec, FP] in order to get the contrastive reading, which is discussed in chapter 8. I take the presence of the particle *illi* to confirm the idea that the subject wh-phrase in (340) has a different position than in (342).

7.4.1.2 Wh-phrase *miin* (who) as animate subject in a nonverbal environment

Let us consider now a nonverbal environment where the wh-phrase *miin* (who) functions as a subject. Examples in

(344-345) are questions corresponding to the declarative sentence in (343)

(343) Ahmad fi-l-biit
Ahmad in-the-house
'Ahmad is in the house'

(344) (a) **Miin** fi-l-biit ?
Who in-the-house
'Who is in the house?'

(b) [_{IP}Miin_i [_{VP} t_i [_V e [_{PP}fi-l-biit]]]]

(345) *Fi-l-biit **miin** ?
In-the-house Who
'Who is in the house?'

As in verbal sentences, it is not possible to have the subject wh-phrase inside the predicate in question (345), and it is not possible to leave the subject in a position lower than the PP *fi-l-biit* (in the house) as illustrated in the declarative in (346):

(346) *Fi-l-biit Ahmad
In-the-house Ahmad
'Ahmad is in the house'

The ungrammaticality of both the interrogative in (345) and the declarative in (346) shows that the subject cannot stay inside the VP and has to move to [Spec, IP], so I assume that such a movement is triggered by an EPP feature of I. This

also shows that there are no other movements taking place in the interrogative structure in (344).

Now consider (347a) and its bracketed representation in (347b):

- (347) (a) **Miin** illi fi-l-biit ?
 Who illi in-the-house
 'Who is in the house?'
 (b) [_{FP}Miin_i [_Filli [_{IP}t'_i [_{VP} t_I [_V e [_{PP}fi-l-biit]]]]]]

Here, I assume that there is an additional movement to [Spec, FP] with a contrastive focus reading, as I will show in chapter 8. This movement induces the postsyntactic insertion of the particle *illi*, which occupies the head F of the FP projection.

To sum up, in my observations on the subject wh-phrase *miin* (who), the 'in situ' strategy is not possible in verbal sentences or in non-verbal sentences because the wh-phrase functions as a subject and has to move from its base-generated position inside the VP to [Spec, IP] for EPP reasons. Therefore, the raising of the subject wh-phrase is mainly motivated by the checking of the EPP feature. When the particle *illi* is used, the wh-phrase *miin* (who) moves from [Spec, IP] to [Spec, FP] and gets the contrastive reading. The following trees summarize this discussion:

(348) Subject wh-phrase in situ

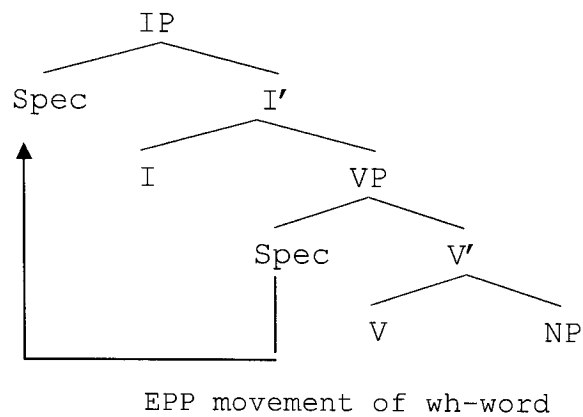


Figure (348) illustrates a subject wh-phrase in IP. Movement of the wh-phrase from VP is motivated by EPP features. Figure (348) illustrates the structure of subject wh-questions as in (349-350)

(349) **Miin** ga ?
 Who come.3.S.M.Past
 'Who came?'

(350) **Miin** fi-l-biit ?
 Who in-the-house
 'Who is in the house?'

Now consider a structure with the particle *illi*:

(351) Subject fronted wh-phrase with *illi*

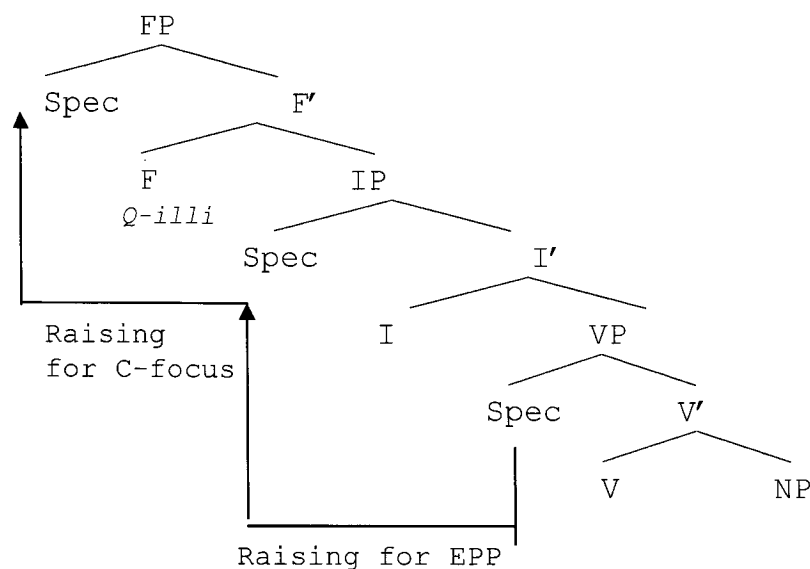


Figure (351) illustrates movement of the subject wh-phrase from [Spec, VP] to [Spec, IP] triggered by an EPP feature and movement of this same wh-phrase from [Spec, IP] to [Spec, FP] triggered by contrastive focus features and EPP features on the particle *illi*. Figure (351) represents the structure of subject wh-questions as in (352-353):

(352) **Miin** illi ga ?
 Who illi come.3.S.M.Past
 'Who came?

(353) **Miin** illi fi-l-biit ?
 Who illi in-the-house
 'Who is in the house?'

7.4.1.3 Wh-phrase *iih* (what) as inanimate subject in a verbal environment

Similar observations apply to the wh-phrase *iih* (what) when it functions as subject. Consider the following examples in (355-356) as possible questions corresponding to the declarative in (354) :

(354) **Chii?** **fasi?** Hasal.
Something terrible happen.3.S.Imp.Past
'Something terrible happened.'

(355) **Iih** hasal ?
what happen.3.S.Past
'What happened?'

(356) *Hasal **iih ?**
happen.3.S.Past what
'What happened?'

The wh-phrase *iih* (what) functioning as subject cannot be in situ and must be fronted to [Spec, IP] to check the EPP feature. (356) is ungrammatical because the subject wh-phrase, like the subject in the declarative in (354), has to move to [Spec, IP] for an EPP feature. It is not possible to leave the subject inside the VP.

(357) *Hasal **chii? fasi?**
happen.3.S.Imp.Past something terrible
'Something terrible happened'

When the particle *illi* is used, the subject wh-phrase raises to [Spec, FP] and gets a contrastive reading as in (358) below:

- (358) **Iih** illi hasal ?
 what *illi* happen.3.S.Past
 'What happened?'

My proposal that wh-phrases move to IP for EPP reasons receives support from questions with expletives. Consider the behaviour of the wh-word *iih* (what) in a nonverbal environment with the expletive *fi* (there) as in (360) and without the expletive *fi* (there) as in (361) which are questions corresponding to the declarative in (359).

- (359) Fi **hayawan** fi-l-?arabiya
 There animal in-the-car
 'there is an animal in the car'

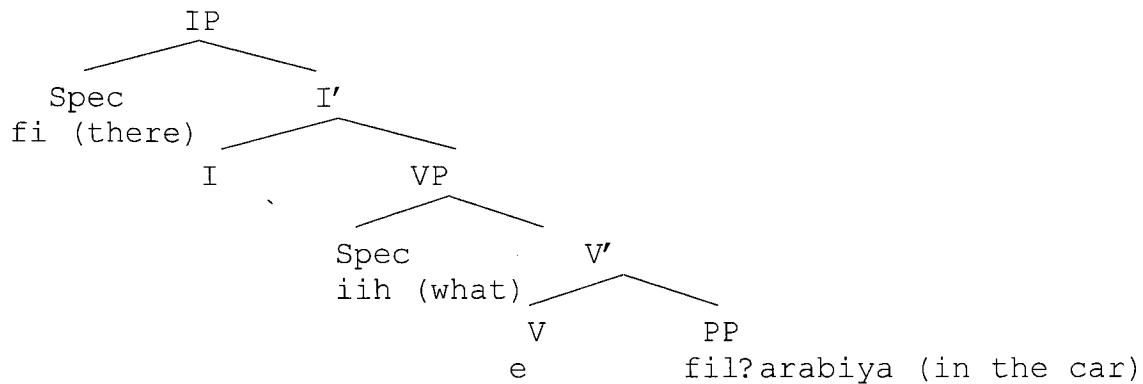
- (360) Fi **iih** fi-l-?arabiya ?
 There what in-the-car
 'What is in the car?'

- (361) *Fi-l-?arabiya **iih** ?
 in-the-car What
 'What is in the car?'

In the context of the expletive *fi* (there), neither a regular NP nor the question word raise to IP. Notice the presence of the expletive *fi* (there) in sentences (359) and

(360) above. For the sake of explanation, consider the following representation of sentence (360) above:

(362)

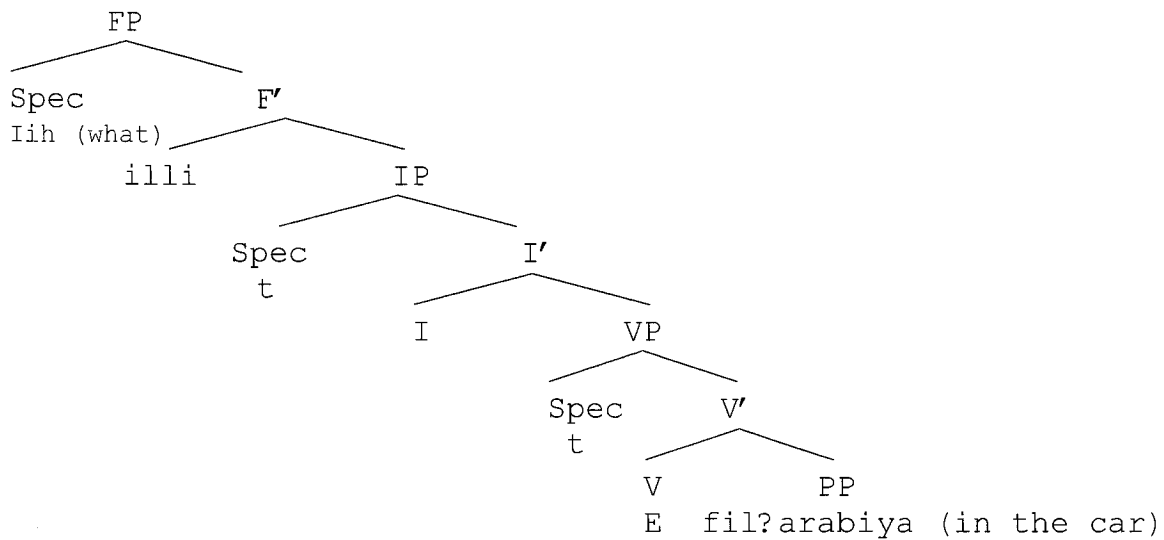


The expletive *fi* (there) occupies [Spec, IP] and checks the EPP feature, providing an explanation for the non-movement of the subject wh-phrase *iih* (what), which remains inside the VP since the EPP feature has already been checked by the expletive *fi* (there). Thus, expletives provide support for the proposal that subject question words without *illli* move from VP to I for EPP reasons.

Now consider the derivation where the particle *illli* is used. The wh-word *iih* (what) raises to [Spec, FP] and gets the contrastive reading. Notice also that the expletive *fi* (there) is absent in the derivation when the particle *illli* is present as shown in the structure (364) that represents sentence (363) below:

(363) **Iih** illi fil-?arabiya ?
 What illi in-the-car
 'What is in the car?'

(364)



The impossibility of the expletive *fi* (there) could be explained by the fact that the particle *illi* bears a contrastive focus feature, which cannot be satisfied by the expletive *fi* (there) since expletives do not have the necessary content to be in focus. That is, if there was an expletive in the structure, it would be the candidate to raise to [Spec, CP], which is not possible.

7.4.1.4 Subject wh-phrase with a transitive verb

Consider the following examples:

- (365) Ali kassar il-vasa.
 Ali break.3.S.M.Past the-vase
 'Ali broke the vase'.

(365) represents a declarative sentence where *Ali* is the subject and the verb *kassar* (break) is a transitive verb

that takes *il-vasa* (the vase) as direct object. Examine now sentences (366-367) where a wh-question is formed asking about *Ali*, the subject of the sentence (365):

- (366) (a) **Miin** kassar il-vasa ?
 Who break.3.S.M.Past the-vase
 'Who broke the vase?'
 (b) [_{IP}Miin_i [_{VP} t_I [_V kassar [_{NP}il-vasa]]]]
- (367) (a) **Miin** illi kassar il-vasa ?
 Who illi break.3.S.M.Past the-vase
 'Who broke the vase?'
 (b) [_{FP}Miin_i [_{Filli} [_{IP}t'_i [_{VP} t_I [_V kassar [_{NP}il-vasa]]]]]]

In (366a) the wh-phrase *miin* is interpreted as information focus and is located in [Spec, IP]. In (367a), it is interpreted as contrastive focus and is located in [Spec, FP].

In (368-369) below, it is not possible to have a postverbal subject, and it is not possible to leave the subject wh-phrase in the postverbal position.

- (368) *Kassar il-vasa **Ali**
 Break.3.S.M.Past the-vase Ali
 'Ali broke the vase'
- (369) *Kassar il-vasa **miin** ?
 Break.3.S.M.Past the-vase who
 'Who broke the vase?'

The table in (370) below summarizes the distribution of the wh-phrases *miin* (who) and *iih* (what) functioning as subjects:

(370) Table: Distribution of Subject wh-words *miin* (who) and *iih* (what)

	Subject: <i>miin</i> (who) <i>iih</i> (what)	
	Verbal clauses	Non-verbal clauses
In situ [- illi]	Miin kassar il-vasa? Who broke the-vase [I-focus]	Miin fi-l-biit? Who in-the-house [I-focus]
Fronted [+ illi]	Miin <u>illi</u> kassar il-vasa? Who illi broke the-vase [C-focus]	Miin illi fi-l-biit? Who illi in-the-house [C-focus]

The following section examines the distribution of wh-phrases functioning as objects.

7.4.2 Wh-phrases as objects

An object wh-phrase in situ occupies the position of the complement of the verb. When the object wh-phrase undergoes movement and gets a contrastive focus reading, it is positioned in [Spec, FP]. Movement of the object wh-phrase is obligatorily associated with the presence of the particle *illi*. Consider the following structures illustrating how a wh-phrase functioning as object behaves in the derivation (the structure in (372) corresponds to sentence (371)):

(371) Mona kallimit **miin** ?
 Mona talk.3.S.F.Past who
 'Who did Mona talk to?'

(372) Object wh-phrase-in situ

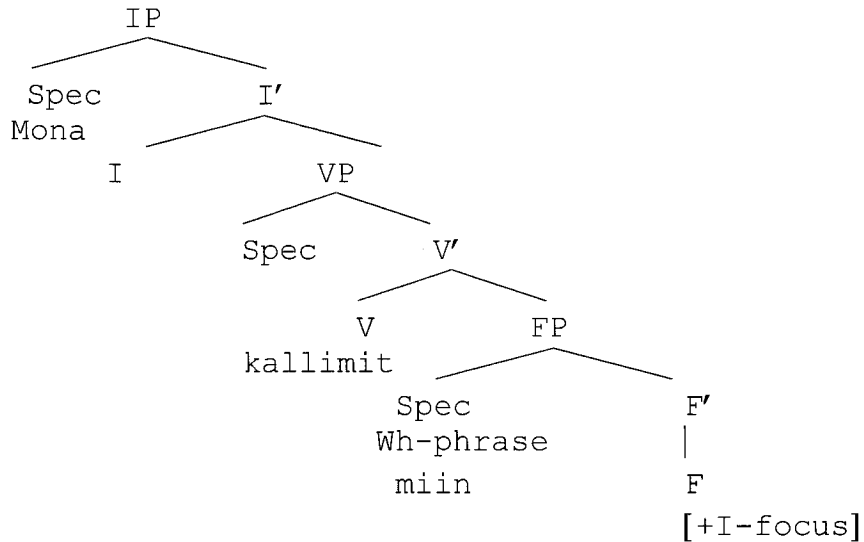


Figure (372) illustrates an in situ derivation where the wh-phrase functions as object. In situ, the object wh-phrase receives an information focus reading.

Figure (374) below illustrates a fronted object wh-phrase as in sentence (373):

(373) **Miin** illi Mona kallimit-uh ?
 Who illi Mona talk-him
 'Who did Mona talk to?'

(374) Object fronted wh-phrase

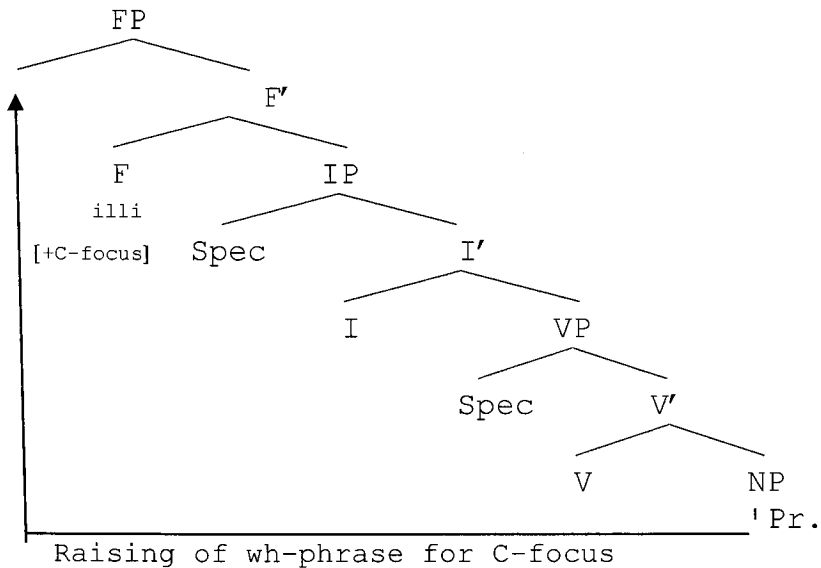


Figure (368) illustrates movement of the object wh-phrase. The trace is lexicalized by a resumptive pronoun as shown by Wahba (1984) and Cheng (1997). I propose that movement of the object wh-phrase triggers the insertion of the particle *illi*. The fronted wh-phrase receives a contrastive focus reading, as will be discussed in the next chapter.

7.4.2.1 Wh-phrase *miin* (who) as animate object

When the wh-phrase *miin* (who) functions as direct object, the in situ strategy as well as the movement strategy are both possible as we can observe from the following examples. Sentence (375) represents a declarative and the wh-question asks about the direct object:

- (375) Mona darabit Ali.
 Mona hit.3.S.F.Past Ali
 'Mona hit Ali'.

- (376) (a) **Miin** illi Mona darabit-uh ?
 Who illi Mona hit-him
 'Who did Mona hit?'
 (b) [_{FP}Miin_j [_Filli [_{IP}Mona_I [_{VP} t_I [_V darabit-uh_j]]]]]
- (377) ***Miin** Ø Mona darabit-uh/ darabit ?
 Who Mona hit-him/hit
 'Who did Mona hit?'
- (378) (a) Mona darabit **miin** ?
 Mona hit.3.S.F.Past who
 'Who did Mona hit?'
 (b) [_{IP}Mona_I [_{VP} t_I [_V darabit [_{FP}miin [_F F-morpheme]]]]]

In (376), the wh-phrase *miin* (who), functioning as a direct object, is fronted and the particle *illi* is inserted, triggered by movement of the object wh-phrase. Judging from the ungrammaticality of (377), the particle *illi* is obligatory when the wh-phrase functioning as direct object is moved. As shown in (378), it is also grammatical to have a wh-phrase direct object in situ. Following my focus morpheme proposal, the wh-phrase in (376) is fronted in order to adjoin the focus morpheme present on the particle *Ø* and to satisfy its EPP feature. The ungrammaticality of (377) confirms that movement of the wh-phrase obligatorily triggers the insertion of the particle *illi* at PF.

7.4.2.2 Wh-phrase *iih* (what) as inanimate object

Let us consider another wh-word that functions as an object. The wh-phrase *iih* (what) also behaves like the wh-phrase *miin* (who) when it functions as an object.

Sentence (379) below represents a declarative and sentence (380) is a question about the direct object of the declarative, *il-kitab* (the book). Sentence (381) represents an ill-formed fronted object wh-question where the particle *illi* is missing and sentence (382) illustrates an object wh-question in-situ.

(379) Mona ?arit il-kitab.

Mona read 3.S.F.Past the-book

'Mona read the book'.

(380) (a) **Iih** illi Mona ?arit-uh ?

What that Mona read-it

'What did Mona read?'

(b) [_{FP}**Iih**_j [_Filli [_{IP}Mona_I [_{VP} t_I [_V ?arit-uh_j]]]]]

(381) ***Iih** Ø Mona ?arit/?arituh ?

What that Mona read/read-it

'What did Mona read?'

(382) (a) Mona ?arit **iih** ?

Mona read.3.S.F.Past what

'What did Mona read?'

(b) [_{IP}Mona_I [_{VP} t_I [_V ?arit [_{FP}**iih** [_F F-morpheme]]]]]

The declarative in (383) represents another instance where the object *yihrab* (escape) is questioned based on the wh-questions (384) and (386), (385) represents an ill-formed form of fronted object wh-question because *illi* is missing:

- (383) Fariid hawil yihrab.
 Fariid try.3.S.M.Past escape
 'Fariid tried to escape'.
- (384) (a) **Iih** illi Fariid hawil yi'mil-uh ?
 What that Fariid tried to-do-it
 'What did Farid try to do?'
 (b) [_{FP}**Iih**_j [_Filli [_{IP}Fariid_I [_{VP} t_I [_V hawil yi'mil-uh_j]]]]]
- (385) ***Iih** Ø Fariid hawil yi'mil-uh ?
 What Fariid tried to-do-it
 'What did Farid try to do?'
- (386) (a) Fariid hawil yi'mil **iih** ?
 Fariid tried to-do what
 'What did Farid try to do?'
 (b) [_{IP}Fariid_I [_{VP} t_I [_V hawil yi'mil [_{FP}**iih** [_F F-morpheme]]]]]

The wh-phrase *iih* (what) is base-generated in the object position. When it stays in situ as in (382) and (386), it is interpreted as information focus as I will show in chapter 8. In (380) and (384), the wh-phrase raises to [Spec, FP] triggering the insertion of the particle *illi*. The absence

of the particle *illi* in sentences (381) and (385) makes the questions ungrammatical.

As discussed in the previous section, movement of the object wh-phrase requires the obligatory presence of both the particle *illi* and the resumptive pronoun located at the position occupied by the wh-phrase prior to movement to [Spec, FP]. This resumptive pronoun is analyzed as a wh-trace that has been lexicalized and has the morphological features of the moved wh-phrase (Wahba 1984 and Cheng 1997).

When discussing wh-words functioning as objects, I used verbal clauses because there are no examples of non-verbal clauses with wh-words as objects. Table (387) below summarizes the distribution of the wh-words *miin* (who) and *iih* (what) as object:

(387) Table: Distribution of Object wh-words *miin* (who) and *iih* (what)

	Object Miin (who) iih (what)	
	Verbal clauses	Non-verbal clauses
Wh-in situ	Mona darabit miin ? Mona beat who [I-focus]	— — —
Fronted - illi	* Miin Mona darabit/-uh? Who Mona beat	— — —
Fronted + illi	Miin <u>illi</u> Mona darabitu? Who illi Mona beat [C-focus]	— — —

When the wh-phrase functions as object, the element *illi*⁴⁶ is obligatory whenever the wh-phrase moves. This movement is interpreted as contrastive focus for reasons discussed later. If the particle *illi* is absent, the fronting of the wh-phrase is ungrammatical. The in situ strategy is also possible if the wh-phrase functions as object and it is interpreted as information focus. The same wh-phrases that function as subject also function as object, i.e., *miin* (who) and *iih* (what). Let us now turn to the analysis of wh-phrases functioning as adjuncts.

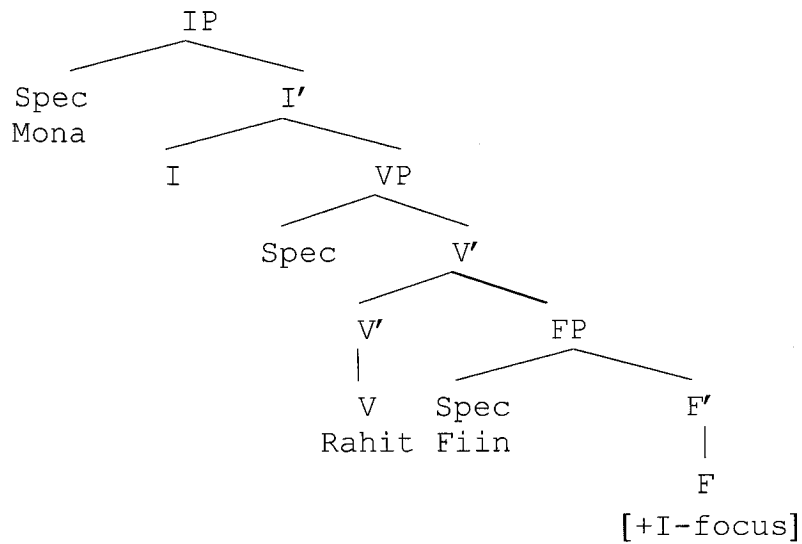
7.4.3 Wh-phrases as adjuncts

An adjunct wh-phrase can stay 'in situ' or occur in the initial position of the clause at [Spec, FP]. The initial position of the adjunct wh-phrase is characterized by the absence of the particle *illi*. I postulate that there is a null *Q* operator responsible for assigning a contrastive focus reading to the initial adjunct wh-phrase. Figure (389) illustrates the derivation of a wh-phrase functioning as adjunct. Sentence (388) represents an instance of an adjunct wh-phrase in situ :

- (388) Mona rahit **fiin** ?
 Mona go.3.S.F.Past where
 'Where did Mona go?'

⁴⁶ A more detailed analysis of the status of the particle *illi* and its role in the formation of wh-questions is given in section 7.5 of this chapter. A discussion of the treatment of the particle *illi* as a complementizer is given in section 6.4.

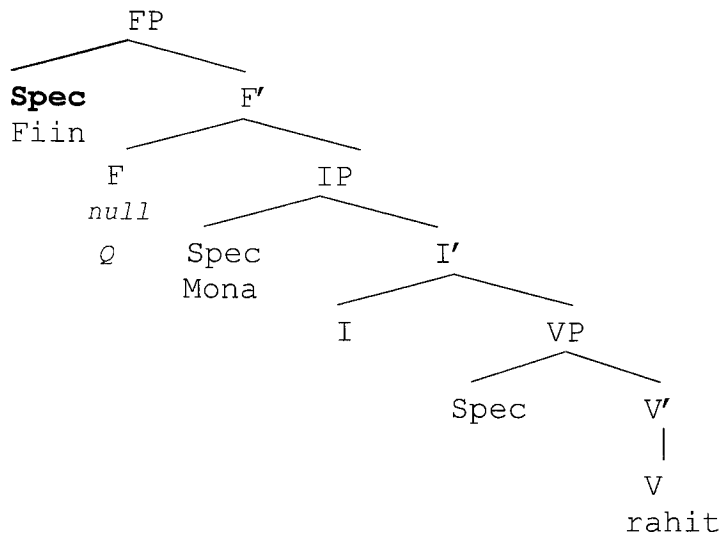
(389) Adjunct wh-phrase 'in situ' with I-focus interpretation



Adjunct wh-phrases can also figure at clause initial positions. Figure (391) illustrates the structure of a clause initial adjunct as in sentence (390):

(390) **Fiin** Mona rahit ?
 Where Mona go.3.S.F.Past
 'Where did Mona go?'

- (391) Initial adjunct wh-phrase with C-focus interpretation (through adjunction of XP)



In (389), the adjunct wh-phrase is adjoined to a position internal to the clause and gets an information focus reading. In (391), the adjunct wh-phrase is located in [Spec, FP] and gets a contrastive focus reading. This reading is made available by the null $\emptyset$ on F.

Wh-phrases that function as adjuncts are presented in the following sentences:

- (392) **Imta** yigi l-atr ?
 when come.3.S.M.Pres. the-train
 'When does the train come?'

- (393) **Izzay** git hina ?
 How come.2.S.M.Past here
 'How did you come here?'

(394) **Liih** irragil da gih ?
 why the-man this come.3.S.M.Past
 'Why did this man come?'

(395) **Fiin** Mona rahit ?
 Where Mona go.3.S.F.Past
 'Where did Mona go?'

Sentences (392-395), the wh-phrases *imta* (when), *izzay* (how), *liih* (why) and *fiin* (where) are clause initial. Notice that the particle *illi* is not overt.

(396) Hatistanna ligayit **imta** ?
 wait.2.S.M.Fut. until when
 'Until when will you wait?'

(397) Git hina **izzay** ?
 come.2.S.M.Past here how
 'How did you come here?'

(398) Irragil da gih **liih** ?
 the-man this come.3.S.M.Past why
 'Why did this man come?'

(399) Mona rahit **fiin** ?
 Mona go.3.S.F.Past where
 'Where did Mona go?'

In sentences (396-399), the adjunct wh-phrases *imta* (when), *izzay* (how), *liih* (why) and *fiin* (where) are in situ.

- (400) ***Imta** illi yigi l-atr ?
when illi come.3.S.M.Pres. the-train
'When does the train come?'
- (401) ***Izzay** illi git hina ?
How illi come.2.S.M.Past here
'How did you come here?'
- (402) ***Liih** illi irragil da gih ?
why illi the-man this come.3.S.M.Past
'Why did this man come?'
- (403) ***Fiin** illi Mona rahit ?
Where illi Mona go.3.S.F.Past
'Where did Mona go?'

Sentences (400-403) represent illi-formed adjunct wh-questions where the particle *illi* is overt and the wh-phrases are clause initial.

Table (404) below summarizes the distribution of wh-words functioning as adjuncts:

(404) Table: Distribution of Adjunct wh-words in EA

	Adjuncts Izzay (how), fiin (where), liih (why), kam (how much/many)	
	Verbal clauses	Non-verbal clauses
Wh-in situ	Ruht hinak izzay ? You-went there how [I-focus]	Mafatihak fiin ? Your keys where [I-focus]

Initial - illi	Izzay ruht hinak? How you went there [C-focus]	Fiin mafatihak? Where your keys [C-focus]
Initial + illi	* Izzay <u>illi</u> ruht hinak? How illi ruht hinak	* Fiin <u>illi</u> mafatihak? Where illi mafatihak

The exploration of the distribution of wh-phrases functioning as adjuncts has given the following observations: Adjunct wh-phrases can be internal or can figure at the initial position of the clause. The presence of the particle *illi* with adjunct wh-phrases makes the wh-question ungrammatical. Initial adjunct wh-phrases can only appear without the particle *illi* and have a contrastive focus reading that I attribute to the contrastive focus feature present on the null operator Q.

The results of the analysis in section 7.3.2 using island constraints showed that wh-questions with adjunct wh-phrases are not sensitive to strong islands. So I conclude that adjunct wh-phrases found at the initial position of the clause do not undergo movement, but they are adjoined to the structure postcyclically through a late merge. A similar account is provided for wh-phrases functioning as object of preposition since they are treated as applicatives, therefore they can get similar analysis than adjuncts. Later in section 7.5, I show how this hypothesis accounts for the absence of the particle *illi* with adjunct wh-phrases in initial position.

I will now develop the idea that adjunct wh-phrases are generated through a late merge. Chomsky (2000) proposes that since merger, combining basic objects, takes place at the

root of the tree, it forces adjuncts to be merged postcyclically through substitution or adjunction in overt syntax. In this dissertation, I follow Stepanov (2001) who suggests a stronger version of Chomsky's (2000) idea by claiming that postcyclic merger of adjuncts must apply late. (Similar ideas are developed in Kidwai 2000).

Stepanov's (2001: 111) proposal can account for raising across experiencers in English:

(405) John_i seems to Mary [t_i to be smart]

The grammaticality of (405) is problematic for the Minimal Link Condition or Attract Closest since the lower subject *John* raises to the matrix subject position and not the experiencer *Mary*, which is a closer candidate for raising. Given Stepanov's proposal on late postcyclic merger of adjuncts, assuming that *to Mary* is an adjunct, it does not enter the derivation until the raising of *John* takes place. Stepanov sees the derivation as follows:

(406)

- | | |
|----------------------------|---|
| a. create | T seems [_{CP/IP} John to be smart] |
| b. Attract John (closest): | John T seems [t_i to be smart] |
| c. Insert to Mary: | John_i seems [to Mary] [_{CP/IP} t_i
to be smart]] |

(Stepanov 2001: 111)

The above proposal is further extended to adjunct wh-phrases:

(407)

(a) ?[To whom]_j does John_i seem t_j [t_i to be smart]

(b) *whom_j does John_i seem [to t_j] to be smart]

The ungrammaticality of (407b) is due to an early insertion of the wh-phrase in the syntax because it is an adjunct and not a selected argument. *Whom* cannot participate in cyclic wh-movement and must merge postcyclically in (407b) as an adjunct. Stepanov proposes late postcyclic merger of adjuncts, a theory that I will use to account for the distribution of adjunct wh-phrases in EA.

My proposal for EA is that the adjunct wh-phrase is merged in the derivation either at the left periphery of the clause in which case it gets a contrastive focus reading or at the right periphery of the clause where it gets an information focus reading. Examine the following examples:

(408) **Fiin** Mona rahit?

Where Mona go.3.S.F.Past

'Where did Mona go?'

(409) Mona rahit **fiin** ?

Mona go.3.S.F.Past where

'Where did Mona go?'

In (408), the adjunct wh-phrase is positioned in the initial position of the clause, which I have argued is [Spec, FP]. At this position, it gets a contrastive focus reading assigned by null-Q operator present on F. The adjunct wh-phrase is adjoined to the derivation postcyclically. Consider the following derivation for sentence (408):

(410)

- a. create [VP rahit Mona]
- b. Move *Mona* for EPP [Spec, T Mona_i] [VP t_i rahit]
- c. Move *rahit* to T [Spec, T Mona_i [T rahit_j]] [t_i t_j]
- c. Insert *null-Q*_[+C-Focus] [Spec, F **e** [F null-Q]] [Spec, T Mona_i [Trahit_j]] [t_i t_j]
- d. Insert *fiin* [Spec, F **Fiin** [F null-Q]] [Spec, T Mona_i [Trahit_j]] [t_i t_j]

Insertion of *Q* with a contrastive focus feature allows the insertion and adjunction of the adjunct wh-phrase in [Spec, FP].

Under the assumption that *Q* is a functional category with an uninterpretable EPP feature, merging an adjunct as a Specifier of *Q* satisfies such a feature. The derivation of sentence (409) is different in the sense that the wh-phrase is adjoined to the structure 'in situ' and the focus morpheme that is inserted into the derivation is an information focus morpheme:

(411)

- a. create [VP rahit Mona]
- b. Move *Mona* for EPP [Spec, T Mona_i] [VP t_i rahit]
- c. Move *rahit* to T [Spec, T Mona_i [T rahit_j]] [t_i t_j]
- c. Insert *null-Q*_[+I-Focus] [Spec, T Mona_i [Trahit_j]][t_i t_j][Spec, F **e** [F null-Q]]
- d. Insert *fiin* [Spec, T Mona_i [T rahit_j]] [t_i t_j][Spec, F **Fiin** [F null-Q]]

We will see in the next section that, under the above analysis, there is a new explanation for the distribution of *illi* discussed in this section, namely Move and not Merge induces the presence of the particle *illi*. Merge does not activate the insertion of the particle *illi* and this explains why adjunct wh-phrases appear in the left periphery without an overt *illi*. An initial wh-phrase functioning as adjunct gets a contrastive focus reading. As we see in the next chapter, this suggests that features of *Q* are present in the derivation. With adjunct wh-phrases, the particle *Q* is a null operator that contains an EPP feature that is uninterpretable and a [+contrastive] focus feature that is interpretable.

My analysis is best captured in terms of late vocabulary insertion as put forward in Distributed Morphology. Such an approach suggests that since syntactic categories are purely abstract and have no phonological content, vocabulary insertion can apply just prior to the mapping to (PF) (Harley and Noyer, 1999: 3). In this case, the null-*Q* morpheme is an abstract syntactic category and *illi* can be inserted in the position occupied by *Q*'s features in late syntax prior to the mapping into PF, for phonological interpretation.

7.5 Late vocabulary insertion of *illi*: the contrastive focus morpheme

As mentioned in the previous chapter, the particle *illi* has an important role in the syntactic structure and the semantic interpretation of the wh-question. The peculiar distribution of the particle *illi* among various types of

wh-phrases undoubtedly shows that this element plays a role in the make-up of wh-questions. It is lexically present with fronted subject and object wh-phrases (412-413). It is lexically absent with fronted adjunct wh-phrases (414) as illustrated below:

- (412) **Miin** illi kassar il-vasa?
Miin illi break.3.S.M.Past the-vase
'Who broke the vase?'
- (413) **Miin** illi Mona chafit-uh ?
Who illi Mona see.3.S.F. Present
'Who did she see?' (Wise 1975: 72)
- (414) **Imta** yigi l-?atr ?
When come.3SM.Future the-train
'When will the train come?'
- (Megally 1993: 74-78)

In the case of fronted subject and object wh-phrases, we claimed that movement of the wh-phrase triggers lexical insertion of the particle illi. In the case of clause initial adjunct wh-phrases, I claim that there is a *null-Q* that has the features [+Contrastive focus] and EPP and is responsible for the interpretation of the wh-phrase as contrastive focus and also for its position at the left periphery of the clause.

I propose the following analysis of Q, which is used to derive wh-phrases and is also responsible for licensing contrastive focus in fronted wh-questions: There are two manifestations of the contrastive focus morpheme. There is

an abstract *null-Q* that contains an EPP feature and a contrastive focus feature (present in derivations containing adjunct wh-phrases), and there is the particle *illi* that contains the same features as *null-Q* and represents the phonological realization of the contrastive focus morpheme when there is a syntactic movement of the wh-phrase (present in derivations containing argument wh-phrases).

I suggested that there is a *null-Q* morpheme, which has contrastive focus and EPP features, that is always present in the derivation to account for the interpretation of the wh-phrase in leftward position of the clause; movement of the wh-phrase triggers the insertion of the particle *illi* in overt syntax. The vocabulary item insertion schema is defined as follows:

- (415) Vocabulary item insertion schema
 $Null-Q \rightarrow Q-illi$ when wh-phrase moves to [Spec, FP]
in overt syntax.

The insertion of the particle *illi* spells out *Q* at PF. This rule is triggered by the overt movement of subject and object wh-phrase. As illustrated with the sentences in (406-407) above, movement of subject and object wh-phrases triggers the phonological realization at PF of *Q-illi*. If the object wh-phrase moves and *Q* is not spelled out at PF, the derivation crashes. Also movement of the subject wh-phrase from [Spec, IP] to [Spec, FP] triggers the insertion of *Q-illi*. The absence of *Q-illi* with subject wh-phrases is interpreted as an information focus since the wh-phrase does not move and stays in [Spec, IP].

Concerning adjunct wh-phrases, as illustrated in the previous section, inserting the particle *illi* in a structure containing an initial adjunct wh-phrase is ungrammatical. How, then, does the initial adjunct wh-phrase acquire a contrastive focus reading without the particle *illi*?

In order to answer this question, I consider that adjunct wh-phrases are merged into the derivation postcyclically and that they do not undergo movement at all throughout the derivation (following Chomsky 2000 and Stepanov 2001). Given my late vocabulary insertion rule for the particle *illi* outlined in (415) which assumes that the spell out of the particle *illi* at PF is triggered by movement of the wh-phrase, it must be that there is no movement in the case of initial adjunct wh-phrases. Therefore, Q remains a null operator throughout derivations containing an initial adjunct wh-phrase. Properties of Q , which are contrastive focus, EPP features, and scope, remain active in the derivation, but the morpheme is not spelled out at PF. When an adjunct wh-phrase is adjoined to the structure in situ, it is interpreted as information focus (see illustrations 410 and 411).

To conclude, the proposed analysis captures the distribution of wh-phrases in EA and their behaviour following their function. It also captures the differences between argument (subject/object) wh-phrases and adjunct wh-phrases and provides a complete picture on how these three types of wh-phrases are derived. This is possible using recent tools provided by the Minimalist Program and Distributed Morphology. The operation Move can account for movement of argument wh-phrases to [Spec, FP]. The operation Move induces the vocabulary insertion of the particle *illi*

prior to the mapping to PF. This operation explains the fronted wh-question option which I claim is interpreted as contrastive focus as it will be shown in chapter 8. The operation Merge can account for the late insertion of the adjunct wh-phrase, which does not involve movement, as proven through island constraints and absence of the particle *illi*. The operation Merge allows the insertion of the adjunct wh-phrase in the initial position of the clause or internal to the clause depending on the type of focus morpheme that is inserted in the derivation. If the Q morpheme, which contains a contrastive focus feature is inserted, the adjunct wh-phrase is merged at the initial position of the clause at [Spec, FP]. If the information focus morpheme is inserted, the adjunct wh-phrase is merged in a position internal to the clause. It is the position of the adjunct wh-phrase that determines, at the end of the derivation which focus morpheme has been inserted in the course of the derivation.

7.6 Conclusion

In this chapter, I have proposed a syntactic analysis of wh-phrases in EA. I have hypothesized that the two forms available in EA to construct wh-questions denote two meanings: an information focus meaning and a contrastive focus meaning. I also explained the licensing of wh-questions through a focus morpheme analysis which assumes that since the wh-phrase is the most prominent element in a wh-question construction, what licenses the two forms are two types of focus morphemes: An information focus morpheme licenses the wh-phrase 'in situ' and a contrastive focus

morpheme licenses the wh-phrase through movement or late merge. The latter is embodied in the particle *Q* that carries the contrastive focus features as well as EPP features.

Wh-questions in EA undergo movement under certain conditions. I have demonstrated that subjects and objects wh-phrases are sensitive to strong island constraints, but that adjunct wh-phrases are not. Given that movement of the wh-phrase is associated with the presence of the particle *illi*, I have suggested that movement triggers the insertion of the particle *illi* prior to the mapping to PF, through a late vocabulary insertion rule. The absence of the particle *illi* with initial adjunct wh-phrases then suggests that adjunct wh-phrases do not undergo overt movement in the syntax but are adjoined postcyclically.

CHAPTER 8: SEMANTIC ANALYSIS OF WH-QUESTIONS IN EGYPTIAN ARABIC

8.1 Introduction

In this dissertation, I claim that the two strategies available to EA to form wh-questions are not identical options. I consider that each strategy offers a different derivation at the syntactic as well as the semantic level. Therefore, there is no optional wh-movement. Having explored the syntax of the two different strategies used to form wh-questions, I will now explore semantic differences that arise between the two derivations: the 'wh-in situ' strategy and the wh-fronting strategy. The idea that there are two different interpretations in apparently optional wh-movement is also advanced for French by Boeckx (1999, 2000), Boeckx et al. (2002), Mathieu (2004), Zubizarreta (2002), and Zubizarreta (2002), whose analyses were reviewed in chapter 5. In section 8.4, I will explore the semantic

interpretation of wh-questions in EA to evaluate whether the strategy used to form wh-questions (whether the in situ form or the clause initial form) is closely related to the semantic output that the speaker would like to convey when confronted with the choice of both strategies. I suggest that the semantic context in which the wh-question is construed affects the choice of strategy used to form wh-questions. In section 8.5, I will compare between French and EA based on the reviews conducted in chapter 5 on French wh-questions (Particularly Zubizarreta and Vergnaud 2002 and Mathieu 2004). However, I know of no previous work exploring a similar idea in the case of EA.

8.2 Wh-in situ: Information focus

In wh-interrogatives, wh-phrases constitute the non-presupposed part of the question that the speaker is enquiring about, so they are the focused elements that receive more prominence in the clause. The non-presupposed part of the sentence usually carries new information that is not shared by the speaker and the hearer and that is the main reason why it interests the two parties. The most common meaning carried by wh-phrases then is information focus where the wh-element presents the new information that both parties, the speaker and the hearer, are inquiring about, and therefore are focusing on.

Boeckx (1999, 2000), Boeckx et al. (2002), Mathieu (2004), Zubizarreta (2002), and Zubizarreta and Vergnaud (2000) propose that optional wh-movement in French bears semantic differences. I propose that in addition to the syntactic differences that I have explored in the previous

chapter, wh-questions in EA also exhibit semantic differences.

In EA, the *in situ* strategy, which seems to dominate wh-question formation⁴⁷, usually denotes information focus as seen in the following examples:

(416) Ismak **iih?**

Name.3SM.Possessive what

'What is your name?'

(417) ***Iih** ismak

What name.3SM. Possessive

'What is your name?' (Megally 1993: 74-78)

Asking somebody about his/her name is usually asking about information that is unknown to the person who is asking the question. In this case, we are dealing with information focus. We focus on knowing the name of the person to whom we are addressing the question. In EA, the question 'what is your name?' is always construed with a wh-phrase *in situ* as illustrated in (416) above. Moving the wh-phrase to the left periphery of the clause makes the sentence ungrammatical as we can see in (417). This provides evidence that wh-*in situ* denotes information focus. Since sentence (416) can only illustrate information focus, it is ungrammatical to move the wh-phrase as in (417) because moved argument wh-phrases denote contrastive focus as we will see in the following section.

⁴⁷ This judgement is based on observations made from the collected data, books on the grammar of EA, and comments by native speakers.

8.3 Wh-raising: Contrastive focus

In EA, the most common meaning of wh-phrases is the information meaning acquired through the wh-in situ strategy. When the wh-phrase is raised to some specific syntactic position that is high in the clause, as illustrated earlier, the meaning is different and is no longer qualified as information focus. Instead, the meaning that we get in EA is the contrastive meaning. Consider the following example :

- (418) **Miin** illi ga ?
 Who illi came.3.S.M.Past
 'Who came?' (Megally 1993: 74-78)

Sentence (418) can be used in a context where the speaker suspects that he/she knows the person who came. There is doubt in the speaker's mind that he/she knows who is supposed to come at a specific time of the day but still wants to be sure so asks the question.

8.4 Interpreting wh-questions in EA

In order to explore interpretative differences between the in situ strategy and the clause initial strategy in wh-questions, I will describe native speakers' judgments on particular contexts built to evaluate the two options. Informants⁴⁸ were asked to read a context and choose which

⁴⁸ My informants are 7 native speakers of EA. Three of them are university students at both Carleton University and University of Ottawa. The four others live and work in Ottawa, Ontario. Their age ranges from

wh-question is more appropriate to the given context. I will show that informants' choice is based on whether there is clear background information in the context or not. The choice of the clause initial wh-phrases is confirmed with the presence of shared background information and the choice of the wh-phrase in situ strategy is confirmed with the absence of shared background information. This will also validate my proposal that when the clause initial wh-phrase option is used, the question denotes contrastive focus and that when the wh-phrase in situ option is used, the question denotes information focus.

8.4.1 Context 1: Animate subject wh-phrase with shared background information

Consider the following context which involves questioning human subject using the wh-phrase *miin* (who):

Context 1: You noticed that there is a new vase sitting in the living room. You suspect that it could be a gift to your mom for mothers' day held a week before. You ask your sister who bought the vase:

(419) **Miin** ichtara il-vasa ?

Who buy.3.S.Past the-vase

'Who bought the vase?'

(420) **Miin** illi ichtara il-vasa ?

Who illi buy.3.S.Past the-vase

'Who bought the vase?'

25 to 35. There are male and female informants. They have been living away from their mother country (Egypt) since less than five years.

Sentence (419) represents the 'in situ' option and sentence (420) represents the 'raising' option. These two options present themselves with subject wh-phrases. With the in-situ option, the subject wh-phrase is in [Spec,IP] as in (419) and with the wh-fronted option, the wh-phrase is in [Spec, FP] followed by the particle *illi*, as in (420).

Speakers of EA consider that sentence (420) is more appropriate for context 1. The reason is that since they know approximately the set of persons that could have bought the vase as a gift for the mother, they use the wh-question with an overt *illi* particle. Sentence (419) is chosen if the speaker has no idea who could have bought the vase (if the occasion is not specified, for example).

The following table summarizes the distribution of wh-phrases in context 1, which I qualify as [+presuppositional] because there is shared background information between speakers:

Table (1):

Wh-phrase	Context 1: [+presuppositional]
'In situ' at [Spec, IP] [+I-focus]	* Miin ichtara il-vasa? 'Who bought the vase?'
Fronted with <i>Illi</i> [+C-focus]	Miin illi ichtara il-vasa? 'Who bought the vase?'

Only the fronted wh-phrase option is acceptable in context 1 because it is a [+presuppositional] context. The in situ strategy that denotes information focus is not

appropriate for context 1. Thus, fronted argument wh-phrases without the particle *illi* are not acceptable in this context because the wh-phrase functioning as subject moves in overt syntax from [Spec, IP] to [Spec, FP] and induces the lexical insertion of the particle *illi* at PF.

8.4.2 Context 2: Non-animate subject wh-phrase with no shared background information

Examine another context which involves questioning a non-animate subject, using the wh-phrase *iih* (what)

Context 2: Your friend did not attend a weekly meeting. You are worried and you want to know if something happened to her. You call her at home and her mother answers the phone. After the greetings you ask her what happened to her daughter.

(421) **Iih** hasallaha ?
 what happen.3.S.F.Past
 'What happened to her?'

(422) **Iih illi** hasallaha ?
 what illi Happen.3.S.F.Past
 'What happened to her?'

For context 2, informants chose question (421) because they do not know anything about the reasons of her absence from the meeting. They do not suspect anything that could explain her absence. Asking a question for context 2 is then

purely informative, i.e., to enquire about a missing information.

If we modify context 2 above adding some information as in context 3 below, informants' judgments on which option to choose change. Consider the context where this happens in the following section.

8.4.3 Context 3: Non-animate subject wh-phrase with shared background information

Context 3: Your friend did not attend a weekly meeting. The previous day, she called you and confessed to you that she had a big fight with her husband, but she did not want to tell you more details. Now you are worried and you want to know if something happened to her so you decide to call her at home and her mother (who was not supposed to be there) answers the phone. After the greetings you ask her what happened to her daughter.

Informants chose the fronted option, repeated here in (423), to match context 3.

(423) **Iih** illi hasallaha ?
 what illi Happen.3.S.F.Past
 'What happened to her?'

They consider question (423) more appropriate to context 3 because it denotes more the idea of surprise and they suspect something serious could have happened, knowing that the friend had a fight with her husband the previous day.

The following table summarizes the distribution of wh-phrases in contexts 2 and 3.

Table (2):

Wh-phrase	Context 2: [-presuppositional]
'In situ' at [Spec, IP] [+I-focus]	Iih hasallaha? 'What happened to her?'
Fronted with <i>Illi</i> [+C-focus]	*Iih illi hasallaha? 'What happened to her?'
Wh-phrase	Context 3: [+presuppositional]
In situ [+I-focus]	*Hasallaha iih? 'What happened to her?'
Fronted with <i>Illi</i> [+C-focus]	Iih illi hasallaha? 'What happened to her?'

For context 2, only the wh-in situ option is possible because the context lacks shared background information and is therefore [-presuppositional]. Asking a question in context 2 denotes information focus. For context 3, only the fronted wh-phrase option is possible because the context is [+presuppositional]. The use of the particle *illi* is obligatory. Movement of the subject wh-phrase *iih* (what) to [Spec, FP] triggers the insertion of the particle *illi* at PF.

8.4.4 Context 4: Object wh-phrase with shared background information

Context 4: Your friend is enquiring about you. He/she called your home but you were out. He/she asked about you and was told that you were tired, that you were coughing the whole night, and that you probably had a fever. Now you meet your

friend and he/she wants to know where you have been so you answer that you went to see a doctor. Your friend wants to know why you went to the doctor. The following options are questions to context 4:

- (424) **Iih** illi waddak li-duktur ?
What illi take.3.S.M.Past to-the-doctor
'What took you to the doctor?'
- (425) **liih** ruht li-duktur ?
why Go.2.S.M.Past to-the-doctor
'Why did you go to the doctor?'
- (426) Ruht li-duktur **liih** ?
Go.2.S.M.Past to-the-doctor why
'Why did you go to the doctor?'

For context 4, informants chose a fronted wh-phrase with an overt *illi* as in (424) where the wh-phrase functions as subject. They also suggested that sentence (425) is appropriate to context 4. Sentence (425) illustrates a clause initial merging of an adjunct wh-phrase, which explains the absence of the particle *illi*. As described in the previous chapter, adjunct wh-phrases are merged postcyclically, which disables the insertion of the particle *illi* at PF so the operator that contains EPP features and contrastive features remains without phonological content.

Informants justify their choice of the clause initial wh-phrase option by the fact that the information given in context 4 entails that they know something about the friend being sick. They are aware of some symptoms of sickness. Using wh-in situ as in (426) would be an option if they do

not know that the friend is possibly sick. The following table summarizes the distribution of wh-phrases for context 4:

Table (3):

Wh-phrase	Context 4: [+presuppositional]
In situ adjunct wh-phrase [+I-focus]	*Ruht li-duktur liih ? 'Why did you go to the doctor?'
Fronted with <i>illi</i> Subject wh-phrase [+C-focus]	Iih illi waddak li-duktur? 'What took you to the doctor?'
Fronted Ø <i>illi</i> adjunct wh-phrase [+C-focus]	Liuh ruht li-duktur? 'Why did you go to the doctor?'

For context 4, the clause initial wh-phrase strategy is appropriate since the context is [+presuppositional]. There are two questions that can be asked in this context: one with a subject wh-phrase that requires the particle *illi* and one with an adjunct wh-phrase that does not require the particle *illi*. Both possible questions to context 4 denote contrastive focus.

8.4.5 Context 5: adjunct wh-phrase with shared background information

Context 5: You are hiding your friend's car keys. You are heading out and you anticipate that your friend is going to look for the keys so you ask him/her where the keys are.

(427) Mafatihak **fiin** ?
 keys-yours where
 'Where are your keys?'

(428) **Fiin** mafatihak ?
 Where keys-yours
 'Where are your keys?'

Informants choose question (428) to use in context 5. They understand that the person who asks the question knows where the keys are. They take into consideration that the person who asks the question is hiding the keys and knows where the keys are. The question is not asked to get new information or enquire about something, it is rather asked to attract the attention of the interlocutor to the fact that the keys are missing. The background knowledge that the speaker has about the context of the question confirms the use of the contrastive focus meaning by choosing the fronted wh-phrase.

Table (4):

Wh-phrase	Context 5: [+presuppositional]
In situ [+I-focus]	*Mafatihak fiin ? 'Where are your keys?'
Fronted Ø <i>illi</i> [+C-focus]	Fiin mafatihak? 'Where are your keys?'

For context 5, the clause initial wh-phrase is possible because the context denotes [+presuppositional]. Since the wh-phrase functions as an adjunct, it is not possible to have an overt *illi* in the derivation.

8.4.6 Context 6: object wh-phrase with shared background information

Context 6: Your sister comes back from shopping. You know in advance that she went out for the day and you know that she was shopping for a gift for her husband's birthday. Before she left to shop, she asked you for your suggestions to help her choose a gift. You had a discussion that ended with a choice between two gifts that she decided to shop for. Now your sister is back and you want to know what she finally decided to buy. You can use of the following options:

(429) Ichtariti **iih** ?
Buy.2.S.F.Past what
'What did you buy?'

(430) **Iih** illi ichtarit-ih ?
What illi-particle buy.2.S.F.Past pronoun
'What did you buy?'

Some informants suggested the use of question (429), some others suggested the use of (430), and most of them suggested a third way of asking the question:

(431) Ha! Ichtariti **iih** ?
So! Buy.2.S.F.Past what
'So, what did you buy?'

The use of the linker *ha* (so) illustrates the background information that both speakers shared before one of them went shopping. By asking question (431), the speaker

links it with information given in context 6, as if the discussion continued after the shopping event. The fact that informants chose question (430) as being appropriate to context 6 does not enable us to identify interpretative differences between the fronted version and the in situ version in this type of context.

The in situ strategy in (430) is used if context 6 is modified as follows:

8.4.7 Context 7: Object *wh*-phrase with no shared background information

Context 7: Your sister comes back from shopping. You know in advance that she has been out for the day but you don't know where (you don't know in advance that she went shopping). She tells you now that she was shopping for a gift for her husband's birthday. You ask her what she bought. How would you formulate the question?

All speakers chose the *wh*-question in situ in (430) repeated here in (432):

(432) Ichtariti **iih** ?
 Buy.2.S.F.Past what
 'What did you buy?

This result suggests that information focus corresponds to the information sought by the person who asks a question and wants to share the new information with the hearer. This new information is the non-presupposed information missing by the person who is asking the question, and the reason why this person is asking the question is to enquire about the

missing information. In the context 6 developed above, the person wants to know what her sister bought. Following context 6, the person who asked the question already shares a considerable amount of information with the hearer and uses the fronted strategy to confirm or correct his/her doubt about some part of the information. In the case of context 6, the speaker wants to know which gift her sister got to her husband. This strategy could only be interpreted as contrastive focus.

Table (5):

Wh-phrase	Context 6: [+presuppositional]
In situ [+I-focus]	Ha, ichtariti iih ? 'So, what did you buy?'
Fronted with <i>Illi</i> [+C-focus]	Iih illi ichtariti-h? 'What did you buy?'
Wh-phrase	Context 7: [-presuppositional]
In situ [+I-focus]	Ichtariti iih ? 'What did you buy?'
Fronted with <i>Illi</i> [+C-focus]	*Iih illi ichtariti-h? 'What did you buy?'

Context 6 is [+presuppositional], which explains the use of the fronted wh-phrase. However, it is also possible to use the in situ strategy with a linker *ha* (so), which denotes that shared background information is available. With the fronted wh-phrase, the particle *illi* is inserted after movement of the object wh-phrase. For context 7, the wh-phrase in situ is the only possible option since there is no shared background information.

Having explored some contexts where native speakers' judgments have been collected in order to catch the subtle differences in meaning between the various possibilities available in EA to form a wh-question, let us now evaluate my findings. The collected observations concern the use of the wh-in situ strategy, the use of the clause initial wh-phrase strategy, and the use of the particle *illi*.

The use of the wh-in situ strategy is considered as the most prevailing option to form wh-questions in EA. This strategy is used to construe a wh-question that denotes information focus. The in situ strategy is considered as the only option available to refer to information focus:

(433) Ismak **iih** ?
 Name-your what
 'What is your name?'

(434) Babak **fiin** ?
 Father-your where
 'Where is your father?'

The use of the clause initial wh-phrase strategy is more complex. The speakers of EA tend to choose such option when they seem to have shared background knowledge with their interlocutor. The reason for asking the wh-question is motivated by the need to assert, confirm, or correct some information. I categorize such wh-questions as contrastive focus questions because the speakers do not seek to acquire new information by asking them, rather, he seeks to confirm or correct already obtained information. Here are examples of contrastive focus questions with fronted wh-phrases:

(435) **Miin** illi ichtara il-vasa ?
 Who illi buy.3.S.Past the-vase
 'Who bought the vase?'

(436) **Iih** illi hasallaha ?
 what illi Happen.3.S.F.Past
 'What happened to her?'

The use of the particle *illi* has proved to be important in depicting the subtle differences in interpretations. The particle *illi* is only used with the fronted wh-phrase functioning as subject as in (435) and object as in (436). When it is overtly used, the question undoubtedly denotes contrastive focus as in (437-438). When the particle *illi* is not overt in a clause initial wh-phrase as in (437) below, the question is still interpreted as a contrastive focus assuming that there is a null operator that contains the same features as the particle *illi*, i.e., contrastive focus features and EPP features:

(437) **Fiin** rahit Mona ?
 Where go.3.S.F.Past Mona
 'Where did Mona go?'

In the following section, I propose to compare EA and French, a language that exhibits an apparent optional wh-movement. The comparison will be based on recent studies on French reviewed earlier in chapter 5.

8.5 Comparing French and EA

The idea that the semantic content that the speaker would like to convey is linked to the strategy used to form the wh-question is not new. Boeckx (1999, 2000), Boeckx et al. (2001), Mathieu (2004), Vergnaud and Zubizarreta (2000), and Zubizarreta (2002) have argued in favor of a relation between the formation of wh-questions and their semantic interpretation.

These authors consider that the optionality exhibited in French wh-question formation is problematic for the minimalist assumptions where optionality of morphologically driven movement is banned. They claim that French wh-questions exhibit an apparent optionality that could be explained on the basis of semantics. Optionality of wh-movement in French does not involve optional derivations in the syntax but two interpretations of two different derivations. They argue that the role of semantics is to explain the contrast between wh-movement and wh-in-situ in French. The goal of this section is to use the various tests employed by authors who are reviewed in chapter 5 and who worked on French in order to apply them on EA. There are two objectives of this task: First, I would like to evaluate to what extent these tests can show the semantic differences between the two options of forming wh-questions. Second, I would like to compare the results obtained in French with those obtained in EA.

8.5.1 Negation and scope reading

Let us now consider how some tests applied by Zubizarreta (2002) and Mathieu (2004) on French work in EA. Both authors used quantifiers as intervenors to evaluate intervention effects and scope reading on both options of forming wh-questions. The application of these tests on French is provided in chapter 5. Here, I will focus on applying them on EA.

Let us apply the negation test, a test used by both Zubizarreta and Mathieu on French. Consider the following examples from EA (similar to examples of Zubizarreta 2002 in French) where a negative answer is proposed to a question with wh-phrase in situ as in (438) and a fronted wh-phrase as in (439):

- (438) Mona kallimit **miin** ?
 Mona speak.3.SF.Past who
 'Who did Mona speak to?'
- (439) # **Miin** illi Mona kallimit-uh ?
 Who illi Mona speak.3.S.F.Past -him
 'Who did Mona speak to?'
- (440) Mona ma-kallimit-chi had
 Mona neg-spoke- neg anybody
 'Mona did not speak to anybody'

The negative answer in (440) can only be a felicitous answer to question (438) where the wh-phrase is in situ. According to my informants, with a question like (439), they expect an answer where a person's name is given, i.e., they expect a

positive answer, but they do not see a negative answer as suitable for a contrastive focused question.

Now let us consider how Mathieu (2004)'s examples of negation work in EA. Consider the following examples in EA (examples are taken from Mathieu (2004) and translated to EA by my informants):

- (441) Hati?mil **iih** yuum il gum?a ?
Do.3.S.M.Fut. what day the-Friday
'What are you doing on Friday?'
- (442) #**Iih** illi hati?mil-uh yuum il gum?a?
What illi Do.3.S.M.Fut. day the-Friday
'What are you doing on Friday?'
- (443) Wala haga, winta?
No-thing, and-you
'Nothing, what about you?'

Again, in EA, the negative answer is possible only for the wh-question in situ such as in (441). Informants do not choose the fronted option such as in (442) when a negative answer is expected.

To sum up, in EA, a negative answer is possible only for a wh-question with a wh-phrase in situ. In French, Mathieu (2004) proposes similar results, i.e. a negative answer is a perfectly good reply for a wh-question with a wh-phrase in situ. For Zubizarreta, however, a negative answer is not possible for a wh-question in situ. In EA, wh-questions with a fronted wh-phrase do not permit a negative answer although such restriction is not available in French, where, according to both Zubizarreta and Mathieu, a negative

answer is completely acceptable when the wh-phrase is fronted.

The following table summarizes the results obtained by both Mathieu and Zubizarreta on French and the results obtained in EA:

Table: Negation as an answer to wh-questions

	Negative answer to fronted wh-question	Negative answer to wh-question in situ
Zubizarreta (on French)	Possible	Not possible
Mathieu (on French)	Possible	Possible
My informants (on EA)	Not possible	Possible

The first striking result is that authors on French disagree on the possibility of a negative answer to the wh-phrase in situ option. The second one is related to the similar judgments obtained by Mathieu on French and my informants on EA concerning the possibility of getting a negative answer to a wh-question in situ.

Now, let us explore how a pair-list reading and an individual reading apply to both forms of wh-questions in EA when quantifiers are used. The French occurrences of these constructions are discussed in chapter 5 (section 5.3.2 for Zubizarreta and 5.3.3 for Mathieu).

- (444) Kulli wahid fiihum lazim yi?zim **miin** ?
 Each one of-them should invite who

'Who should each one of them invite?'

(445) **Miin** illi kulli wahid fiihum lazim yi?zim-uh ?

Who illi each one of-them should invite-him

'Who should each one of them invite?'

(446) Kulli wahid fiihum lazim yi?zim ?araz ?azdika?uh.

Each one of-them should invite best friend-him

'Each one of them should invite their best friend'.

(447) Ali lazim yi?zim Ahmad, Mona lazim ti?zim Leila,

Tare? Lazim yi?zim Mahmoud . . .

Ali should invite Ahmad, Mona should invite Leila,

Tare? Should invite Mahmoud . . .

According to my informants, the pair-list reading in (447) is the preferred answer to the fronted wh-phrase in (445). However, informants see no restriction in applying either of the two answers in (446-447) above to the wh-question in situ in (444). Results for wh-questions in EA contradict Zubizarreta's results for French. According to her, in French, the individual reading is available for both the in situ strategy and the fronted strategy. In EA, the individual reading is only available for the in situ strategy. In French, the pair-list reading is restricted to the fronted option, but in EA, it is a possible reading for both the fronted and the in situ strategy.

Let us now apply Mathieu's examples on scope reading with quantifiers. Consider the following examples in EA

(448) ?aruh kulluhum **kam** kitab

Read.3.Pl.Past all how-many books

'How many books did they all read ?'

(449) **Kam** kitab kulluhum ?aruh
 How-many books all read.3.Pl.Past
 'How many books did they all read ?'

According to my informants, only the pair list reading is available for the fronted option in (449) and both the pair list reading and the individual reading are available for the in situ option in (448). The results in EA are similar to the results obtained by Mathieu (2004) on French especially concerning the possibility of getting a pair list reading from the in situ option, a reading that Zubizarreta does not get from her French data.

The following table summarizes the findings of both authors on French and the results I obtained on EA:

Table: Scope reading in wh-questions

	PL reading In situ	PL reading Fronted	In reading In situ	In reading Fronted
Zubizarreta (on French)	Not Available	Available	available	Available
Mathieu (on French)	Available	Available	Not available	Available
My Informants EA	Available	Available	available	Not Available

As illustrated in the table above, judgment on scope reading is very controversial and results differ from author to another even on the same language. In French, although

both authors agree that both readings are available for the fronted option, they disagree on which reading is available for the in situ option: For Zubizarreta, only the individual reading is available and for Mathieu only the pair list reading is available. Mathieu's judgment on French wh-questions in situ is similar to my informants' judgment on EA on the same option since he agrees that the pair list reading is available for wh-questions in situ.

To sum up, results from negation and scope reading have shown that both authors disagree on similar data and that Mathieu seems to offer judgments for French that applies to EA. This could suggest that French and EA wh-question formation can be interpreted in an equal way (if we take Mathieu's judgment⁴⁹). Mathieu suggests that the in situ strategy of forming wh-questions is interpreted as 'non-specific', 'not presupposed' and 'non-prominent' (Mathieu 2004:1125). This interpretation applies to wh-questions in situ in EA where this option is used to convey a meaning of an information focus entity or event which is not presupposed and is newly introduced to the discourse participants.

However, Mathieu (2004) does not overtly provide interpretative differences between the two options of forming wh-questions based on the information focus versus contrastive focus distinction that I provide in this thesis for EA. His interpretation of the wh-phrase in situ in French is close to my interpretation of wh-question in situ

⁴⁹ Motivations for going with Mathieu's judgements on French come from the facts that readers of the thesis and other native speakers of French seem to agree more with Mathieu's judgement on French than with that of Zubizarreta. This does not mean that I disagree with her analysis since I still adopt her distinction between information focus and contrastive focus as the basis for the interpretative differences between both forms.

as information focus in EA, but his interpretation of fronted wh-phrases does not really correspond to my interpretation of fronted wh-phrases as contrastive focus in EA especially in relation to presuppositionality. I interpret the fronted option in EA as contrastively focused with a clear meaning of presuppositionality whereas Mathieu considers the fronted option in French as having a specific interpretation, as being foregrounded and prominent but 'without necessarily being presuppositional' (Mathieu 2004:1102).

8.5.2 Testing interpretative differences

Having shown that interpretative differences proposed on EA give rise to similar views for French as proposed by Mathieu (2004) I now continue applying some tests on EA wh-question forms to show that these two forms fall into two types of meanings : an information focus meaning and a contrastive focus meaning. These tests have been applied by Zubizarreta (2002) on French and have been reviewed in chapter 5. These tests consist in introducing several expressions such as 'for instance', 'among others', 'only', 'also', 'exactly' in order to verify whether the use of these expressions change the meaning of the sentence in terms of presuppositionality. If the use of these expressions confirms that there is a meaning change as we will see in the following pages.

Let us first see how the use of the expression 'for instance' is construed in EA⁵⁰:

⁵⁰ French examples are given in section 5.3.2 (page 133).

- (450) Ali ?azam **miin** masalan ?
 Ali invite.3.S.M.Past who for instance
 'Who did Ali invite for instance?'
- (451) **Miin** illi ?azam-uh Ali masalan ?
 Who illi invite.3.S.M.Past Ali for instance
 'Who did Ali invite for instance?'
- (452) **Miin** illi Ali ?azamu-uh masalan ?
 Who illi Ali invite.3.S.M.Past for instance
 'Who did Ali invite for instance?'

Sentences (450-452) are all grammatical questions where the use of the expression 'masalan' (for instance) does not matter. This suggests that this test of adding an adverbial such as *for instance* does not really predict any interpretative differences in EA, although it does in French as Zubizarreta (2002) tells us.

Second, let us apply the expression 'among others' with a fronted wh-phrase and a wh-in situ:

- (453) **Miin** illi Ali ha-yi?zim-uh men-el-tanyeen ?
 Who illi Ali will-invite-him among others
 'Who will Ali invite among others?'
- (454) Ali ha-yi?zim **miin** men-el-tanyeen ?
 Ali Hill-invite who among others
 'Who will Ali invite among others?'

According to native speakers, both sentences are acceptable, and the use of 'among others' does not seem to convey any restriction in meaning or any difference between the two

forms. This suggests that this test of adding an adverbial such as *among others* is not appropriate to distinguish between types of foci interpreted in EA wh-questions. For Zubizarreta (2002), this test proved useful to convey interpretative differences between the fronted wh-form and the wh-in situ form in French.

We have explored some of the tests applied by Zubizarreta in order to analyze the interpretative differences that arise between the fronted wh-question and the wh-in situ in French. I conclude that not all the tests proposed by Zubizarreta apply to EA and could be interpreted in a way that they prove that there is meaning variation between the fronted form and the in situ form. Unlike French, the use of expressions such as 'for instance' and 'among others' does not say much about the interpretative differences between forms of wh-questions since these two tests could freely apply to both fronted wh-questions and in situ questions. Also, some native speakers of French do not get the interpretative differences that Zubizarreta claims it exists between the two options of forming wh-questions in French when such tests are used.

On one hand, Zubizarreta's tests and analysis do not fully apply to EA and also the positions where focus interpretation is given differ between French (the variety of French used by Zubizarreta) and EA. In French, information focus in wh-questions always appears in the front position and contrastive focus materializes in situ. In EA, however, information focus appears in situ and contrastive focus emerges high in the clause. On the other hand, Mathieu's judgments on French concerning negation and scope reading are similar to my informants' judgments on EA in similar environment, i.e. negative and scope reading, a

result that suggests that there exist some similarities between French wh-phrase in situ and EA wh-phrases in situ.

One wonders how the controversial results obtained by Zubizarreta and Mathieu in French could be explained. First, each author uses French data from different dialects: Zubizarreta uses dialects of French spoken in North America whereas Mathieu uses dialect of French spoken in Paris (colloquial/popular French). But some North American Francophones (such as readers of this thesis) agree with Mathieu's judgments on French concerning negation and scope reading and disagree with Zubizarreta's results on similar data. This leads us to the conclusion that Zubizarreta's judgments on French are doubtful and raises disagreement among French speakers from different francophone countries.

If Zubizarreta's judgments on French are to be criticized, we could relate her results to some parametric variation. Indeed, languages that exhibit focus features tend to have information focus in situ and contrastive focus at the left periphery of the clause (e.g., Zubizarreta (1998) for Spanish and German, Rizzi (1996) and Cinque (1990) for Italian, Kiss (1998) for Hungarian, among others). EA seems to follow the general rule governing the distribution of foci in the clause, but French seems to have a particular strategy whereby focus is interpreted. There is also the possibility that French does not exhibit two types of foci as Brunetti (2003) proposed for Italian, and this could explain that what is interpreted as focus in French cannot behave as a typical focused element. Therefore, interpretative differences in French wh-questions cannot be explained through focus as suggested by francophone readers of this thesis who cannot differentiate between an information focus reading versus a contrastive focus

reading when it comes to distinguishing the two options of forming wh-questions.

Second, for the interest of this thesis, I find Mathieu's judgments on French appealing because they support my informants' judgments on EA. Such similarities suggest that French and EA are two languages that maintain that optionality in wh-question formation is only apparent and that the two options available to form wh-questions serve two distinct meanings. Similarities between French and EA are mostly observed in the interpretation of wh-phrases in situ. Mathieu offers a new interpretation for French wh-phrases in situ which differs from that of Zubizarreta and other authors such as Boeckx (1999, 2000) and Chang (1997). In his interpretation of wh-question in situ, he claims that

"French wh-in-situ questions are split-DP constructions involving stranding of the nominal with which the wh-operator is associated (...) when the noun appears in that position, it is not referring to a specific entity. On the contrary, the stranded nominal is interpreted as a non-specific indefinite: it introduces a new, and not an old discourse referent (...) there is no semantic presupposition associated with wh-in-situ (...) Pragmatically, a wh-phrase in situ is a lower-order topic, i.e. a non prominent entity (...)" (Mathieu, 2004: 1129).

Mathieu's interpretation of French wh-questions in situ could be easily applied to EA wh-questions in situ. Indeed, throughout this dissertation, I have claimed that EA wh-questions in situ introduce new information, are not presupposed, and occupy a lower-order position in the clause. The major difference between Mathieu's analysis and

mine is that I expand the interpretation of wh-questions in situ and claim that they involve information focus meaning. An expansion that Mathieu⁵¹ does not see it applicable for French because he considers focus as part of discourse analysis rather than semantic analysis.

Concerning the interpretation of fronted wh-questions, Mathieu (2004:1130) claims that in French, fronted wh-phrases are interpreted as referring to specific entity, involve a foreground context, and are higher-ordered topic involving a prominent entity. Again, this interpretation is applicable to EA fronted wh-phrases that I interpret as contrastively focused. But, Mathieu does not see any meaning of presuppositionality involving fronted wh-phrases. Neither does he recognize the contrastively focused interpretation of fronted wh-phrases. Also, Mathieu's judgments on fronted wh-phrases concerning negation and scope reading is different from my informants' judgments on EA fronted wh-phrases. For these reasons, I don't really consider that Mathieu's interpretation of fronted wh-questions applies to EA. Overall, considering Mathieu's analysis of French wh-questions, French and EA seem to behave in a similar way, especially with wh-phrases in situ.

8.5.3. More tests on interpretative differences

In order to confirm that there are interpretative differences between the two forms of wh-questions in EA, an in situ form that denotes information focus and a clause initial form that denotes contrastive focus, I present more

⁵¹ Mathieu's argument on Focus comes from the discussions I had with him on the possible similarities between his analysis of French and my analysis of EA.

tests that support this difference. These tests include the use of adverbials such as *bizzabt* (exactly), *baas* (only) and *kaman* (also)⁵². Consider the following sentences:

(455) **Miin** bizzabt illi ga ?
 who exactly illi come.3.S.M.Past
 'Who exactly came?'

(456) ?**Miin** bizzabt ga ?
 who exactly come.3.S.M.Past
 'Who exactly came?'

When using the adverbial *bizzabt* (exactly), informants usually use the fronted option with the particle *illi* as in (455). The *in situ* option does not convey the presuppositional background required by the adverbial *bizzabt* (exactly); that is, when asking about who came, and we have a presupposition that it must be a person from a set of persons already chosen in a previous discourse context, we tend to use the contrastive focus reading. The use of the adverbial *bizzabt* (exactly) requires the contrastive focus reading.

Consider another test:

(457) **Miin** baas illi Mona kallimit-uh ?
 Who only illi Mona call.3.S.M.Past-him
 'Who did Mona only called?'

⁵² A similar analysis is offered by Kiss (1998) in her study of contrastive and information focus in Hungarian. The reader is referred to chapter 4 where a review of Kiss's (1998) comparison between contrastive focus and information focus is provided.

- (458) ?Mona kallimit **miin** baas ?
Mona call.3.S.M.Past who only
'Who did Mona only called?'

The adverbial *baas* (only) is usually used with the fronted wh-phrase option because it requires a contrastive focus reading where the speaker would like to emphasize already shared information rather than to ask about new information.

Consider a third test:

- (459) **Miin** kaman illi ga ?
who also illi come.3.S.M.Past
'Who also came?'

- (460) ?**Miin** kaman ga ?
Who also come.3.S.M.Past
'Who also came?'

Similar to the adverbials *bizzabt* (exactly) and *baas* (only), *kaman* (also) can only be used with the fronted wh-phrase option because it denotes the contrastive focus reading and the adverbial *kaman* (also) requires a presuppositional background. The context of (459) involves background information where some people came and the speaker knows the possible set of people coming. The speaker is asking about who else came after knowing that some other people from the set of people coming, already came.

These tests involving the use of adverbials such as *bizzabt* (exactly), *baas* (only) and *kaman* (also) further show that there are interpretative differences between the clause initial wh-phrase form and the in situ form, the former conveying a contrastive focus reading and the latter

denoting an information focus reading. Adding to Zubizarreta's tests used for EA above and the test on adverbials I just presented, we can confirm that the two options available in EA to form wh-questions differ on the syntactic as well as the semantic level.

8.6 Conclusion

In this chapter, I have proposed a semantic analysis of wh-phrases in EA in accordance with the two strategies available in this language to form wh-questions. I have shown that two syntactically different options have two different meanings: the 'in situ' strategy is interpreted as information focus and the clause initial form is interpreted as contrastive focus. This distinction has been highlighted with various tests inspired by Zubizarreta (2002) and Mathieu (2004) and I have added some others to enrich the comparison.

CHAPTER 9: CONCLUSION

I would like to evaluate the results obtained in this dissertation by going through the set of questions that I posited in the introductory chapter and checking how my proposals answer them.

A first question was why it is that not all wh-phrases undergo movement to [Spec, CP] in some dialects of Arabic and why it is that only some dialects of Arabic exhibit optional movement of wh-phrases. This question can be answered on the basis of what we discovered about EA. I have shown that there is movement of the wh-phrase in EA but this movement does not target [Spec, CP], rather, it targets [Spec, FP]. I provided an explanation for this different landing site based on the assumption that EA exhibits focus movement for object and subject wh-phrases or merges adjuncts in a focus position in the left periphery of the clause. In EA, optional wh-movement does not exist. I have shown that there are two different forms available to construct wh-questions and that each form represents a different interpretative content: the fronted form denotes contrastive focus reading,

whereas the in situ form represents the information focus reading.

Second, I inquired whether optional movement can account for the two options to form wh-questions in some dialects of Arabic. I showed that optionality of movement is not accepted in Minimalism because, based on Economy Principles, only an optimal derivation must reach the interfaces for interpretation, and I proposed that the apparent optionality is explained through a focus analysis. There are two distinct focus structures: a high level focus structure and a low level focus structure. They are interpreted in two different ways; the former is contrastive focus and the latter is information focus.

Third, I inquired about what triggers movement. If it is a [+wh] feature, is this feature present in all languages and what are its characteristics? In this dissertation, I have shown that [+wh] does not seem to be a feature that can account for wh-movement crosslinguistically because, for instance, wh-in situ cannot be explained through a strong [+wh] feature. Also, I have shown that LF movement of the [+wh] feature does not parallel overt movement. Having dispensed with [+wh] feature, I proposed to use a focus morpheme as a licenser of wh-movement.

Fourth, we asked where does the wh-phrase move. In this dissertation, I have shown that in the case of EA, when a wh-phrase raises, triggered by focus, its landing site is a [Spec, FP] position and not a [Spec, CP].

Fifth, we questioned to what extent LF movement of wh-phrases mimics overt movement. Chapter 3 of this dissertation reviews arguments against the so-called parallelism between overt movement and LF movement and shows

that both movements differ on various parameters such as the conditions that constrain each movement and the interpretative differences denoted by each movement.

Sixth, we raised the issue of whether wh-question formation is a general process that obeys wh-diagnostics or a construction-specific process that displays particular properties in a given language. In this dissertation, having compared the behavior of French wh-questions with that of EA wh-questions, I have concluded that both languages exhibit apparently optional wh-movements and they correspond to two different meanings. Having compared judgments of Mathieu on French with judgments of my informants on EA, I have claimed that both languages offer similar meanings of the wh-in-situ form. Concerning Zubizarreta's judgments on French, though they proved controversial to those of Mathieu's and different from those of my informants', they proved useful to analyze the information versus contrastive focus meanings of wh-questions in EA.

Finally, this dissertation has contributed to the development of analyses on wh-movement by proposing to incorporate focus to account for the distribution of wh-phrases in EA, a language that exhibits an apparently optional wh-movement. Needless to say that more research must be conducted in order to extend the results obtained in this dissertation: More research must be performed to understand the behavior of French wh-questions (Mathieu's versus Zubizarreta's). Also, more research must be carried out to evaluate Mathieu's judgments on wh-question formation in languages that exhibit apparent optionality (languages described in chapter 1).

BIBLIOGRAPHY

- Abdel-Malek, Z. N. (1972). *The Closed-List Classes of Colloquial Egyptian Arabic*. The Hague: Mouton.
- Adger, D. (1996). "Economy and Optionality: Interpretation of Subjects in Italian". *Probus* 8: 117-135.
- Akkal, A. (1993). *Syntactic Derivation of the Inflections of the Verb in Moroccan Arabic*. Doctorat d'Etat. Faculté des Lettres, Université Hassan II, Casablanca.
- (1996). "How SVO is SVO in Standard Arabic". In A. Fassi-Fehri (ed.), *Linguistique Comparée et Langues au Maroc* Rabat: Publications de la Faculté des Lettres au Maroc : 101-127
- Alexiadou, A. and Anagnostopoulou, E. (1998). "Parametrizing AGR: Word order, V-movement and EPP-checking". *Natural Language and Linguistic Theory* 16(3): 491-539.
- Anagnostopoulou, E., van Riemsdijk, H. and Zwarts, F. (eds.). (1997). *Materials on Left Dislocation*. Amsterdam: John Benjamins Publishing Company.
- Aoun, J., Benmamoun, E. and Sportiche, D. (1994). "Agreement, Word Order and Conjunction in Some Varieties of Arabic". *Linguistic Inquiry* 25(2): 195-220.

- Aoun, J. and Li, A. (1993). "Wh-Elements In situ: Syntax or LF?". *Linguistic Inquiry* 24(2): 199-238.
- Arnaudova, Olga. (2003). Focus and Bulgarian Clause Structure. Doctoral Dissertation, University of Ottawa.
- Baker, C.L. (1970). "Notes on the Description of English Questions: The Role of an Abstract Q-morpheme". *Foundation of Language* 6: 197-202.
- Belletti, A. (2001). "Inversion as Focalization". In A. Hulk and J.Y. Pollock (eds.), *Inversion in Romance and the Theory of Universal Grammar*. Oxford: Oxford University Press: 60-90.
- ____ (2002). "Aspect of the Low IP Area". In L. Rizzi (ed.), *The Structure of IP and CP. The Cartography of Syntactic Structure 2*. Oxford: Oxford University Press.
- Benmamoun, E. (2000). *The feature Structure of Functional Categories: A Comparative Study of Arabic dialects*. New York: Oxford University Press.
- Boeckx, C. (1999). "Decomposing French Questions". In J. Alexander, N.-R. Han and M. Minnick Fox (eds.), *University of Pennsylvania Working Papers in Linguistics 6, Proceedings of the 23rd Annual Penn Linguistic Colloquium*: 69-80.
- ____ (2000). "Interrogative Strategies in French: A reply to Cheng and Roorych". Manuscript. University of Connecticut.

- Boeckx, C., Penka Stateva and Arthur Stepanov (2001). "Optionality, Presupposition and Wh-in situ in French". In J. Camps and C.R. Wiltshire (eds.), *Romance Syntax, Semantics and L2 Acquisition, Current Issues in Linguistic Theory*. Amsterdam: John Benjamins Publishing Company: 57-71.
- Bolotin, N. (1995). "Arabic and Parametric VSO Agreement". In M. Eid (ed.), *Perspectives on Arabic Linguistics VII*. Amsterdam: John Benjamins Publishing Company: 7-27.
- Bošković, Željko. (1998). "Wh-movement and Wh-phrases in Slavic". Paper presented at the Comparative Slavic Morphosyntax Workshop, Spencer, Indiana.
- ____ (2000). "Sometimes in [Spec, CP], Sometimes in situ". In R. Martin, D. Michaels, and J. Uriagereka (eds), *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*. Cambridge: MIT Press: 53-87.
- Brunetti, L. (2003). *Unification of Focus*. Doctoral Dissertation, University of Florence, Italy.
- Carnie, A. (2002). *Syntax: A Generative Introduction*. Oxford: Blackwell Publishers.
- Chang, L. (1997). *Wh-in situ Phenomena in French*. Master's thesis, University of British Columbia.
- Cheng, L. (1997). *On the Typology of Wh-questions*. New York: Garland Publications.

Cheng, L. and Rooryck, J. (2000). "Licensing Wh-in situ".
Syntax 3: 1-19.

Chomsky, N. (1957). *Syntactic Structures*. The Hague: Mouton
and Co.

____ (1965). *Aspect of the Theory of Syntax*. Cambridge: MIT
Press.

____ (1971). "Deep Structure, Surface Structure and Semantic
Interpretation". In D. Steinberg and L. Jakobovits,
(eds.), *Semantics: An Interdisciplinary Reader in
Philosophy, Linguistics and Psychology*. Cambridge:
Cambridge University Press.

____ (1976). "On the Nature of Language". In SR Harnad, HD
Steklis and J. Lancaster (eds.). *Origins and Evolution
of Language and Speech*. Annals of the New York Academy
of Sciences, Volume 280: 46-57.

____ (1977). "On Wh-movement". In P. Culicover, T. Wasow and
A. Akmajian (eds.), *Formal Syntax*. New York: Academic
Press: 71-132.

____ (1981). *Lectures on Government and Binding*. Dordrecht:
Foris.

____ (1986). *Barriers*. Cambridge: MIT Press.

____ (1991). "Some notes on Economy of Derivation and
Representation in Principles and Parameters in
Comparative Grammar. Robert Freidin (ed.): 417-454.

- ___ (1993). "A minimalist program for linguistic theory". In Hale and Keyser (eds.), *The view from building 20*. Cambridge: MIT Press: 1-52.
- ___ (199a). "Bare Phrase Structure". In G. Webelhut (ed.), *Government and Binding Theory and the Minimalist Program*. Cambridge: Blackwell Publishers: 383-440.
- ___ (1995b). *The Minimalist Program*. Cambridge: MIT Press.
- ___ (1999). "Derivation by Phase". *MIT Working Papers in Linguistics* 18: 1-39.
- ___ (2000). "Minimalist Inquiries: The Framework". In R. Martin, D. Michaels and J. Uriagereka (eds.), *Step by Step: Essays in Honor of Howard Lasnik*. Cambridge: MIT Press: 89-155.
- ___ (2001). "Beyond Explanatory Adequacy". *MIT Occasional Papers in Linguistics* 20: 1-28.
- Chomsky, N. and Halle, M. (1968). *The Sound Pattern of English*. New York: Harper and Row.
- Cinque, G. (1990). *Types of A'-dependencies*. Cambridge: MIT Press.
- ___ (1993). "A Null Theory of Phrase and Compound Stress". *Linguistic Inquiry* 24(2): 239-298.

- Cole, P. and Herman, G. (1994). "Is there LF Wh-Movement?". *Linguistic Inquiry* 25(2): 239-262.
- Culicover, P. and Rochemont, M. (1983). "Stress and Focus in English". *Language* 59: 123-165.
- Denham, K. (2000). "Optional Wh-movement in Babine Witsuwit'en". *Natural Language and Linguistic Theory* 18: 199-251.
- Drzdik, L.(1999). "Some Aspects of Relativization in Egyptian Colloquial Arabic". *Asian and African Studies* 8: 74-82. <http://www.elis.sk/aas/full/aas199f.pdf>
- Emonds, J. (1981). "Word Order in Generative Grammar". *Journal of Linguistic Research* 1: 33-54.
- Epstein, S. Höskuldur Thráinsson and C. Jan-Wouter Zwart. (1996) "Introduction". In W. Abraham, et al. (eds.), *Minimal Ideas*. Amsterdam: John Benjamins Publishing Company: 1-66.
- Fassi-Fehri, A. (1982) *Linguistique arabe: formes et interprétation*. Rabat: Publications de la Faculté des Lettres et Sciences Humaines.
- Gamal-Eldin, S.M. (1967). *A syntactic Study of Egyptian Colloquial Arabic*. The Hague: Mouton.
- Haegeman, L. (1994). *Introduction to Government and Binding*. Second Edition. Oxford: Blackwell Publishers.

- Halle, M. and Marantz, A. (1993). "Distributed Morphology and the Pieces of Inflection". In K. Hale and S.J. Keyser (eds.), *The View from Building 20*. Cambridge: MIT Press: 112-176.
- Halle, M. and Vergnaud, J.-R. (1987). *An Essay on Stress*. Cambridge: MIT Press.
- Harley, H. and Noyer, R. (1999). *State-of-the-Article: Distributed Morphology*. *GLOT* 4:1-34.
- Heim, I. (1982). *The Semantics of Indefinite Noun Phrases*. Doctoral Dissertation, University of Massachusetts Amherst.
- Hirschbühler, P. (1978). *The Syntax and Semantics of Wh-Constructions*. Doctoral Dissertation, University of Massachusetts, Amherst.
- ____ (1980). "The French Interrogative pronoun *que*". In William Cressey and Donna Jo Napoli (eds.), *Linguistic Symposium on Romance Languages* 9. Washington: Georgetown University Press, 227-247.
- Huang, J. (1982). *Logical Relations in Chinese and the Theory of Grammar*. Doctoral Dissertation, MIT, Cambridge.
- Jackendoff, R. (1972) *Semantic Interpretation in Generative Grammar*. Cambridge: MIT Press.
- Kahnemuyipour, A. (2000) "On Wh-questions in Persian". *Canadian Journal of Linguistics* 46: 41-61.

Kayne, R.S. "French Relative que". In Marta Luhan and Fritz Hensey (eds.), *Current Studies in Romance Linguistics*. Washington: Georgetown University Press, 255-299.

____ (1994). *The Antisymmetry of Syntax*. Cambridge: MIT Press.

Khairi, A.O. (1996). "À Propos de l'Identification des Catégories Vides en Arabe. Sujet vs. Objet". In A. Fassi-Fehri (ed.), *Linguistique Comparée et Langues au Maroc*. Rabat: Publications de la Faculté des Lettres au Maroc : 191-210.

Kidwai, A. (2000). *XP-Adjunction in Universal Grammar*. New York: Oxford University Press.

Kiss, K.E. (1998). "Identificational Focus Versus Information Focus". *Language* 74: 245-268.

Koopman, H. and Sportiche, D. (1983). "Variables and the Bijection Principle". *The Linguistic Review* 2(3): 139-160.

____ (1991). "The Position of Subjects". *Lingua* 85: 211-258.

Krifka, M. (1984). "Focus, Topic, Syntactic Structure and Semantic Interpretation". Manuscript. University of Tübingen.

Lebeaux, D. (1991). "Relative Clauses Licensing and the Nature of the Derivation". In S. Rothstein (ed.),

Syntax and Semantics 25: Perspectives on Phrase Structure. New York: Academic Press: 209-239.

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.

Majdi, B. (1990). "Word order and proper government in Classical Arabic". In M. Eid (ed.), *Perspectives on Arabic Linguistics I: Papers from the First Annual Symposium on Arabic Linguistics*. Amsterdam: John Benjamins Publishing Company.

Marantz, A. (1995). "The Minimalist Program". In G. Webelhuth (ed.), *Government and Binding Theory and the Minimalist Program*. Cambridge: Blackwell Publishers: 349-382.

____ (2003). *Morphology: Introduction*. Manuscript: MIT.

Mathieu, E. (2004). "The Mapping of Form and Interpretation: the Case of Optional Wh-movement in French". *Lingua* 114: 1090-1132.

May, R. (1985) *Logical Form. Its Structure and Derivation*. Cambridge: MIT Press.

McGuirk, R. (1986). *Colloquial Arabic of Egypt*. England: Routledge and Kegan Paul.

- Megerdooian, K. and Ganjavi, S. (2000). "Against Optional Wh-movement". NECOL: California State University, Fresno: 1-12.
- Megally, S. (1993). *L'Arabe Egyptien: Cours de Grammaire et Exercices*. Paris: Samir Megally Paris.
- Mohanan, K.P. (1991). "On the Bases of Radical Underspecification". *Natural Language and Linguistic Theory* 9: 285-325.
- Obenauer, Hans-George. (1977). *Syntaxe et Interprétation : Que interrogatif!*. FM 45.
- Ouhalla, J.(1997). "Remarks on Focus in Standard Arabic". In M. Eid and R.R. Ratcliffe (eds.), *Perspectives on Arabic Linguistics X: Papers from the Fifth Annual Symposium on Arabic Linguistics*. Amsterdam: John Benjamins Publishing Company: 9-45.
- Pesetsky, D. (1987). "Wh-in situ: Movement and Unselective Binding". In E.J. Reuland and A.T. Meulen (eds), *The Representation of (In)definiteness*. Cambridge: MIT Press: 98-129.
- Plunkett, B. (1993). "The Position of Subjects in Modern Standard Arabic". In M. Eid and C. Holes (eds.), *Perspectives on Arabic Linguistics V: Papers from the Fifth Annual Symposium on Arabic Linguistics*. Amsterdam: John Benjamins Publishing Company: 231-260.

- Radford, A. (1997). *Syntax: A Minimalist Introduction*. Cambridge: Cambridge University Press.
- Reinhart, T. (1995). "Interface Strategies". *OTS Working Papers*: 1-78.
- ___ (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.
- Rizzi, L. (1990). *Relativized Minimality*. Cambridge: MIT Press.
- ___ (1996). "Residual Verb Second and the Wh-Criterion". In A. Belletti and L. Rizzi (eds.), *Parameters and Functional Heads: Essays in Comparative Syntax*. Oxford: Oxford University Press: 63-90.
- ___ (1997). "The Fine Structure of the Left Periphery". In L. Haegeman (ed.), *Elements of Grammar: Handbook in Generative Syntax*. Dordrecht: Kluwer: 281-337.
- Rochmont, M.S. (1986). *Focus in Generative Grammar*. Amsterdam: John Benjamins Publishing Company.
- Rochmont, M.S. and Culicover, P. (1990). *English Focus Constructions and the Theory of Grammar*. Amsterdam: John Benjamins Publishing Company.

- Rooth, M. (1992). "A Theory of Focus Interpretation". *Natural Language Semantics* 1: 75-116.
- Ross, (1967). *Constraints on variables in syntax*. Doctoral Dissertation. Cambridge: MIT.
- Rudin, C. (1988). "On Multiple Questions and Multiple Wh-Fronting". *Natural Language and Linguistic Theory* 6: 445-502.
- Shlonsky, U. (1997a). "Constituent Questions in Palestinian Arabic". Manuscript. University of Genève.
- Shlonsky, U. (1997b). *Clause Structure and Word Order in Hebrew and Arabic: An Essay in Comparative Semitic Syntax*. New York: Oxford University Press.
- Simpson, A. (2000). *Wh-movement and the Theory of Feature Checking*. Amsterdam: John Benjamins Publishing Company.
- Sportiche, D. (1988). "A Theory of Floated Quantifiers and its Corollaries for Constituent Structure". *Linguistic Inquiry* 19(3): 425-449.
- Stepanov, A. (2001). "Late Adjunction and Minimalist Bare Structure". *Syntax* 4(2): 94-125.
- Stroik, T. (1992). "English Wh-in situ Constructions." *Linguistic Analysis* 22: 133-153.
- Uriagereka, J. (1998). *Rhyme and Reason: An Introduction to Minimalist Syntax*. Cambridge: MIT Press.

- Van Geenhoven, V. (1998). Semantic incorporation and indefinite descriptions: semantic and syntactic aspects of noun incorporation in West Greenlandic. CSLI, Stanford.
- Vergnaud, J.R. and Zubizarreta (2000). "The Logical Structure of Informational and Contrastive Focus". *Manuscript* (Abstract). University of Southern California.
- Wachowicz, K. (1978). "Q-morpheme Hypothesis". In H. Hiz (ed.), *Questions*. Dordrecht: Reidel: 155-166.
- Wahba, W.A.-F. (1984). *Wh-Constructions in Egyptian Arabic*. Doctoral Dissertation, University of Illinois, Urbana.
- Watanabe, A. (1992). "Subjacency and S-structure Movement of Wh-in situ". *Journal of East Asian Linguistic* 1: 255-291.
- Wise, H. (1975). *A Transformational Grammar of Spoken Egyptian Arabic*. Oxford: Blackwell Publishers.
- Zubizarreta, -M.-L. (1998). *Prosody, Focus and Word Order*. Cambridge: MIT Press.
- ____ (2002). "Intervention Effects in the French Wh-in situ Construction: Syntax or Interpretation?". In Núñez-Cedeño, Rafael, Luis López and Richard Camero (eds.) *A Romance Perspective in Language Knowledge and Use*. Selected papers from the 31st Linguistic Symposium on

Romance Languages, Amsterdam/Philadelphia: John
Benjamins.