A Syntactic Study of wh-movement in Egyptian Arabic within the Minimalist Program

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Abstract

Since Chomsky (1964) and Ross (1967), wh-movement has received considerable attention in the literature. One of the cross-linguistic phenomena that has appeared in recent works on wh-movement is the issue of optionality - a situation whereby languages allow both wh-movement and wh-in-situ strategies.

This thesis aims to investigate the syntax of wh-questions in one of the optional wh-movement languages, namely, Egyptian Arabic (henceforth EA). It examines wh-fronting and wh-in-situ strategies which the grammar of EA employs to form wh-questions. The theoretical framework within which this study is conducted is the Minimalist Program (henceforth MP) as proposed and developed by Chomsky (1995).

The major claim of this study is that EA is mainly a wh-in-situ language whereby wh-phrases are interpreted and assign scope in their base-generated (i.e. *in situ*) positions. I propose that EA wh-phrases carry weak [wh] features, hence they cannot be attracted to the C-domain. This is why wh-movement of the English type does not take place. The only movement involved in the derivation of the wh-questions *in situ* is the covert movement of a functional category (an operator) which carries the [wh] feature. Thus, wh-phrases *in situ* are licensed and assign scope via LF movement of formal features to the Spec CP position: a type of movement allowed in the MP.

The question remains for the cases where wh-phrases are fronted. I claim that movement in EA is triggered by a feature other than the [wh] feature required for clausal typing, and that wh-phrases appear in a projection other than the CP projection which normally hosts wh-phrases in wh-movement languages such as English. The present study argues that the fronting of wh-phrases in EA is the result of Focus movement, which is triggered on a par with wh-movement. Focus movement involves the movement of wh-phrases to the Spec of Focus projections (FocusPs).

For argument wh-questions which employ the relative pronoun *illi* in their derivation (or what I refer to as *illi*-questions), I claim that *illi* licenses the Focus projection and heads it. Within an *illi*-question, the focused wh-phrase appears in a clause-initial position, followed by an *illi*-clause. This study also analyses possible syntactic structures which are presumed to be variants of *illi*-questions. Within these structures, the *illi*-clause is preposed, while the focused argument wh-phrase appears in a clause-final position. I propose that these structures are derived by topicalising the *illi*-clause over the FocusP. Hence, the resultant wh-question has the structure [TopicP FocusP].

On focused adjunct wh-questions, I claim that the functional head of this left-branching projection hosts a Focus morpheme [FM]. Adjunct wh-phrases move to the Spec of FocusPs to check their Focus features.

One of the methods used in the analysis of the EA-data is an experimental study which was employed essentially to find out whether or not EA has real optionality. This study involved conducting a questionnaire on a group of EA-speakers. This questionnaire was aimed at collecting empirical data and obtaining accurate relevant information to support this study. A group of 25 EA speakers, all PhD students, were consulted for their grammaticality judgement on a sample of wh-questions. The experimental study utilised qualitative and quantitative research methodology to analyse the collected data.

List of Abbreviations

The following is a list of the abbreviations used in the glosses of Arabic examples:

- 1. First person
- 2. Second person
- 3. Third person
- PAST. Past
- PROG. Progressive
- PRES. Present
- INFIN. Infinitive
- F. Feminine
- M. Masculine
- S. Singular
- PLU. Plural
- NOM. Nominative
- ACC. Accusative
- GEN. Genitive
- SPEC. Specifier
- [FM]. Focus morpheme
- COMP. Complementiser
- FOCUSP. Focus projection
- TOPICP. Topic projection
- COP. Copula
- QP. Question particle
- RC. Relative clause
- OP. Operator

Arabic Transliteration Chart

The glosses of the Arabic examples that I use in this thesis may differ from the glosses that appear in the original references due to some changes in the phonetic transliterations. The following is a list of the phonetic transliterations that I use in the glosses of MSA and EA examples:

- **Consonant Transcriptions**

Name of Letter	Symbol in Transliteration	IPA Symbol
Hamza	'	ʔ
ba:	B	B
ta:	T	T
θa:	th in MSA, s in EA	θ in MSA, s in EA
ji:m	j in MSA, g in EA	dʒ in MSA, g in EA
Ha:	H	Ħ
xa:	X	X
da:l	D	D
ða:	th in MSA, z in EA	Ð
ra:	R	R
Zay	Z	Z
si:n	S	S
shi:n	Š	ʃ
Sa:d	S	sˤ
Da:d	D	dˤ
Ta:	T	tˤ
'ayn	ᶜ	ʕ
Ghayn	Gh	ɣ
fa:	f	F
qa:f	Q	Q
ka:f	K	K
la:m	L	L
mi:m	M	M
nu:n	N	N
ha:	H	H
wa:w	W	W
ya:	Y	J

- **Vowel Transcriptions**

Symbol in Transliteration	IPA Symbol
uu	u:
ii	i:
i	i
a	a
aa	a:
ee	ei
aw	aʊ
ay	ai

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Chapter 1: Introduction

Cheng (1997) proposes the Clausal Typing Hypothesis according to which a structure is typed as a wh-question by either a wh-phrase which moves to the Spec CP position, or a wh-particle; no language can possess both mechanisms. Thus, optionality in clause typing is rejected. In linguistic theory, optional wh-movement is a further debate against optionality. A language is said to have optional wh-movement if its wh-phrases can either be fronted or left *in situ*; in addition, wh-phrases exercise similar scope properties in the fronted and the *in situ* positions.

Optionality in languages such as French, Bahasa Indonesia, Babine Witsuwit'en, and Palauan is one of the major linguistic issues which the MP contradicts. In the MP (Chomsky 1993, 1995), a language may have either a strong [+wh] feature that triggers wh-movement, or a weak [+wh] feature which yields wh-in-situ. In the MP, no language can exhibit both features at the same time. Given that the MP calls for more economical derivations, the linguistic problem of optionality is excluded under the economy condition; with the only exception being the special cases of equally economical alternative derivations.

1.1 Background of the study

The present study is an endeavour towards a unified account of wh-questions in EA. It attempts to define the nature and the type of movement which EA has, and accounts for the existence of a wide range of syntactic structures of wh-questions. The theoretical framework which is adopted for the analysis of wh-questions is the Minimalist Program (Chomsky 1995).

For the purposes of this research, an experimental study was carried out whereby a group of EA speakers were asked for their grammaticality judgement on a sample of wh-questions. This experimental study was planned to collect more accurate data regarding the common strategies of question formation in EA. One of the results of this study was that the wh-in-situ strategy is the prevailing and indeed the preferred strategy; such a result has implications for the analysis of EA as a wh-in-situ language. However, the experimental study ascertained that EA speakers accepted some wh-questions with fronted wh-phrases; this led to the assumption that EA has true

optionality. Thus, this study aims to resolve the linguistic problem of optionality, and propose a minimalist account for optional wh-movement in EA.

1.2 Objectives and research questions

The current study has four main objectives: (1) to provide an in-depth examination of the wh-fronting and the wh-in-situ question formation strategies employed by the grammar of EA; (2) to explain apparent optionality which EA seems to exhibit within the framework of the Minimalist Program; (3) to account for the wide range of possible syntactic structures identified in EA as far as wh-questions are concerned; and (4) to investigate some aspects of the grammar which have remarkable influences on the formation of wh-questions.

The major claim of this thesis is that EA is a wh-in-situ language whereby wh-phrases do not move to the Spec CP position. To support this claim, the following questions are addressed:

- How do wh-phrases behave regarding syntactic islands? In other words, are wh-phrases in EA islands sensitive like their English counterparts?
- If wh-phrases remain *in situ*, how are they interpreted and how do they assign scope?
- How can wh-phrases be licensed in their base-generated positions?

In this study, wh-phrases are divided into argument and adjunct wh-phrases. Within argument wh-questions, wh-phrases are fronted and followed by *illi*. In object wh-questions, resumptive pronouns mark the extraction sites. In this thesis, two forms of *illi*-questions are examined: the first has an initial wh-phrase followed by *illi*, and the second has an initial *illi*-clause, while a wh-phrase appears in a clause-final position. Both structures raise the following questions:

- Are these structures alternative derivations which share the same numeration and interpretation?
- How can these structures be formed?
- If these structures show optionality, how can a theory such as the MP account for these alternative derivations?

The study postulates that the fronting of argument wh-phrases is possible with the use of two elements: *illi* and the resumptive pronouns. Thus, a detailed description of these elements is given, followed by a minimalist account that addresses the following questions:

- What is peculiar about *illi* that makes it facilitate extraction?
- If *illi* is absent in adjunct wh-questions, how can an adjunct wh-phrase be extracted?
- What is the position *illi* occupies within wh-questions?
- Can *illi* be described as a complementizer, a scope marker, a relative pronoun, a question marker, or a definiteness marker?
- Does *illi* play two different roles within both wh-questions and relative clauses?
- How can the MP account for the insertion of elements such as *illi* and the resumptive pronouns?

This study argues that the fronting of wh-phrases is the result of a Focus movement whereby wh-phrases move to the Spec of Focus projections. The present work also introduces two interesting wh-questions: the first has a full pronoun, while the second illustrates scrambling of subject NPs over adjunct wh-phrases. The following research questions are addressed in the thesis:

- How is the Focus projection licensed?
- What triggers Focus movement?
- What type of Focus induces movement?
- Is Focus movement compatible with wh-movement?
- How can the occurrence of the full pronouns be accounted for within wh-questions?
- What are the positions of these pronouns within wh-questions?
- Do these pronouns affect the interpretations of wh-questions?
- What induces scrambling within adjunct wh-questions?

The present work aims at highlighting the unavailability of having two derivations which share the same numeration and interpretation. Its main purpose is to argue against

optionality in EA. The major claim of this study is that EA is truly a wh-in-situ language, whereby fronted wh-questions are the result of Focus movement of wh-phrases to the Spec of FocusP.

Although the main bulk of the data is drawn from EA, relevant works on other varieties of the Arabic language are cited, for example: Iraqi Arabic (IA); Jordanian Arabic (JA); Moroccan Arabic (MA); and Palestinian Arabic (PA). The reason these varieties are discussed is to underline the similarities and/or the differences they share with EA. Modern Standard Arabic (MSA) is also referred to in the course of discussing certain phenomena in EA.

1.3 Structure of the thesis

The thesis includes eight chapters and three appendices. The second part of the present chapter is a literature review which discusses previous research on EA and other varieties of the Arabic language. Chapter 2 outlines the theoretical framework within which the study is conducted. Chapter 3 discusses the results of the experimental study carried out to test the most common strategies for forming wh-questions in EA, and Chapter 4 offers a detailed description of a wide range of wh-questions within EA. Chapters 5-7 aim at analysing the different syntactic structures, and the different strategies of question formation described and identified in Chapter 4. Thus, Chapter 5 proposes a minimalist account for argument wh-phrases *in situ*, whilst Chapter 6 analyses the fronting of argument wh-phrases, and proposes a Focus movement analysis. Chapter 7 investigates *in situ* and fronted adjunct wh-phrases, and extends the Focus analysis proposed for the fronted wh-arguments to them with Chapter 8 summing up the findings and concluding the thesis.

Appendix A presents the questionnaire which was given to the EA speakers; Appendix B provides the data matrices for the different types of wh-questions, and finally Appendix C renders the distribution of data into figures.

1.4 Literature Review[1]

This section provides an overview of previous research on EA. Through selective references to some of the literature, it aims at providing a background for the syntax of EA wh-questions via a full description of the current research findings. The following works on EA will be outlined: Wahba (1984); Osman (1990); Lassadi (2003); and Soltan (2010). This section also covers two papers that discuss wh-questions in two varieties of Arabic other than EA, namely Iraqi Arabic (Wahba 1991), and Palestinian Arabic (Shlonsky 2002). A separate section is devoted to identifying the robust features of wh-constructions in Modern Standard Arabic (henceforth MSA).

1.4.1 Wahba (1984)

Wahba investigates the behaviour of EA wh-phrases within the framework of the (G)overnment and (B)inding Theory (Chomsky 1980). She argues that the first strategy employed by the grammar of EA to form a wh-question necessitates that the wh-phrase appears in Comp and is co-indexed with a resumptive pronoun which marks the extraction site. Other structures, such as relative clauses and topicalised constructions, are also formed by the same strategy. Within these constructions, the relativised and the topicalised sites are marked by resumptive pronouns.

Wahba claims that wh-questions are derived by a movement rule, whereas relative clauses and topicalised constructions involve no movement in their derivation. She takes this idea to be the main reason why questioning into syntactic islands is restricted in wh-questions, while it is quite free in topicalised and relativised constructions. She proposes a detailed examination for topicalised constructions, headed relative clauses and free relative clauses.

1.4.1.1 Topicalisation

Wahba (1984) argues that a topicalised construction has a definite NP (previously known in the discourse) in a sentence-initial position. The topicalised NP is usually linked to an argument position which is marked by a resumptive pronoun as in (1).

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[1] Some works reviewed in this chapter were conducted within the framework of the GB theory; I copied the terminologies as they appeared in the original references (e.g. COMP is referred to in later developments of the theory as C^0).

Replacing the resumptive pronoun by an empty category yields ungrammatical structures similar to the one in (2).

(1)   il-walad$_i$, Mona šaafit   -uh$_i$ imbaariH.
        the-boy   Mona see (3SF.PAST) -him   yesterday
        'The boy, Mona saw him yesterday.'

(2)   *il-walad$_i$, Mona šaafit   e$_i$ imbaariH.
        the-boy   Mona see (3SF.PAST)   yesterday
        'The boy, Mona saw yesterday.'

        (Wahba 1984: 13)

If the topicalised element is a PP, the topicalised site is marked by a gap which cannot be replaced with a resumptive locative *hinaak* 'there' as in (3).

(3)   fi-l-šaari$^c{}_i$ dah, Mona kaanit   bitDawwar ^{c}ala
        on-the-street   that   Mona be (3SF.PAST)   look (3SF.PROG) on

        ša'a   e$_i$ (*hinaak)
        apartment   (*there)
        'On that street, Mona was looking for an apartment.'

        (Wahba 1984: 13)

Wahba argues that the grammar of EA allows topicalisation from inside a wh-island if the topicalised element is nominal. In this case, the topicalised site inside this island is marked by a resumptive pronoun as in (4).

(4)   il-bint$_i$ di, Ali ye^{c}raf   miin$_k$ illi   e$_k$ Darab   -ha$_i$
        the-girl   this, Ali know (3SM.PRES) who   that   hit(3SM.PAST) -her
        'That girl, Ali knows who hit her.'

Wahba notes that it is possible to topicalise out of a wh-question as in (5), while questioning out of a topicalised construction yields ungrammaticality, as in (6).

(5)   il-bint$_i$ di, miin$_k$ illi e$_k$ Darab   -ha$_i$
        the-girl   this, who   that   hit(3SM.PAST) -her
        'As for that girl, who hit her?'

(6)   *anhi kitaab$_i$ il-bint$_j$ di$_j$ Ali idda   -hu$_i$-l-ha$_j$?
        which book,   the girl   this, Ali give(3SM.PAST) –it-to-her
        'Which book as for that girl, did Ali give it to her?'

        (Wahba 1984: 16)

1.4.1.2 Relative clauses

Wahba (1984) classifies relative clauses into headed and free relative clauses. In the former, the head NP is associated with a resumptive pronoun, rather than an empty category, as illustrated by the contrast in (7).

(7)   a. il-raagil$_i$ illi   Mona   šaafit   -uh$_i$
         the-man   that   Mona   see (3SF.PAST) -him
         'The man that Mona saw'

        b. *il-raagil$_i$ illi   Mona   šaafit   e$_i$
         the-man   that   Mona   see (3SF.PAST)
         'The man that Mona saw'

        (Wahba 1984: 16-17)

Wahba (1984) claims that headed relative clauses are not derived by movement. She bases her claim on two observations: first, this type of relative clause does not allow pied piping[2], as illustrated by the ungrammaticality of (8).

(8)   * il-raagil ma^{c}a   miin   Mona raaHit   e   il-Qahira.
         the-man with   whom   Mona go(3SF.PAST)   e   to-Cairo
         'The man with whom Mona went to Cairo

        (Wahba 1984: 17)

Second, it is possible to relativise into either an embedded relative clause (as in (9)), or an embedded question (as in (10)), although these constructions are typical syntactic islands.

(9)   dah il-beet$_j$ illi   baba ye^{c}raf   il-raagil$_i$ illi   e$_i$
         this the-house   that   father know(3SM.PRES)   the-man that

        bana-ah$_j$.
        build (3SM.PAST) –it
        'This is the house that my father knows the man who built it.'

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[2] In a wh-question such as 'To whom did you talk?' the wh-phrase 'whom' is said to pied-pipe the preposition 'to', whereas in 'Whom did you talk to?', the preposition is left stranded.

(10)   dah   il-beet$_i$ illi   baba kaan   bi-yis'al   miin$_j$

         this the-house that   father be (3SM.PAST) ask (3SM.PROG) who

         illi   e$_j$ bana   -ah$_i$.

         that   build(3SM.PAST) –it

         'This is the house that my father was asking who built it.'

         (Wahba 1984: 17-18)

For Wahba, free relative clauses are similar to headed relative clauses, as they both have to be associated with resumptive pronouns. If the relativised element appears in an NP position, it has to be followed by *illi*[3] as in (11).

(11)   'a^{c}raf   illi$_i$ Mona ^{c}ayzah   tištiri   -ih$_i$

         know (1S.PRES) that Mona want (3SF.PRES) buy (3SF.INFIN) –it

         'I know whatever Mona wants to buy

         (Wahba 1984: 18)

Wahba divides EA wh-phrases into nominal and non-nominal. In her view, wh-questions with nominal wh-phrases (e.g. *miin* 'who', *eeh* 'what' and *anhi* 'which') look like headed relative clauses since they both require the presence of a resumptive pronoun and *illi* as in the following examples:

(12)   miin$_i$ illi   Mona šaafit   -uh?

         what that   Mona see (3SF.PAST)

         'Who did Mona see?'

(13)   eeh$_i$ illi   Mona arit   -uh?

         what that   Mona read (3SF.PAST)-it?

         'What did Mona read?'

(14)   anhi   walad illi   Mona šaafit   -uh?

         which boy   that   Mona see (3SF.PAST) -him

         'Which boy did Mona see?'

         (Wahba 1984: 21)

Wahba (1984) also discusses the behaviour of nominal wh-phrases with respect to the Subjacency Condition[4]. She claims that nominal wh-questions undergo movement in the

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[3] In Chapter 5, a detailed analysis of the role of *illi* in the derivation of wh-questions is offered.

[4] Chomsky (1977: 73) argues that the Subjacency Condition is observed if no phrase moves from the position *Y* to *X* or from *X* to *Y* as in (i).

syntax based on the idea that within nominal questions, the resumptive pronoun, like wh-traces in English, obeys the Wh-Island Constraint[5] subsumed under the Subjacency Condition. In order to support her claim that the Wh-Island Constraint holds in EA, Wahba presents the following examples which demonstrate the impossibility of subject/object extraction out of indirect wh-questions.

(15) a. *miin$_i$ illi [Mona te^{c}raf   [feen$_j$ huwwa [raaH$_i$ e$_j$]]
         who   that Mona   know (3SF.PRES) where he   go(3SM.PAST)
         'Who does Mona know where he went?'

      b. *[anhi kitaab$_j$ illi [Mona te^{c}raf   [miin$_i$ illi
         which book   that [Mona know (3SF.PRES) who   that

      [e$_i$ sara'-uh]]]]?
         steal (3SM.PAST) –it
      'Which book does Mona know who stole?'

      (Wahba 1984: 50)

Wahba argues that relative clauses and topicalised constructions are not derived via a movement rule, as they can freely violate island constraints. She provides the following examples to illustrate the possibility of topicalising and relativising out of wh-islands.

(16)   a. il-raagil dah$_i$, Mona 'aalit-li   [feen$_j$ huwwa
          the-man   that,   Mona tell(3SF.PAST)-me   where   he

      ['aabil-ha$_i$ e$_j$]]
          meet (3SM.PAST)-her
      'As for that man, Mona told me where he met her.'

      b. il-bint$_i$ illi Fariid 'aal   [feen$_j$ ' aabil-ha$_i$ e$_j$]
          the-girl that Fariid say(3SM.PAST) where   meet(3SM.PAST)-her
          'The girl that Fariid said where he met her'

         (Wahba 1984: 45-6)

1.4.1.3 The movement analysis

Wahba (1984: 59) argues that wh-questions are derived by wh-movement. The traces resulting from this movement undergo a morphological rule in order to be spelt out as

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...X...[$_\alpha$ ... [$_\beta$...Y...] ...] ... X ..., where α and β are cyclic nodes
Chomsky (1986b) takes IP and NP as cyclic nodes which form barriers for movement.
[5] Extraction out of a wh-island results in a wh-island effect. The wh-phrase '*what*' is said to create an island in the following example: '*Who would you like to know what bought.*'

resumptive pronouns. In nominal wh-questions, resumptive pronouns behave like their English counterparts (i.e. the wh-traces). They are bound by the wh-phrases in Comp via the operation Move alpha[6]. Thus, she analyses wh-questions in EA in terms of the rule Move alpha defined in Chomsky (1981).

(17) & is a pronominal if and only if & = NP [F, (P)],

   where P is a phonological matrix and F $\in$ $\emptyset$, and either (i) or (ii):
   (i)   & is free
   (ii) & is locally A-bound by B with an independent role

Wahba (1984) proposes the following lexicalisation rule for wh-traces in EA:

(18) NP   [F] $\longrightarrow$ [+ lexical]

   where F is the set of grammatical features of number, person, and gender
       (Wahba 1984: 60)

For Wahba, the example in (19a) has the deep structure in (19b).

(19) a. miin_i illi   Mona   Darabit -hum_i ?
        who   that   Mona   hit (3SF.PAST) -them
        'Who did Mona hit?'

   b. [illi +wh [Mona Darabit miin]]

       (Wahba 1984: 64)

Applying the rule Move alpha to the deep structure in (19b) results in the movement of the wh-phrase *miin* 'who' to the [+wh] Comp position, leaving behind a trace in the surface structure, as in (20).

(20) [miin_i illi [Mona Darabit e_i]]
       (Wahba 1984: 64)

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[6] In the GB theory, Deep Structure (DS) is related to Surface Structure (SS) via the application of the transformational rule of Move α. The MP eliminates DS and SS and assumes LF and PF as the two interface levels.

The wh-question in (19a) is derived after the lexicalisation rule in (18) lexicalises the grammatical features of the wh-trace as in (21).

(21)   [e] $\longrightarrow$ [hum]

     [+mas]

     [+pl]

     [+3rd]

     [+lex]

(Wahba 1984: 64)

As for non-nominal wh-questions, Wahba argues that they require the presence of an empty category and the absence of *illi*. She proposes the Tense Locality Requirement (TLR) which non-nominal wh-phrases observe. She presumes that the best way to test the TLR of the non-nominal wh-operators is to examine their extractability. She adds that non-nominal wh-phrases can occur in main clauses as in (22).

(22)   feen$_i$ Mona   raaHit e_i ?
       where   Mona   go (3SF.PAST)
       'Where did Mona go?'

(Wahba 1984: 26)

Embedded tenseless clauses, in contrast to tensed clauses, allow wh-extraction of non-nominal wh-phrases as in the following contrast:

(23)   feen$_i$ [Mona   Hawlit   [e_i inn [-ha truuh e_i]]]]?
       where   Mona   try (3SF.PAST)   that   she   go(3SF.INFIN)
       'Where did Mona try to go?'

(24)   *imta$_i$ [iftakarit   Mona [e_i inn   [baba   xarag e_i]]] ?
       when   think (3SF.PAST) Mona   that   father   leave (3SM.PAST)
       'When did Mona think that father left?'

(Wahba 1984: 26)

Wahba claims that in EA, a tensed clause acts as a bounding node (i.e. barrier for government), as indicated by the contrast in (25).

(25)   a. feen$_i$ [S$_1$ Mona   tawaqqa^{c}it   [inn [S$_2$ uxta-ha   truuH e_i]]]?
       where   Mona   expect (3SF.PAST) that   sister-her   go (3SF.INFIN)
       'Where did Mona expect her sister to go?'

   b.*feen$_i$ [S$_1$ Mona   iftakarit   [inn [S$_2$ uxta-ha   raaHit e_i]]]?
       where   Mona   think (3SF.PAST) that   sister-her   go (3SF.PAST)
       'Where did Mona think that her sister went?'

(Wahba 1984: 33)

In (25a), the wh-trace crosses one tensed clause (S$_1$), which is the main clause. In (25b), the wh-trace crosses two tensed clauses: the lower and the matrix clauses (S$_1$ and S$_2$). Accordingly, the example in (25b) violates the Subjacency Condition. Wahba claims that tense is a feature on both S and S' which act as bounding nodes. The examples in (25) have the representations in (26).

(26)   a. feen$_i$ [Mona   tawaqqa^{c}it [inn [uxta-ha   truuH e_i]]]?
             S'$_1$ S$_1$ S'$_2$ S$_2$
             +T   +T   -T   -T

       b.*feen$_i$ [Mona   iftakarit [inn [uxta-ha   raaHit e_i]]]?
             S'$_1$ S$_1$ S'$_2$ S$_2$

(Wahba 1984: 34)

Wahba proposes the following representation for wh-questions with non-nominal operators:

(27)   INFL''
           /   \
       comp   INFL'
               /   \
            N'   INFL'
                     /   \
                  INFL   V''
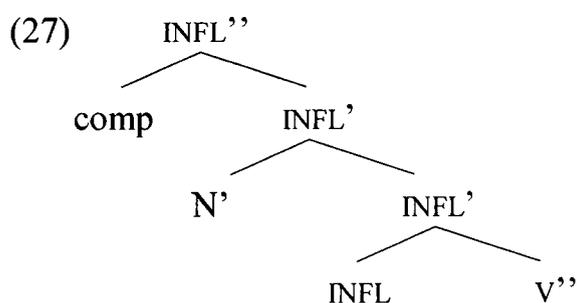
(Wahba 1984: 35)

1.4.1.4 The wh-in-situ strategy

Wahba (1984: 95) proposes that wh-phrases-in-situ undergo movement at LF similar to wh-movement in the syntax based on the suggestion that the two movement rules share common features. LF movement is not free, as it is subject to several locality

requirements like the Subjacency Condition. She argues that the grammar of EA has question particles (QPs) which define the scope of the wh-phrases-in-situ. The relation between the QP and the wh-phrase *in situ* in (28a) is similar to the one between the wh-phrase-in-Comp and its co-indexed trace in (28b).

(28)   a. [QP [[[wh-phrases-in-situ   ]   ]]]

      b. [wh-phrases$_i$ [[e$_i$ [e$_i$]]]]

          (Wahba 1984: 96)

Wahba suggests that the wh-phrases *in situ* undergo LF raising, and this explains their scope ambiguities. She adds that LF raising rule can account for the similarities between SS and LF movements in the grammar of EA. The idea is explained by the following example:

(29)   Mona   nisit   tiktib   eeh./?
       Mona   forget (3SF.PAST)   write (3SF.INFIN)   what
       'Mona forgot what to write.' Or 'What did Mona forget to write?'

          (Wahba 1984: 101)

In (29), the verb *nisi* 'forgot' subcategorises for a non-interrogative complement where the wh-phrase *eeh* 'what' has narrow scope over the lower clause. The result is the indirect question reading 'Mona forgot what to write'. If the verb *nisi* 'forgot' subcategorises for an interrogative complement, the wh-phrase *eeh* 'what' has wide scope over the entire sentence, and the result is the direct question 'what did Mona forget to write?' Applying LF movement, the wh-phrase *eeh* 'what' moves to the lower clause as in (30a), or raises to the matrix Comp position as in (30b).

(30)   a. [-wh [Mona nisit   [eeh$_i$ +wh [tiktib   e$_i$]]]
             Mona   forget (3SF.PAST)   what   write (3SF.INFIN)
             'Mona forgot what to write.'

       b. [eeh$_i$ +wh [Mona nisit   [-wh [tiktib e$_i$]
           what   Mona forget (3SF.PAST)   write (3SF.INFIN)
           'What did Mona forget to write?'

          (Wahba 1984: 101)

Applying wh-movement in syntax, the wh-phrases will move to the Comp position and the following constructions which are similar to the one in (29) are derived:

(31) a. [eeh$_i$ illi [Mona nisit   [t$_i$ tiktib   -uh$_i$]]?
        what that Mona forget (3SF.PAST) write(3SF.INFIN) -it
        'What did Mona forget to write?'

      b. Mona nisit   eeh$_i$ illi [tiktib   -uh$_i$]]
        Mona forget (3SF.PAST) what   that write (3SF.INFIN) –it
        'Mona forgot what to write.'

        (Wahba 1984: 104)

Wahba presents the example in (29) to illustrate that wh-phrases undergo movement at LF, while the wh-phrases in (31) undergo movement in the syntax. The similarity between the two constructions leads Wahba to conclude that wh-phrases *in situ* in EA undergo movement in LF which is similar to movement in the syntax.

1.4.2 Osman (1990)

Osman (1990) is the second paper on wh-constructions in EA. Her work is conducted within the Government and Binding Theory (GB). She refers to nominal wh-questions which comprise embedded relative clauses as relativised questions. Her major claim is that non-nominal wh-questions undergo wh-movement, whereby Subjacency and other constraints on movement are observed. She discusses definite, indefinite and free relatives as in the following examples:

(32) [$_{NP}$ [il-ustaaz$_i$] [$_{CP}$ illi [$_{IP}$ pro$_i$ 'aabil Ali]]] mašhuur. (Definite RC)
        the-professor that pro met Ali famous
        'The professor who met Ali is famous.'

(33) geh [$_{NP}$ [raagil$_i$] [$_{CP}$ e [$_{IP}$ pro$_i$ yi^{c}raf 'abu-uk   ]]]. (Indefinite RC)
        came man   e   pro knows father-your
        'A man who knows your father has come.'

(34) [$_{NP}$ e$_i$ [$_{CP}$ illi [$_{IP}$ pro$_i$ yi^{c}raf 'abu-uk   ]]] geh.   (Free RC)
        e   that   pro knows father-your   came
        'The one that knows your father has come.'

        (Osman 1990: 41-47)

Osman suggests that relative clauses are base-generated at D-structure. They do not undergo wh-movement, as they do not allow pied-piping of a preposition (as in (35)). She proposes the structure in (36) for relative clauses:

(35)   *[[il-walad$_i$] [$_{CP}$ ma^{c}a miin$_i$ [$_{IP}$ Ali raaH t$_i$ in-naadi]]] Tawiil.
        the-boy   with whom   Ali went   the-club   tall
        'The boy with whom Ali went to the club is tall.'

(36)   NP----------NP S'
                (Osman 1990: 42-50)

Osman argues that resumptive pronouns occur in syntactic constructions other than relative clauses; examples of these constructions are illustrated below.

(37)   a. miin   illi 'abilt-uh   fi-l-maktaba?   (Constituent Question)
            who   that meet (2SM.PAST)-him   in-the-library
            'Who did you meet (him) in the library?'

        b. il-bint   di, Ali yi^{c}raf   ir-raagil illi   biyiHibb-aha.
            the-girl this Ali know (3SM.PRES) the-man that   loves (3SM.PRES)-her
            'This girl, Ali knows the man who loves her.'
                                                    (Topicalised Construction)

            (Osman 1990: 62-63)

Osman argues that the similarity between the structure of relative clauses and nominal wh-questions (relativised questions) predicts that they have similar derivations. She concludes that both relative clauses and relativised questions are not derived by a movement rule, and proposes the following structure for relativised questions:

(38)   [wh-phrase [illi   [....]]]
                (Osman 1990: 128)

For Osman, relativised questions (which are not derived by a movement rule) can violate the Complex NP constraint[7] as in the following example:

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[7] For Ross (1967), a complex NP has a head noun modified by a relative clause or other NP complements. Since a complex NP is a syntactic island, any movement out of it violates the Complex NP-Constraint.

(39) a. miin illi Ali sadda'   Hikaayit inn Mona t-gawizit-uh
      who that Ali believe (3SM.PAST) story   that Mona marry (3SF.PAST)-him
      'Who is the person that Ali believed the story that Mona had married him?'

(Osman 1990: 148)

Osman (1990) argues that nominal and non-nominal wh-phrases are base-generated; they involve no syntactic movement in their derivation. To gain interpretation, wh-phrases *in situ* move at LF, while the trace remains and is co-indexed with the moved wh-phrase which binds it. She claims that, after the application of LF movement to the *in situ* wh-question in (40), the resulting structure in (41) looks similar to the one created by the syntactic wh-movement in (42). The traces resulting from LF movement and syntactic movement occupy A-position and are A'-bound by wh-phrases in Comp.

(40) Ali miši   imta?
      Ali leave (3SM.PAST) when
      'When did Ali leave?'

(41) [imta$_i$ [Ali miši   t$_i$]]
      when Ali leave (3SM.PAST)

(42) [imta Ali miši   t]]
      when Ali leave (3SM.PAST)

(Osman 1990: 191-2)

To sum up, Osman claims that *in situ* wh-phrases like the one in (40) undergo LF movement in order to obtain proper interpretation. She argues that this movement is similar in many respects to overt syntactic movement. The question of why the syntax of EA allows more than one syntactic structure is not addressed.

1.4.3 Lassadi (2003)

Lassadi (2003) investigates optional wh-movement in French and EA. She compares French and EA, as they both employ the wh-fronting and the wh-in-situ strategies in forming wh-questions. Since the present chapter focuses mainly on previous research on wh-constructions in EA, I will limit the discussion to her analysis of the target language.

Lassadi conducts her research within the Minimalist Program (Chomsky 1993). She excludes the proposal that accounts for optional wh-movement in terms of feature

strength. She follows the minimalist assumption that a [+wh] feature cannot be both strong, triggering overt wh-movement, and weak, triggering LF wh-movement at the same time. Instead, Lassadi (2003) follows Denham (2000) in considering Focus to be the only element that can account for optionality in the following EA simple wh-questions:

(43)   seme^ct   eeh?
       hear (2SM.PAST)   what
       'What did you hear?'

(44)   leeh   ^camalt   kida?
       why   do (2SM.PAST)   that
       'Why did you do that?'

(Lassadi 2003: 78)

Lassadi claims that EA favours the wh-in-situ strategy. She accounts for this strategy by arguing that, whenever it is possible to front either the wh-phrase or the verb phrase, the grammar of EA favours fronting the verb phrase to get Focus. In her view, EA has a basic SVO order, and when the verb moves to get focus, a VSO order is derived as in (43). Lassadi argues that wh-phrases are related to either the subject or the object, so Focus still remains on the verb.

Lassadi suggests that the grammar of EA prefers to focus the verb rather than the wh-phrase, as the latter lacks the strong [wh] feature. However, wh-phrases may get fronted, not to check the [wh] feature, but to get Focus. As for embedded wh-questions, Lassadi argues that the *in situ* strategy is the only grammatical option as illustrated by the contrast in (45).

(45)   a. ^caayiz   yi^craf   i-nnatiiga   eeh.
          want (3SM.PRES)   know (3SM.PRES)   the-result   what
          'He wants to know what the result is.'

b. *ᶜaayiz   yiᶜraf   eeh   i-nnatiiga[8].
  want (3SM.PRES) know (3SM.PRES) what   the-result
  'He wants to know what the result is.'

(Lassadi 2003: 85)

Lassadi follows previous assumptions in the literature (e.g. Fassi Fehri 1993; Plunkett 1993 among others) that in some Arabic dialects, the verb moves to I for Tense, Topicalisation, or Focus. She argues that the VSO order is derived when the verb moves to the I position as in the following examples:

(46) semeᶜt   eeh?
      hear (2SM.PAST)   what
      'What did you hear?'

(47) giit   izzayy?
      come (2SM.PAST)   how
      'How did you come?'

(48) raayiH   feen?
      go (2SM.PROG)   where
      'Where are you going?'

(Lassadi 2003: 89)

To sum up, Lassadi (2003: 88) claims that the grammar of EA does not exhibit wh-movement. However, when the wh-phrase is fronted, it is triggered by Focus, rather than wh-feature strength. She argues that the wh-phrase within a simple wh-question remains *in situ*, as EA has a basic SVO word order. The VSO word order is derived by moving the verb to the I position. Lassadi (2003: 91) concludes that fronting of wh-phrases is triggered by a Focus feature that needs to be checked in a Focus position.

1.4.4 Soltan (2010)

Soltan (2010) argues that, in addition to the *in situ* position, wh-phrases in EA can occur in left-peripheral position in a cleft structure. The fronted wh-phrase can optionally be

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[8] Although Lassadi (2003) claims that this wh-question is ungrammatical, the experimental study carried out in Chapter 3 showed that similar structure was judged to be grammatical by 80% of the EA informants whom I consulted. The structure is presented in Appendix A, Section 5, and is repeated below for illustrative purpose.
(i) Fariida ᶜirfit **eeh** asbaab il-Hadsa.
    Fariida knew what causes the-accident
    'Farida knew what the causes of the accident are.'

followed by a pronominal copula *huwwa*. The wh-question with a fronted wh-phrase contains a relative clause which is headed by *illi*. This wh-question has the following syntactic structure:

(49)   miin   (huwwa)   illi   inta   šuft-u-h   imbaariH?
          who   COP (3SM) COMP you see (2SM.PAST)-him   yesterday
          'Who is it that you saw yesterday?'
             (Soltan 2010: 1)

Soltan argues that a wh-adjunct cannot replace the wh-argument in (49), as illustrated by the following illicit structure:

(50)   *feen/imtaa/izzaay/leeh (huwwa)   illi   AHmad ha-yisaafir?
          where/when/how/why COP (3SM) COMP Ahmad   will-travel (3SM.INFIN)
          'Where/When/How/Why is it that Ahmad will travel?'
             (Soltan 2010: 2)

Soltan proposes the following resumption constraint on A'-positions to account for the impossibility of clefting wh-adjuncts in structures similar to the one in (50):

(51)   A'-positions must be resumed.
           (Soltan 2010: 3)

For Soltan, employing the gap strategy in nominal wh-questions violates the above constraint, and yields ungrammatical structures similar to the one below.

(52)   *miin   inta šuft   e imbaariH?
          who you see (2SM.PAST)   yesterday
          'Who did you see yesterday?'
            (Soltan 2010: 3)

As for the manner in which wh-scope is licensed in EA, Soltan argues that the scope of the *in situ* and the fronted wh-phrases is licensed by an interrogative null operator in C; this operator unselectively binds a wh-phrase either in an argument position, yielding the *in situ* strategy or in a cleft structure (i.e. FocusP), yielding the fronting strategy.

Thus, he proposes the structures below to represent the two question formation strategies in EA:

(53)   a. [$_{CP}$ Op_i [$_{TP}$ ... [$_{vP}$ ... *wh-phrase$_i$*]]]

   b. [$_{CP}$ Op_i [$_{FocP}$ *wh-phrase$_i$* [$_{CopulaP}$ Copula [$_{CP}$ *illi* [$_{TP}$ ... [$_{vP}$ ... *pronoun$_i$*]]]]]]
       (Soltan 2010: 3)

Based on the above representations, Soltan treats the Q-particle *huwwa* as an overt realisation of an operator *Op* that bears the [+wh] and the phi-features. The [+wh] feature is licensed via unselective binding of fronted/*in situ* wh-phrases, whereas the phi-features are licensed by Agree with the wh-phrases.

1.4.5 Previous research on other varieties of Arabic

1.4.5.1 Wahba (1991)

Wahba (1991) argues that, in Iraqi Arabic (IA), wh-movement in the syntax and at LF share the same properties. She suggests the existence of an abstract rule which raises the wh-phrases *in situ* to a position which c-commands the domain of the wh-phrases. She claims that wh-phrases *in situ* and wh-phrases which undergo syntactic movement, share the same scope properties. The following examples display the scope properties of wh-phrases *in situ*:

(54)   a. Mona sa'alit   Ali   Ro'a   ištarat   šeno.
          Mona ask (3SF.PAST) Ali   Ro'a   buy (3SF.PAST) what
          'Mona asked Ali what$_i$ Ro'a bought e$_i$.'

      b. Mona   nasat   tištiri   šeno?
          Mona   forget (3SF.PAST) buy (3SF.INFIN) what
          'Mona forgot what$_i$ to buy e$_i$.'
      or
          'What$_i$ did Mona forget to buy e$_i$?'

      c. Mona   itmannat   tištiri   šeno?
          Mona   hope (3SF.PAST) buy (3SF.INFIN) what
          'What$_i$ did Mona hope to buy e$_i$?'

          (Wahba 1991: 255)

In (54a), the wh-phrase *šeno* 'what' has narrow scope as the matrix verb *sa'al* 'asked' subcategorises for an interrogative complement. In (54b), the wh-phrase *šeno* 'what'

may have narrow scope which results in an indirect question reading; if it has wide scope, it yields a direct question reading. In (54c), the lower Comp (i.e. C in latter development of the theory) is marked [-wh], so the wh-phrase *šeno* 'what' has wide scope. The similar scope properties which the syntactically moved wh-phrases exercise are illustrated by following examples:

(55) a. Mona sa'alit   Ali šeno Ro'a ištarat.
       Mona ask (3SF.PAST) Ali what Ro'a buy (3SF.PAST)
       'Mona asked Ali what Ro'a bought.'

      b. [Mona nasat   [šeno$_i$ [tištiri   e$_i$]]].
         Mona forget (3SF.PAST) what   buy (3SF.INFIN)
         'Mona forgot what to buy.'
   or
      b'. [šeno$_i$ [Mona nasat   [e$_i$ [tištiri   e$_i$]]]]?
          what   Mona forget (3SF.PAST)   buy (3SF.INFIN)
          'What did Mona forget to buy?'

      c. [šeno$_i$ [Mona itmannat   e$_i$ tištiri   e$_i$?
         what   Mona hope (3SF.PAST)   buy (3SF.INFIN)
         'What$_i$ did Mona hope to buy e$_i$?'

        (Wahba 1991: 256)

Wahba argues that if the *in situ* wh-phrases in (54) undergo movement in LF which is similar to the wh-movement in the syntax exemplified in (55), both the *in situ* and the moved wh-phrases can share the same scope properties. The moved/*in situ* wh-phrases have the same scope properties of English wh-phrases as in the following examples:

(56) a. What did Mona hope to buy e$_i$?

      b. John forgot [what [to buy e$_i$]] or 'What$_i$ did John forget to buy e$_i$?'

      c. John asked Mary [what$_i$ [Tim bought e$_i$]].

        (Wahba 1991: 256)

Wahba claims that the weak crossover phenomenon which disallows a moved element to cross over a co-indexed pronoun in its way to C, provides evidence for the existence of wh-movement at LF as illustrated by the following examples:

(57)　*meno$_i$ ʻuxta-ha$_{*i/j}$　Darabat　　　e$_i$?
　　　who　　sister-her　hit (3SF.PAST)
　　　'Who did her$_i$ sister hit$_i$?

(58)　*ʻuxta-ha$_i$　Darabat　　　　meno$_{*i/j}$?
　　　sister-her　hit (3SF.PAST)　who
　　　'Who$_i$ did her$_i$ sister hit e$_i$?'

　　　　　　(Wahba 1991: 257)

In (57), the syntactic wh-movement of the wh-phrase *meno* 'who' crosses the co-indexed pronoun, and hence it yields a crossover violation. In (58), the wh-phrase *meno* 'who' is preceded by a co-indexed pronoun. If the wh-phrase *meno* 'who' undergoes movement at LF, the example in (58) will have the LF representation in (59).

(59)　*[meno$_i$ [ʻuxta-ha$_i$ Darabat e$_i$]]

The above example demonstrates a crossover violation as the wh-phrase *meno* 'who' crosses a co-indexed pronoun in its path to the matrix Comp position.

The other idea that Wahba (1991: 258) discusses is that the grammar of IA has successive cyclic[9] LF movement, similar to movement in the syntax. IA allows LF Comp-to-Comp movement. The following examples illustrate that the wh-phrases *in situ* can occur in intermediate Comp positions, whereby they intervene between their base-generated position and the matrix Comp position:

(60)　a. [$_{COMP1}$ [Mona　raadat　　　　　[$_{COMP2}$ [tijbir　　　　　Su^{c}ad
　　　　　　　　　　Mona　want (3SF.PAST)　　　　force (3SF.INFIN)　Su^{c}ad

　　　　[$_{COMP3}$ [tisa^{c}ad　　　　　*meno*]]]]]]
　　　　　　　help (3SF.INFIN)　who

　　　b. [Mona　raadat　　　　　[　tijbir　　　　　Su^{c}ad
　　　　　　Mona　want (3SF.PAST)　　force (3SF.INFIN)　Su^{c}ad

　　　　[*meno$_i$*　[tisa^{c}ad　　　　　e$_i$]]]]?
　　　　　who　　　help (3SF.INFIN)

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[9] Successive-cyclic movement was first proposed in the (1970s) and developed by Chomsky (1977).

c. [Mona   raadat   *meno*$_i$ [tijbir   Su^{c}ad
   Mona want (3SF.PAST) who   force (3SF.INFIN) Su^{c}ad

[e$_i$ [tisa^{c}ad   e$_i$]]]]] ?
     help (3SF.INFIN)

d. [*meno*$_i$ [Mona raadat   [e $_i$ [tijbir   Su^{c}ad
      who   Mona want(3SF.PAST)   force (3SF.INFIN) Su^{c}ad

[e $_i$ [tisa^{c}ad   e$_i$]]]]]] ?
      help (3SF.INFIN)
'Who did Mona want to force Su^{c}ad to help?'

(Wahba 1991: 258)

In (60a-d), the wh-phrase *meno* 'who' has wide scope over the entire sentence, so the above examples share only one LF structure in (61).

(61)   meno$_i$ [Mona raadat [e$_i$ [tijbir   Su^{c}ad [e$_i$ [tisa^{c}ad   e$_i$]]]]]]
        (Wahba 1991: 258)

Wahba argues that LF structure in (61) looks like the surface structure in (60d), whereby the wh-phrase *meno* 'who' undergoes wh-movement in syntax. Suggesting that (61) is the LF structure of (60a) and that the wh-phrase is in an argument position, the wh-phrase *meno* 'who' is said to be an instance of extraction from an argument position. In (60b), the wh-phrase occurs in a non-argument position. Wahba argues that if (61) is the LF structure of (60b), the wh-phrase *meno* 'who' in (61) is said to be an instance of extraction from a non- argument position. Wahba (1991: 259) proposes that 'LF movement exhibits identical behaviour to SS movement, whereby wh-extraction at LF can take place from argument and non-argument positions'.

Wahba uses the IA data to argue against Huang's (1982) claim that LF movement can freely violate the island conditions subsumed under the Subjacency Condition. The example in (62) indicates that the grammar of IA does not allow a wh-phrase-in-situ (either an argument or an adjunct) to be located within a wh-island. For Wahba (1991), the example in (63) is ruled out since the wh-phrase occurs within a complex NP, while (64) is ungrammatical as the wh-phrase is part of a co-ordinate structure.

(62) *Mona nasat [li-menoᵢ [tinti šeno eᵢ]] ?
Mona forget (3SF.PAST) to- whom give (3SF.INFIN) what
'What did Mona forget to whom to give?'
'Mona forgot [for which x, for which y [to give x to y]]'

(63) *Mona ᶜurfit [il –bintᵢ [illi [eᵢ ištarat šeno]]]?
Mona know (3SF.PAST) the-girl who buy (3SF.PAST) what
'What ᵢ did Mona know the girl who bought eᵢ?'

(64) *Mona gablat Ro'a wi ištarat šeno?
Mona meet (3SF.PAST) Ro'a and buy (3SF.PAST) what
'What did Mona meet Ro'a and bought?'

(Wahba 1991: 260)

To conclude, Wahba investigates LF movement in the grammar of IA and she argues that wh-phrases *in situ* undergo movement in LF similar to wh-movement in the syntax. She resorts to the weak crossover phenomenon to support the existence of a wh-movement rule at LF. The possibility of extraction out of argument and non-argument positions is also employed to support the existence of LF Comp-to-Comp movement.

1.4.5.2 Shlonsky (2002)

Shlonsky (2002) argues that Palestinian Arabic (PA) has two basic strategies for question formation: the first one is the traditional strategy employed by English, which involves cyclic movement of the wh-phrase to the [Spec CP] position. In this strategy, the wh-phrase appears in a clause-initial position where it binds a variable whose position is marked by a gap. Direct and indirect questions are formed by this strategy as illustrated by the following two examples respectively:

(65) miinᵢ l-'asad 'akal eᵢ mbaariH ?
who the-lion eat (3SM.PAST) yesterday
'Who did the lion eat yesterday?'

(66) ma- ᶜirift –š [la-miin]ᵢ 'inti baᶜaeti
NEG-know (1S.PAST)-NEG to-whom you (F) send (3SF.PAST)

maktuub eᵢ mbaariH ?
letter yesterday
'I didn't know to whom you sent a letter yesterday?'

(Shlonsky 2002: 138)

Shlonsky claims that this class of interrogatives supports the existence of wh-movement in PA, as it obeys the Subjacency Condition. According to Shlonsky, the ungrammaticality of the following example is due to a violation of the Complex NP Constraint; the wh-phrase is extracted out of the NP *l-'asad* 'the lion' which is modified by an *illi*-clause.

(67) *['anii   bint]$_i$ šufti   l-'asad   illi   'akal   e$_i$?
       which girl   see (2SF.PAST)   the-lion   that   eat (3SM.PAST)
       'Which girl did you see the lion that ate?'

           (Shlonsky 2002: 139)

As for the second strategy of question formation in PA, Shlonsky suggests that at D-structure, such interrogatives look like copular constructions where the wh-phrase assumes the role of the subject, while the predicate is a free relative clause. Between D-structure and S-structure, the wh-phrase undergoes movement to the [Spec CP] position in a successive-cyclic pattern. The second strategy has a fronted wh-phrase, followed by *illi* as presented below.

(68) ['anii   bint]$_i$ illi   l-'asad   'akal-ha$_i$ mbaarih ?
       which girl   that   the-lion   eat(3SM.PAST)-her   yesterday
       'Which girl did the lion eat yesterday?'

           (Shlonsky 2002: 139)

In the first class of interrogatives, the wh-phrase is associated with an empty category as in (65). In the second class, it is associated with a resumptive pronoun; alternating the empty category with resumptive pronouns yields the ungrammaticality of the wh-question in (69).

(69) *miin   illi   l-'asad   'akal   e$_i$ mbaariH?
       who   that   the-lion   eat(3SM.PAST)   yesterday
       'Who did the lion eat yesterday?'

           (Shlonsky 2002: 140)

Extraction out of a wh-island is allowed only in the second strategy (i.e. *illi*-questions) as reflected by the contrast between the ungrammatical structure in (69) and the one below.

(70) ['anii   bint]ᵢ illi   šufti   l-'asad   illi   'akal-haᵢ
     which girl   that see (2SF.PAST) the-lion that eat (3SM.PAST)-her
     'Which girl did you see the lion that ate her?'

(Shlonsky 2002: 140)

Shlonsky argues that the wh-phrase in the second class of interrogatives occurs in a position external to CP based on the idea that PRON can occur in a position between the wh-phrase and *illi*. Free relatives with *illi* do not accept a wh-phrase in the [Spec CP] position. He proposes the following structure for *illi*-questions:

(71)
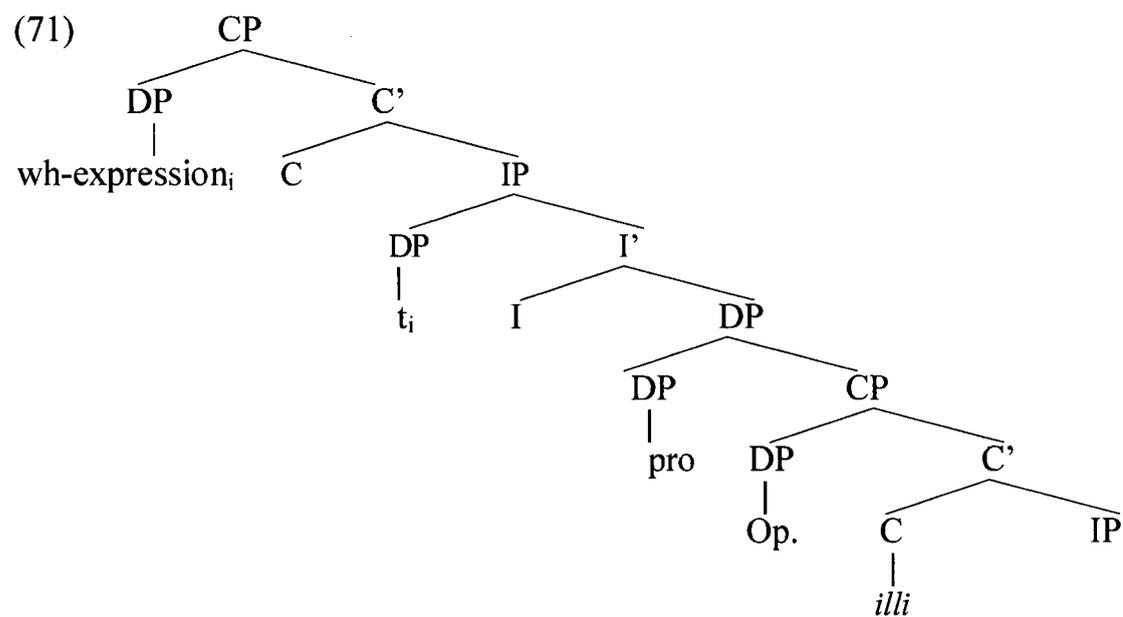
(Shlonsky 2002: 152)

Shlonsky illustrates that the second strategy of constituent question formation in PA involves only nominal wh-expressions followed by *illi*, while adverbial phrases and PPs can only be wh-extracted without *illi* as indicated by the ungrammaticality of the following wh-questions:

(72) * la-miin   illi   'inti baᶜaeti   maktuub?
        to-whom that you send (2SF.PAST) letter
       'To whom did you send a letter?'

(73) * kiif   illi   faHaSti   's-Sayyara?
        how that examine (2SF.PAST) the-car
       'How did you examine the car?'

(Shlonsky 2002: 140)

Shlonsky accounts for the ungrammaticality of the above examples in terms of the following two observations: first, PPs and adjuncts are not allowed to occupy the specifier position of *illi*, as they do not originally occur in A-positions; second, PPs and adjuncts do not bear phi-features to enter into agreement relationship with *illi*, so they cannot occupy its specifier position.

To conclude, in this section, Wahba (1991) and Shlonsky (2002) were reviewed. The two works investigate question formation strategies in IA and PA respectively. The following section will go over wh-constructions in Modern Standard Arabic.

1.5 Wh-questions in Modern Standard Arabic (MSA)[10]

The study of Modern Standard Arabic has been the focus of research in linguistic theory. Cowan (1976: 6) defines MSA as '...the form of language which, throughout the Arab world from Iraq to Morocco, is found in prose of books, newspapers, periodicals, and letters. This form is employed in formal public address, over radio and television, and in religious ceremonial'.

Since the present study focuses on analysing wh-questions in EA, which is one of the non-standard forms of the Arabic language, and one of the many regional varieties of Arabic, it is crucial to demonstrate a structural description of the wh-constructions in MSA before looking at the EA data. Frequent references to certain aspects of the grammar of MSA will be encountered throughout the thesis. Yes/no questions, wh-questions and topicalised constructions in MSA will be described in the present section.

1.5.1 Yes/No questions

In MSA, the two question particles which are employed to mark a yes/no question are *'a* and *hal*. While *'a* is used for both affirmative and negative questions, *hal* is used mainly for affirmative questions which anticipate the answer 'no', or imply the negative. In direct yes/no questions, the question particle *hal* can be followed by VP or NP as in (74a) and (74b) below.

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[10] The MSA data were collected from different sources in the literature; if the source is not mentioned, it means that the data were encountered in different general contexts.

(74) a. hal   katabta   'l-dars-a?
       Q   write (2SM.PAST)   the-lesson-ACC
       'Did you write the lesson?'

     b. hal   huwa   masruur-un?
       Q   he   happy-NOM
       'Is he happy?'

The question particle *'a* can also precede either a nominal or a verbal sentence as demonstrated by the following examples:

(75)   a-masruur-un   'anta?
        Q- happy-NOM   you
        'Are you happy?'

(76) 'a-taHaddaθt-u   ila   'l-walad-i?
       Q-talk (2SM.PAST)   to   the-boy-GEN
       'Have you talked to the boy?'

(Badawi et al 2004: 685)

Although the two particles seem to be identical, only *'a* can introduce a negative sentence as in (77).

(77) *'a* /*hal lam   ya-HDur?
       Q   NEG (PAST) come (3SM.PRES)
       'Didn't he come?'

(Eid 1992: 107)

In indirect yes/no questions, the question particle *hal* can be employed as in (78).

(78)   la naͨrif-u   hal-i l-ͨaalam-u sa-yanͨam-u   fiͨlan
       not know (1PLU.PRES) Q   the-world will-enjoy (3SM.PRES) actually

       bi-dawaa'-in   šaaf-in   li-maraD-i   'l-saraTaan-i.
       with-medicine   curing   to-disease   the-cancer
       'We do not know if the world will actually be pleased with a drug for curing cancer.'

(Badawi et al 2004: 714)

A yes/no question without the question particles *'a* or *hal* can be identified by an intonation morpheme; this type of yes/no question is commonly used in dialogues.

(79) hadhihi hiyya qiSSatu-ka?   (rising intonation)
     this.F   she   story-your.MS
     'Is this your story?'

1.5.2 Wh-questions

In MSA, direct questions can be introduced by either argument wh-phrases such as *man* 'who', *maadhaa/ maa* 'what', *ayy* 'which' and *kam* 'how much', or adjunct wh-phrases as *kayfa* 'how', *'ayna* 'where', *mataa* 'when' and *li-maa/l-maadhaa* 'why'. Subject and object wh-phrases can be extracted as in the following examples:

(80) a. man ya^{c}rif-u   al-Tareeq-a   'ila Mecca?
          who know (3SM.PRES) the-way-ACC   to   Mecca
          'Who knows the way to Mecca?'

      b. man qaddamt-a   'ilay-hi   al-musaa^{c}adat-a ?
          who offer (3SM.PAST) to-him   the-help-ACC
          'Who did you offer to help?'

(81) a. maa 'l-afDal-u   la-ha ?
          what the-best-NOM   for-her
          'What is the best for her?'

      b. maadhaa katabt-a ?
          what write.2SM(PAST)
          'What did you write?'

In MSA, it is possible to extract argument wh-phrases out of embedded questions:

(82) ^{c}arifna   man huwa l-qaatil-u.
      know (1PLU.PAST)-him who   he   the-killer-NOM
      'We knew who the killer is.'

(83) sa'altah-u   maa l-Hall-u.
      ask (1S.PAST)-him   what the-answer-NOM
      'I asked him what the answer is.'

The wh-phrase *'ayy* 'which' must agree with the following constituent in gender. In (84), the wh-phrase *'ayy* 'which' is inflected for the feminine in order to agree with the head noun *šaa^{c}iratin* 'poetess', whereas in (85), the wh-phrase *'ayyu* 'which' and the NP *Tabiibin* 'doctor' are both masculine.

(84)   'ayyatu   šaaᶜiratin   ijtazat   l-mtiHaan-a?
         which.F   poetess.F   pass (3SF.PAST)   the-exam-ACC
         'Which poetess passed the exam?'

(85)   'ayyu   Tabiibin   tazawajat-hu   l-bint-u?
         which.M doctor.M   marry (3SF.PAST)-him the-girl-NOM
         'Which doctor did the girl marry?'

The last wh-phrase in this group of interrogative pronouns is the wh-phrase *kam* 'how much'. Rudin (2005: 402) argues that this wh-phrase can be followed by an indefinite noun phrase which carries the accusative case. It is a form of *tamyiiz* 'accusative of specification' as in (86a). In this example, the indefinite noun phrase must be singular as indicated by the ungrammaticality of using the plural *diruus-an* 'lessons'. The wh-phrase *kam* 'how much' can be followed by a definite noun in a topic-comment structure as in (86b), or by an indefinite noun which is suffixed to a nominative pronoun as in (86c).

(86)   a. kam   dars-an   (*diruus-an)   akmal-tum?
          how much(many) lesson-ACC (lessons-ACC)   complete (2MPLU.PAST)
          'How many lessons have you completed?'

         b. kam l-saaᶜat-u?
          what the-time-NOM
          'How much is the hour?'

         c. kam   ᶜumr-u-hu?
          how much age-his
          'How old is he?'

           (Rudin 2005: 403)

The second group of interrogatives in MSA includes adjunct wh-phrases such as *mataa* 'when', *li-maa* 'why', *'ayna* 'when' and *kayfa* 'how'; the following are examples of these wh-phrases:

(87) a. mata haadhaa l-Haflu?
        when   this   gathering
        'When is this gathering?'

b. mataa ʿastaTiiᶜu ʿan ʿaktuba bi-yadi?
when be able.1S to write (1S.PRES) with-my hand
'When shall I be able to write with my hand?'

(88) a. li-maa haadhihi l-ʿaswaaru l-Daxmatu?
why these the-walls the-thick
'Why these thick walls?'

b. li-maa tastajiibu ?
why answer (3SF.PRES)
'Why does she answer?'

(89) a. ʿayna ʿana l-aana?
where I now
'Where am I now?'

b. ʿayna naDaᶜu-hu?
where put (1PLU.PRES)-it
'Where shall we put it?'

(90) a. kayfa hiya istiᶜdaadaatu-kum ?
how they preparation-your
'How are your preparations?'

b. kayfa ʿahrabu ?
how flee (1S.FUT)
'How shall I flee?

(Badawi et al 2004: 696-700)

In MSA, indirect wh-questions, similar to their direct counterparts, allow the alternation between the empty category and the gap strategy as in the following examples:

(91) laa aᶜrifu maadhaaᵢ qaddamta eᵢ li-lwaTan-i
not know (1S.PRES) what give (2SM.PAST) to-the-country-GEN
'I don't know what you gave to the country.'

(92) laa aᶜrifu maa-alladhᵢ qaddamta-huᵢ l-il-waTan-i
not know (1S.PRES)-NOM what-that give (2SM.PAST)-him to-the-country-GEN
'I don't know what you gave to the country.'

In MSA, some wh-phrases can be used as indefinite pronouns to form relative clauses which are similar to wh-questions, as they both allow alternation between the empty category and the resumptive pronoun. This idea is illustrated by the following examples from Wahba (1984).

(93)   a. al-waladu$_i$ alladhii ra'at   Fatimat-u e$_i$
            the-boy   that   see (3SM.PAST)   Fatima
            'the boy that Fatima saw'

        b. al-waladu$_i$ alladhii ra'at-hu$_i$ Fatimat-u
            the-boy   that   see (3SM.PAST)-him Fatima
            'the boy that Fatima saw'

            (Wahba 1984: 81)

The wh-phrases *man* 'who' and *maa* 'what' can appear in headless relative clauses as in (94) and (95).

(94)   kullu man$_i$ fi l-suuqi   ša^{c}aru$_i$ bihi.
        all   who   in the-market feel (3MPLU.PAST) (became aware) him
        'All of those in the market have become aware of it.'

(95)   waqa^{c}a   maa$_i$ naxšaahu$_i$ wa   qaamat-i   l-Harbu.
        happen (3SM.PAST) what   fear (1PLU.PRES) and   arise (3SF.PAST) the-war
        'What we fear happened and war arose.'

            (Badawi et al 2004: 507-509)

In MSA, wh-phrases can remain *in situ* where the wh-questions are echo questions as suggested by Fassi Fehri (1993).

(96)   jaa'a   man?
        come (3SM.PAST) who
        'Who came?'
            (Fassi Fehri 1993: 67)

Fassi Fehri (1993: 68) observes that the grammar of MSA does not allow the co-occurrence of a wh-phrase and a question particle regardless of the position of the wh-phrase[11] (e.g. in Spec CP, or *in situ*). In the literature, this restriction is referred to as the Doubly Filled COMP Filter which was first introduced by Chomsky and Lasnik (1977). This filter is also defined by Haegeman (1994: 383) as follows:

(97)   When an overt wh-phrase occupies the Spec of some CP the head of that CP must not dominate an overt complementiser.

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[11] This idea is in line with the Clausal Typing Hypothesis proposed by Cheng (1997).

Violating this filter yields ungrammaticality as in the following examples:

(98)　a.*man 'a　jaa'a
　　　　　who　Q　come (3SM.PAST)
　　　　　'Who came?'

　　　　b.*'a　jaa'a　　　　　　man
　　　　　Q　come (3SM.PAST) who
　　　　　'Who came?'

　　　　　　　(Fassi Fehri 1993: 68)

As for multiple wh-questions[12], MSA, like English, allows only one wh-phrase to move, while the other wh-phrase(s) remain *in situ*, as in the following examples:

(99)　a. man Darab-a　　　　　man　bi-maadhaa?
　　　　　who beat (3SM.PAST)　who　with-what
　　　　　'Who beat whom with what?'

　　　　b.*bi-maadhaa　man　Darab-a　　　　　man?
　　　　　with-what　who　beat (3SM.PAST)　who
　　　　　'Who beat whom with what?'

　　　　c. *man　Darab-a　　　　　bi-maadhaa　man?
　　　　　who　beat (3SM.PAST)　with-what　who
　　　　　'Who beat whom with what?

　　　　　　(Fassi Fehri 1993: 67)

The ungrammaticality of the above examples is due to the violation of the Superiority Condition[13] responsible for determining which wh-phrase moves; it necessitates that

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[12] Languages can be classified according the way in which they form multiple-wh questions. For example, Bulgarian has all the wh-phrases in the [Spec CP] position, while Japanese wh-phrases remain *in situ*, as in the following examples:
　　　(i)　kogo　kakvo e　　pital　Ivan ?　　　(Bulgarian)
　　　　　whom　what Aux　asked　Ivan
　　　　　'Who did Ivan ask what?'
　　　(ii)　Taroo-ga　dare-ni　nani-o　ageta　no? (Japanese)
　　　　　Taroo-NOM　who-DAT　what-ACC　gave　Q
　　　　　'Who did Taroo give what?'
　　　　　　　　　　(Richards 1997: 12)
[13] In the MP, the Superiority Condition is refined as Attract Closest Principle defined below:
　　　(i)　*Attract Closest Principle/ACP*
　　　　　　A head which attracts a given kind of constituent attracts the closest constituent of
　　　　　　the relevant kind
　　　　　　(Chomsky 1995: 297)

only the superior (higher) wh-phrase undergoes movement. This is illustrated by the following contrast:

(100) a. Who did what?

b.*What did who do?

In MSA, it is not possible to form a multiple wh-question with a sequence of fronted wh-phrases without the occurrence of a co-ordinator element like *wa* 'and' as in the following example:

(101) mataa wa kayfa ji'ta?
when and how come (2SM.PAST)
'When and how did you come?'

1.5.3 Topicalisation

Plunkett (1993) follows the traditional Arab grammarians in assuming that the initial NP in a clause should be treated as a topic, not as a subject. This topic is followed by a comment clause. The construction [topic comment] is treated as Left Dislocation. What is meant is that when the topic occurs in a clause-initial position, an overt resumptive pronoun, which is co-referential with this topic, is attached to the verb, and appears in the object position. In the following example, the topic *al-Tullab-u* 'the students' are fronted, the resumptive pronoun *hum* 'them' is attached to the verb *'uHibu* 'I love' and is co-indexed with the initial topic.

(102) al-Tullaab-u$_i$ 'uHibbu -hum$_i$
the-students-NOM like (1S.PRES)-them
'The students, I like them.'

(Plunkett 1993: 241)

In some cases, the comment clause which follows the topic can be a wh-question linked to the topic by either an empty category (as in (103)) or a resumptive pronoun (as in (104)).

(103) 'al-maalu_i li-man 'a^cTayta e_i ?
      the-money to-whom give (2SM.PAST)
      'Whom did you give the money?'

(104) 'al-maalu_i li-man 'a^cTayta-hu_i ?
      the-money to-whom give (2SM.PAST)-it
      'Whom did you give the money?'

The examples in (103) and (104) indicate that in MSA, object NPs can be topicalised out of direct questions. In these examples, the object NP *al-maala* 'the money' is extracted over the fronted wh-phrase *li-man* 'to whom'. Topicalisation out of indirect questions is also permissible in MSA.

(105) 'al-rajulu_i haadhaa_i, qaalat Faatimatu 'ayna ra'at-hu_i.
      the-man this say (3SF.PAST) Faatima where see (3SF.PAST)-him
      'As for this man, Fatima said where she met him.'

(106) *man qaalat Faatimatu 'ayna ra'ata-hu?
      who say (3SF.PAST) Faatima where see (3SF.PAST)-him
      'Who did Fatima say where she met?'

In (105), the object of the indirect question is extracted without violating the Wh-Island Constraint (Ross 1967) which bans the movement of a constituent out of a wh-clause. In (106), on the other hand, the wh-phrase *man* 'who' originates as the complement of the verb *ra'at* 'saw' and is extracted out of the wh-clause in violation of the Wh-Island Constraint.

As for extraction out of a relative clause, Wahba (1995) argues that in some constructions, it is not possible to extract an object NP out of an embedded relative clause even if the extraction site is marked by either a wh-trace (as in (107b)), or a resumptive pronoun (as in (107c)). The two examples violate the Complex NP Constraint.

(107) a.qaabala Omaru l-rajul-a alladhii ištaraa l-bayta l-mujaawir.
      meet (3SM.PAST) Omar the-man who buy (3SM.PAST) the-house next door
      'Omar met the man who bought the house next door.'

b.*maadhaa_i qaabala Omaru l-rajula_j alladhii_j e_j ištaraa-hu_i ?

what   meet (3SM.PAST) Omar the-man   who   buy (3SM.PAST)-it

'What did Omar meet the man that bought?'

c.*maa-alladhii_i qaabala Omaru l-rajula_j alladhii_j e_j ištaraa-hu_i ?

what   meet (3SM.PAST) Omar   the-man who   buy (3SM.PAST)-it

'What did Omar meet the man that bought?'

(Wahba 1995: 61)

In (107a), the head noun is modified by a relative clause. Since relative clauses are islands, it is not possible to extract the complement NP; hence, the examples in (107b) and (107c) are ruled out.

In MSA, no element can be extracted over a preverbal subject. In this regard, Fassi Fehri (1993) proposes the condition in (108) to account for the contrast in (109).

(108) No constituent may be extracted over a topic.

(109) a.*man   'r-rajul-u   Darab-a?

who the-man-NOM   beat (3S.PAST)

'Who has the man beaten?'

b. man 'anta   muntaqid-un?

who you   criticising

'Who are you criticising?'

(Fassi Fehri 1993: 64)

In (109a), the NP is interpreted as a topic which is modified by a wh-question. The example is ruled out because it violates the condition in (108). Assuming that extraction over a preverbal subject is allowed only in nominal sentences[14], the example in (109b) is said to be grammatical. In this example, the preverbal pronoun *'anta* 'you' is interpreted as the subject, while the NP which follows it is the predicate. With verbal predicates, the situation is different; the following example from Plunkett (1993) illustrates the impossibility of extracting the wh-phrase *ayna* 'where' over a subject NP whose predicate is a VP.

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[14] Traditional Arab grammarians classified Arabic sentences according to their initial constituent. A verbal sentence has an initial verb, whereas a nominal sentence has an initial NP-topic which can be followed by NP, AP, PP, or IP (Bakir 1979).

(110) *'ayna   l-Tullaabu   yadrusuuna?
       where   the-students   study (3MPLU.PROG)
       'Where, the students (they) are studying?'

       (Plunkett 1993: 243)

1.5.4 Wh-movement in MSA

Fassi Fehri (1993) argues that in MSA, wh-phrases undergo overt wh-movement from a basic SVO word order. The wh-phrase moves from its base-generated position to a clause-peripheral position. Makhoukh (2000: 37) argues that wh-phrases in MSA undergo overt raising to the [Spec CP] position, and this movement is triggered by the need to check the strong feature of the head C under the Spec-Head relation. The following examples have wh-phrases in the [Spec CP] position:

(111) a. *man*   qatala   Muhammad-an?
          who   kill (3MS.PAST) Muhammad-ACC
          'Who killed Muhammed?'

       b. *maadhaa* fa^{c}ala   l-walad-u ?
          what   do (3MS.PAST)   the-boy-NOM
          'What did the boy do?'

       c. *'ayna*   saafarati   l-bint-u?
          where   go (3SF.PAST)   the-girl-NOM
          'Where did the girl go?'

The wh-questions in (111) are formed by the movement of the wh-phrases to the [Spec CP] position, whereby the extraction site is marked by an empty category. These wh-phrases undergo movement from subject, object and adverbial positions respectively. The examples in (111) have the skeletal representations in (112).

(112)   a. [$_{Spec CP}$ man$_i$ [[$_{IP}$ t$_i$ qatala Muhammad-an]]]?

        b. [$_{Spec CP}$ maadhaa$_i$ [[e] [$_{IP}$ fa^{c}ala al-walad-u t$_i$]]]?

        c. [$_{Spec CP}$ 'ayna [[e] [$_{IP}$ saafarati al-bint-u t$_i$]]]?

Wahba (1984) points out that the gap which marks the questioned site can optionally be replaced by a resumptive pronoun, as in the following examples:

(113) man_i ra'at   Fatimat-un   e_i?
      who   see (3SF.PAST) Fatima-NOM
      'Who did Fatima see?'

(114) man_i ra'at-**hu**_i   Fatimat-un?
      who   see (3SF.PAST)-him   Fatima-NOM
      'Who did Fatima see?'

(Wahba 1984: 79)

In MSA, the argument wh-phrases *man* 'who', *madhaa / maa* 'what' can be suffixed to prepositions; this is referred to as pied-piping.

(115) a. ila- man   nataHaddath-u?
         to-who   talk (1PLU.PRES)
         'To whom do we talk?'

      b. li-maadhaa   tuqaabilu   Muhammad-an?
         for-what(why)   meet (2SM.PRES)   Muhammad-ACC
         'Why do you meet MuHamad?'

      c. li-maa   tašᶜuru   bi-lbard-i?
         for-what(why)   feel (2SM.PRES)   with-cold-GEN
         'Why do you feel cold?'

In (115b) and (115c), the PPs have the semantic value of the adjunct wh-phrase 'why'. Although the wh-phrases in (115) are composed of a wh-phrase suffixed to a preposition, only the wh-phrase *man* 'who' in (115a) can be preposed on its own, while the preposition *ila* 'to' is stranded[15] at the end of the clause. The pronoun has to be attached to the verb as illustrated in (116a). The examples in (116b) and (116c) are

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[15] In EA, a wh-phrase can be suffixed to a preposition as in (i). When the wh-phrase moves, the resumptive pronoun, which is co-indexed with the moved wh-phrase, is suffixed to the preposition as in (ii). In Chapter 4, prepositional wh-phrases in EA will be described in both fronted and *in situ* positions.
  (i) xaragti   maᶜa miin?
      go (2SF.PAST)   with who
      'With whom did you go out?'
  (ii) miin_i illi xaragti   maᶜa-ah_i?
       who   that go (2SF.PAST)   with-him
       'With whom did you go out?'

ungrammatical, as the preposition *l* 'for' is not pied piped to the wh-phrases *madha* and *ma* 'what'.

(116) a. man nataHaddathu ila-yhi?
        who talk (1PLU.PRES) to-him
        'To whom do we talk?'

  b.* maadhaa tuqaabilu Muhammad-an li?
      what meet (2SM.PRES) Muhammad-ACC for
      'Why do you meet MuHamad?'

  c. *maa taš^curu bi-lbardi li?
     what feel (2SM.PRES) with-cold for
     'Why do you feel cold?'

In MSA, pied-piping is not possible with all wh-phrases. For example, the wh-phrases *'ayna* 'where' and *mata* 'when' can co-occur with a preposition, and hence they allow pied-piping (as in (117)), whereas it is not possible to have a preposition with the wh-phrase *kayfa* 'how' (as in (118)).

(117) a. *'ila-*'ayna saafarat 'l-bint-u?
        to- where go (3SF.PAST) the-girl-NOM
        'Where did the girl go[to]?'

  b. *'ila-*mataa 'istamarrat 'l-ma^craka-tu?
     to- when last (3SF.PAST) the-battle-NOM
     'How long did the battle last?'

(118) * *li-*kayfa ya^cmalu jihaazi 'l-Hasuubi?
       for- how work (3SM.PRES) set the-computer
       'How does the computer work?'

To recap, MSA is similar to English as far as the formation of wh-questions is concerned. In the two languages, wh-phrases undergo wh-movement from their base-generated positions to the Spec CP position. Yes/No questions are introduced by two question particles: *'a* and *hal*. The wh-phrases *man* 'who', *maa/maadhaa* 'what and *'ayy* 'which' are employed to form relative clauses which are similar to wh-questions. In the two structures, the extraction site is marked by either an empty category or a resumptive pronoun. Like English, MSA has multiple wh-questions where only one wh-

phrase is moved, while the other wh-phrase(s) remain *in situ.* Wh-in-situ questions are used as echo questions. In MSA, extraction over a preverbal subject is restricted.

1.6 Conclusion

This chapter was divided into two parts: the first part (Sections 1-3) introduced the objectives of this study and the research questions, while the second part (Sections 4-5) reviewed the literature on EA, IA, PA, and MSA. The main findings of Wahba (1984) and Osman (1990) were summed up. The two authors suggest that wh-phrases in EA undergo LF movement similar to movement in the syntax. They propose that initial non-nominal wh-phrases move to the matrix Comp at S-structure via the transformational rule of Move Alpha, whereas wh-phrases *in situ* move at LF. Lassadi (2003) accounts for optionality in EA in terms of Focus movement, while Soltan (2010) suggests the existence of an operator which unselectively binds a wh-phrase either in the base-generated position or in a Focus projection. The main strategies of question formation in Iraqi Arabic and Palestinian Arabic were also reviewed, and the robust features of wh-constructions in MSA were outlined.

The present study is conducted within the framework of the Minimalist Program proposed and developed by Chomsky (1993, 1995). Further development of the Minimalist Program was sketched out in Chomsky (2000, 2001); however, his (1995) version will be adopted for the purposes of this study. The basic minimalist assumptions regarding wh-movement will be sketched out in the following chapter.

Chapter 2: Theoretical Background

2.1 Introduction

This chapter discusses the typology of wh-movement within the framework of the (M)inimalist (P)rogram (Chomsky 1995). It also has three main goals: (1) to investigate the way in which the MP approaches wh-movement; (2) to discuss the predictions which the MP makes against 'optionality'; and (3) to present some arguments for/against optionality.

The chapter is organised as follows: section 2 briefly describes two types of movement: head-movement and A'-movement. Section 3 recaps the main aspects of the MP regarding the nature of wh-movement. Section 4 discusses the issue of optionality and exposes the debate it raises in the literature; besides, it refers to some languages which exhibit optional wh-movement. Section 5 defines another type of wh-movement (i.e. partial wh-movement), whereby a wh-phrase moves to an embedded Spec CP of a [-wh] clause. Section 6 concludes the chapter.

2.2 Types of movement

Within the theory of Move, there are three main types of movement: Head-movement, A-movement and A'-movement (Travis 1984; Rizzi 1996; Haegeman 1997; Vikner 1997). The type of movement depends on the type of element that moves and the landing site, or the position, to which an element moves. I will focus on Head-movement and A'-movement.

2.2.1 Head-movement

Head-movement is controlled by the Head-Movement Constraint (HMC), first proposed by Travis (1984). The HMC is defined by Roberts (2001) as follows:

(1)   Head movement of X to Y cannot skip an "intervening" head Z.
                (Roberts 2001:113)

The Head-Movement Constraint which is one of the locality conditions on movement, states that a head cannot move across other heads unless it moves through all

intervening head positions. There are many types of head-movement[1]; among them are V-to-I movement (i.e. movement of the verb to the inflectional head) and I-to-C movement (i.e. movement of the verb to the C position).

Regarding V-to-I movement, Vikner (1997) argues that all inflectional endings are generated in I, so the verb has to move to I in order to receive its inflectional ending. English lacks V-to-I movement, as it has weak inflectional morphology which must be identified in I. Haegeman (1997), on the other hand, argues that verbs are associated with their inflectional endings in the lexicon. It is the head I that carries certain features which match the inflectional morphology on the verb. The inflectional features on the verb need to be checked, so the head I licenses the checking of these features. If the verb has strong features on it, it moves to I as in French[2]. Therefore, English lacks this type of movement due to the weak features on its verbs. In yes/no questions, I-to-C movement takes place when the finite verb moves to the head C to check its finiteness properties. I-to-C movement can be illustrated by the example in (2) followed by its syntactic representation:

(2)   a. Do they like cake?

b.

```
              CP
           /      \
        Spec        C
                  /    \
               do_i     IP
                      /    \
                 they_k     I
                          /    \
                       t_i      VP
                              /    \
                           t_k      V'
                                  /    \
                                 V      NP
                                 |      |
                               like    cake
```

2.2.2 A'-movement

When maximal projections such as NPs, PPs, APs and AdvPs are raised, they are said to undergo A'-movement as they move to non-argument positions (A'-positions). Examples of A'-movement are wh-movement, Topic-movement and Focus-movement. The landing sites of the three types of A'-movement are [Spec CP], [Spec TopP], and [Spec FocP] correspondingly. The following examples from Zavitnevich-Beaulac (2002: 9) represent each type of A'-movement followed by its syntactic representation:

(3)   a. What did you buy?

        b.

```
              CP
          ┌────┴────┐
       what_k       C
              ┌─────┴─────┐
            did_e         IP
                    ┌──────┴──────┐
                 you_i            I
                            ┌─────┴─────┐
                          t_e          VP
                                 ┌──────┴──────┐
                               t_i            V
                                        ┌──────┴──────┐
                                      buy           t_k
```

(4)   a. John, I did not see

        b

```
            TopP
        ┌────┴────┐
     John_k      Top
            ┌─────┴─────┐
          Top           IP
                  ┌──────┴──────┐
                I_i             I
                          ┌─────┴─────┐
                        did          NegP
                                ┌─────┴─────┐
                              not          VP
                                     ┌──────┴──────┐
                                   t_i             V
                                              ┌─────┴─────┐
                                            see          t_k
```

(5)   a. John I saw (not Mary)

         b.

```
                    FocP
              _____|_____
          Johnₖ            Foc
                      _____|_____
                    Foc              IP
                             _____|_____
                            Iᵢ                  I
                                          _____|_____
                                         I            VP
                                                 _____|_____
                                                tᵢ           V
                                                        _____|_____
                                                      saw          tₖ
```
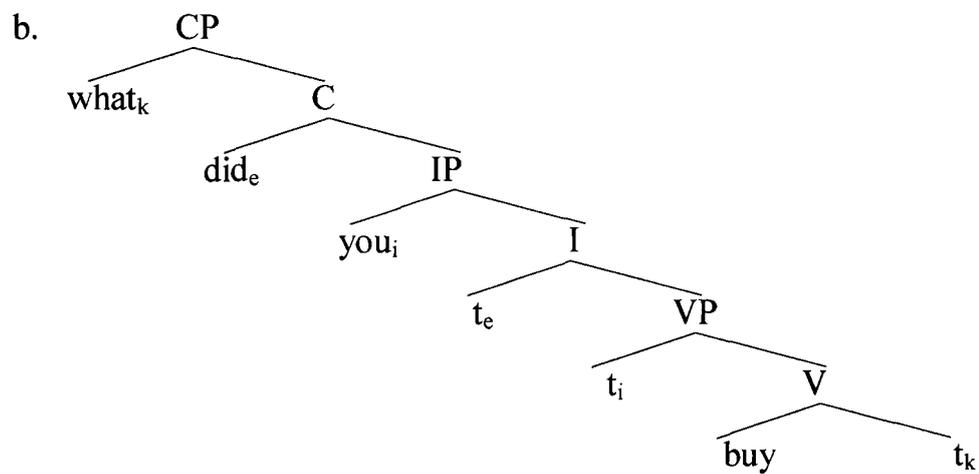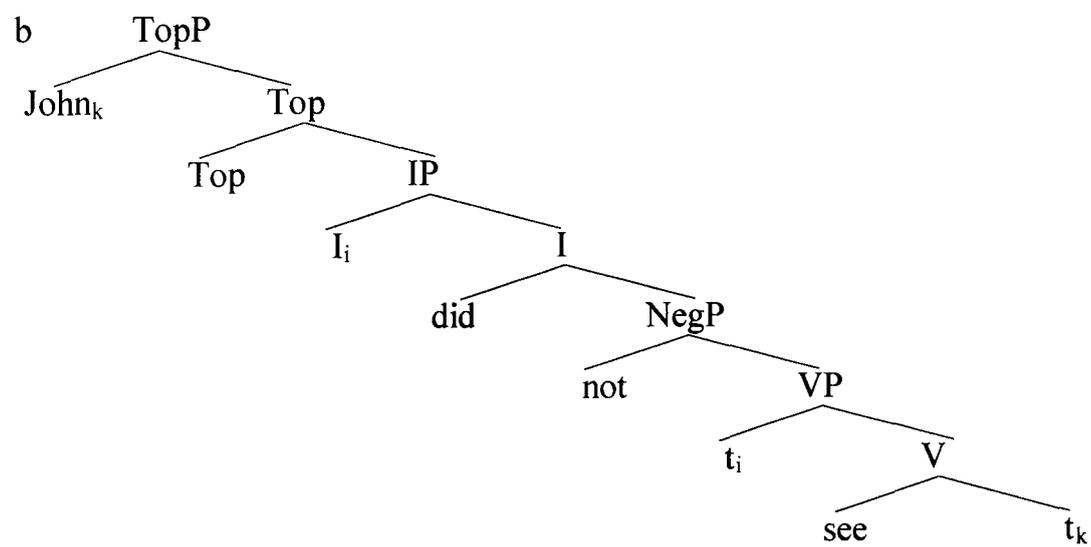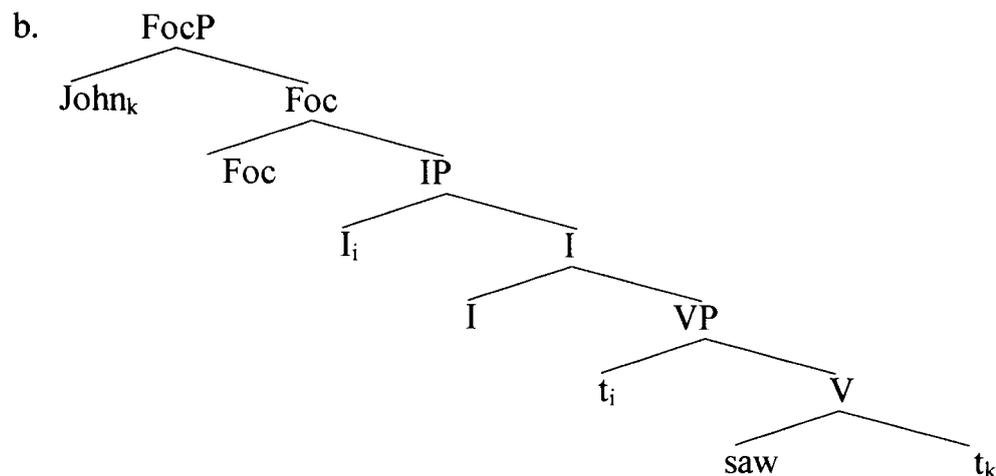
Rizzi (1996: 64) argues that for a structure to be interpreted as a wh-question, the wh-phrase must occupy the [Spec CP] position, in order to satisfy the Wh-Criterion defined below:

(6)   *The Wh-Criterion*
     - A wh-operator must be in Spec-Head Configuration with X [+wh].
     - An X [+wh] must be in Spec-Head Configuration with a wh-operator.

           (Rizzi 1996: 64)

Rizzi suggests that for the Wh-Criterion to be satisfied, a wh-phrase must be in a Spec-Head configuration with a head C that carries a [+wh] feature, so the [+wh] on C becomes in a Spec-Head configuration with the wh-phrase.

Following this brief sketch of head movement and A'-movement, the minimalist views regarding the nature of wh-movement and what triggers it will be considered.

2.3 Wh-movement in the Minimalist Program

Chomsky (1992) has proposed the Minimalist Program (MP) as a modification for previous theories which emerged from the Principles and Parameters framework (henceforth P& P). In the MP, specific language internal principles are more costly than the principles which all languages share. The MP calls for the elimination of both Deep Structure (DS) and Surface structure (SS) which were previously employed to account for some aspects of syntax within the P& P framework. The Spell-Out level has

replaced DS and SS. Spell-Out is the point at which the derivation is sent to Phonetic Form (PF) and Logical Form (LF) components. If movement takes place before Spell-Out, movement is said to take place in overt syntax. Covert movement takes place after the Spell-Out point. The MP has replaced the P& P operation Move α by the operations Merge, Agree and Move.

The derivation starts with the operation **Merge**. When two elements (α& β) are selected from the lexicon, they merge together to form a constituent (i.e. a projection). The next step is to choose another element from the numeration. This element is merged to the derivation to form another projection that contains the newly selected element, in addition to the projection formed earlier in the derivation. The operation is recursive till all items in the numeration have been consumed.

The operation **Agree** takes place in a Spec-Head relation. This relation is established between a lexical item α and a feature F in another node of the same derivation. For the operation Agree to take place, the features on the lexical item α must agree with the features carried by the other node which α targets.

The last operation is **Move**. It generates agreement between the lexical item α and the phrase determined by the feature F (FP). FP is merged to [α P] where F occupies the specifier position of α. F is now in the [Spec α] position. It is to this position that the constituent resorts in order to check a certain feature. After checking this feature, movement can safely take place. If movement happens before feature checking, the whole derivation is doomed to crash. Accordingly, Move is described as a Last Resort operation that has to take place in order to save the structure. Chomsky (1995) proposes the following definition for Last Resort:

(6)   Last Resort

        Move F raises F to target K only if F enters into a checking relation with a sublabel of K.

        (Chomsky 1995: 280)

Chomsky (1995: 177) offers the following representation to explain the relation among all the constituents of a given structure:

(7) XP$_1$

```
              XP₁
         ╱         ╲
       UP           XP₂
              ╱            ╲
           ZP₁              X'
        ╱      ╲        ╱      ╲
      WP       ZP₂ X₁          YP
                           ╱      ╲
                          H        X₂
```
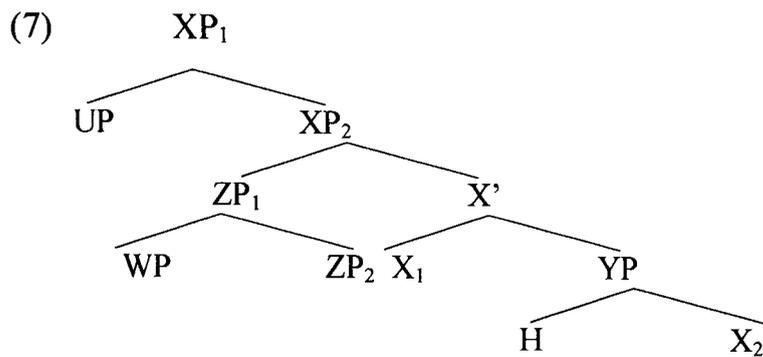
The domain of a head α is defined as the set of nodes contained in Max (α) which do not include α (Chomsky 1995: 178). In (7), the domain of X is {UP, ZP, WP, YP, H}. The complement domain of α is the subset of the domain which is reflexively dominated by the complement of the construction. In (7), YP and whatever it dominates are the complement domain of both X and H.

Chomsky (1995: 297) replaces the operation Move with Attract/Move and proposes the notion of Attract F defined below.

(8) *Attract F*
     K attracts F if F is the closest feature that can enter into a checking relation with a sublabel of K

The operation Attract/Move is triggered by the need to check features. If a certain feature is strong, it has to be checked before Spell-Out. In English, wh-phrases carry strong [+wh] features which are raised to the [Spec CP] positions via overt wh-movement. This movement involves the pied piping of the whole category (which is the wh-phrase) in order to yield a legitimate derivation that converges at PF. The idea that a wh-phrase enters into a checking relation with a strong head was reformulated as the Minimal Link Condition:

(9) *Minimal Link Condition*
     K attracts α only if there is no β, β closer to K than α, such that K attracts β

     (Chomsky 1995: 311)

2.3.1 Economy of Derivation

Rizzi (1990) has proposed Relativized Minimality[3](RM) which is another type of locality constraint on movement; the following configuration represents RM:

(10)   ...X...Z...Y...

(Rizzi 2001: 89)

The above configuration demonstrates that for RM, no relation can be established between Y and X if Z intervenes, and Z shares some properties with X. The following examples, from Zushi (2001), represent the basic assumptions of RM:

(11)   a. *John$_i$ seems that it is likely t$_i$ to win.

b.*Have$_i$ they could t$_i$ left.

c.*How$_i$ do you wonder which problem$_k$ to solve t$_i$ t$_k$?

(Zushi 2001: 13)

The example in (11a) involves a super-raising, whereby *John* moves to the matrix subject position, crossing the intermediate subject trace. In (11b), the Head-movement Constraint (HMC) is violated as the result of the movement of 'have' which crosses the head position filled by 'could'. The example in (11c) presents a wh-island violation; the wh-phrase *how* crosses the wh-phrase 'which problem' in the lower [Spec CP] position.

Chomsky (1995) takes Relativized Minimality to be an economy principle. In terms of economy considerations, movement should take the shortest steps. Hence, the MP accounts for the ungrammaticality of the examples in (11) in terms of the failure of *John*, *Have* and *How* to make the shortest move. Chomsky (1995: 190) refers to this constraint as the Shortest Movement Condition where shorter movement is preferred to one-step long movement. Since the MP calls for more economical derivations, Chomsky introduces the Procrastinate Principle, according to which covert movement is preferable unless overt movement is needed to produce a convergent derivation.

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[3] In Chapters 6 and 7, I will provide a detailed discussion of Relativized Minimality, and will investigate how it works in EA.

After recapitulating the basic assumptions of the MP regarding wh-movement, the question of why the MP excludes optionality will be the core of the next section.

2.4 Optional wh-movement and the MP

The present section presents the minimalist views on optional wh-movement. It aims at finding out why the MP cannot account for optionality under its realm. Previous proposals for/against the issue of optionality in wh-movement (e.g. Fukui 1993; Denham 2000) are reviewed. Cheng's (1997) account of apparent optionality in EA is also discussed.

2.4.1 The minimalist views on optionality

The linguistic issue of optionality has raised much debate in the MP which could not account for this phenomenon within its principles. In the MP, movement takes place mainly for feature checking purposes. Failure to achieve this purpose yields an illegitimate derivation that crashes at PF. If C carries a strong [wh] feature, wh-movement is said to take place. If C carries a weak [wh] feature, it yields covert movement. Chomsky (1995) argues that feature strength is a parametric value in a language. A language can have either a strong or a weak [wh] feature on C. In other words, in a given language, a feature can either be strong or weak, but it cannot be both; hence, optionality is excluded. In the MP, derivations are compared and what survive are the most economical ones. Therefore, there is no room for optionality.

Optionality poses a problem for the MP which calls for more economical derivations. Chomsky (1995) argues that Move/Attract α is a Last Resort operation which aims at eliminating the unreadable features at the PF/LF interfaces. Under the Economy of Derivation, when an element obligatorily moves, the same numeration can no longer be used to form a different structure or a different linear order. Accordingly, the MP contradicts optionality.

2.4.2 Previous proposals on optional wh-movement
2.4.2.1 Fukui (1993)

Fukui discusses the issue of optionality which cannot be accounted for under the Economy of Derivation proposed by Chomsky (1995). Fukui's paper is an attempt to find a specific measure of the cost of formal operations in a grammar to come up with

the conditions that can permit optional movement. Fukui (1993: 400) proposes the Parameter Value Preservation (PVP) measure in (12):

(12)   The parameter value preservation (PVP) measure:
        A grammatical operation (Move α, in particular) that creates a structure that is inconsistent with the value of a given parameter in a language is costly in the language, whereas one that produces a structure consistent with the parameter value is costless.

Fukui (1993) claims that if the application of Move α results in a structure that fits the PVP defined in (12), and meets the parameter settings of a given language, the operation Move α is said to be costless and hence, it satisfies the Economy of Derivation which necessitates all derivations to be minimal in cost. Fukui (1993) applies his PVP to English and Japanese, and argues that this measure of cost is also applicable to Chinese and some VSO languages, such as Chamorro and Irish. Fukui (1993: 400) suggests that a costless operation can be truly optional if it is not derived by any force such as the need to satisfy the Case filter, or to establish the specifier-head agreement. He presumes that his PVP measure provides a necessary condition for optional movement. If the PVP measure judges the application of Move α to be costless, this movement is said to be optional. When, on the other hand, the PVP measure evaluates an application of Move α to be costly, movement becomes obligatory and no longer optional. In the latter case, Fukui proposes that the operation is obligatory, as other principles and conditions force the application of Move α.

Fukui (1993) suggests the following structures to represent the idea that English is a head-initial language:

(13)   a. $[_{V'} [_V \text{eat}] [_Y{}^{max} \text{ an apple}]]$

        b. $[_{X'} [X^0 Y^{max}]$

                (Fukui 1993: 401)

He claims that each language has a particular parameter setting which helps establish a relation (i.e. extended parameter value) between the head and its complement. This relation is referred to as the Canonical Precedence Relation (CPR). Fukui (1993: 405) suggests that in English, the structure created by the application of wh-movement is not

in line with the CPR=V^0 > Y^{max} due to its head-initial parameter. The idea is illustrated by the following example:

(14)   What$_i$ did John buy t$_i$?

(Fukui 1993: 405)

According to Fukui (1993), the wh-phrase 'what' in the above example moves to an initial position and the wh-question is no longer representing the CPR=V^0 > Y^{max}. The PVP measure presumes that such a movement is not truly optional, as it is triggered by the [+wh]-feature associated with the head C. As a consequence, this costly leftward movement of the object wh-phrase *what* cannot be optional.

2.4.2.2 Denham (2000)

Denham argues that Babine-Witsuwit'en (BW) exhibits genuinely optional wh-movement. In Babine-Witsuwit'en, optional fronting of wh-phrases is not derived by pragmatic factors like Topicalisation, Focus or Clefting. Rather, it is the result of optional selection of C from the lexicon. She suggests that when the wh-feature and C appear in the numeration, the wh-feature and the wh-phrase are raised to the [Spec CP] position for feature checking in C. If C does not appear in the numeration, wh-movement does not take place. In BW, the fronted and the *in situ* wh-phrases have the same meaning. The fronted wh-phrases evince island constraints like the wh-phrases which undergo syntactic wh-movement. Denham investigates optional wh-movement in different types of wh-constructions in BW, but I limit the discussion to her analysis of simple and embedded wh-questions, whereby she argues that wh-phrases can remain *in situ* or get fronted within embedded and matrix clauses, as in the following examples:

(15)   George [Lillian **ndïtnï book**   yik'iyelhdic] yilhni?
        George Lillian which book   read   told
        'Which book did George tell Lillian to read?'

(16)   George [**ndïtnï book**   Lillian yik'iyelhdic] yilhni?
        George   which book   Lillian read   told
        'Which book did George tell Lillian to read?'

(17)   **ndïtnï book** George [Lillian   yik'iyelhdic] yilhni?
  which book George Lillian   read   told
  'Which book did George tell Lillian to read?'

(Denham 2000: 204)

The examples in (15)-(17) demonstrate that the wh-phrase *ndïtnï book* 'which book' can be fronted. Its non-interrogative counterpart *ggï book* 'that book' cannot get fronted in embedded and matrix clauses as seen by the following illicit examples:

(18)   *George [*ggï* **book** Lillian yi'iyelhdic] yilhni?
  George that book Lillian   read   told

(19)   **Ggï book** George   [Lillian   yik'iyelhdic] yilhni?
  that book George   Lillian   read   told
  George told Lillian to read that book.

(Denham 2000: 205)

Denham argues that the ungrammaticality of fronting the non-interrogative NPs in (18)-(19) suggests that the fronting of the wh-phrases in (15)-(17) is purely syntactic, as it cannot be the result of topicalisation or scrambling. If they are derived by topicalisation, it would be expected that non-interrogative NPs can also be topicalised. Thus, the impossibility of fronting the non-interrogative NPs in (18)-(19) suggests that interrogative and non-interrogative constructions in BW are derived by two separate operations.

Denham (2000) attempts to prove that the fronting of the wh-phrases in (15)-(17) is purely syntactic to support her claim that BW has a genuine optionality, which can be proposed under the framework of the MP. Denham (2000: 207) argues that the MP allows optional selection of functional categories such as C in the numeration. She suggests that in BW, the interrogative head C can optionally be selected for a given derivation. When C is selected, a wh-phrase which inherently carries a [+wh] feature is raised to delete the uninterpretable feature in C. She adds that the wh-phrase retains the [+wh] feature in both *in situ* and fronted positions, so the interrogative C triggers movement. In topicalised constructions, on the other hand, the inherent wh-features are absent.

To sum up, Denham explains the true optionality in BW based on the idea that the MP allows lexical and functional items to be freely selected in the numeration. If the two derivations (the fronted/*in situ* wh-questions) are identical, the MP would choose the most economical one and disallow the other. Denham argues that it is not the case in BW. The two derivations take a distinct array of items which have been selected in the numeration: one with C and the other without C. The result is the two distinct derivations; the first derivation where C is selected involves wh-movement; the second derivation, which does not select C, has its wh-phrase *in situ*. In Denham's view, this proposal achieves a sort of reconciliation between the principles of the MP and the optional wh-movement in BW.

2.4.2.3 Cheng (1997)

Cheng (1997) introduces the Clausal Typing Hypothesis, whereby she observes that clauses are typed at S-structure either by a question particle, or by overt wh-movement. Languages which leave their wh-phrases *in situ* within simple wh-questions normally use overt markings (e.g. particles) in their yes/no questions. If a language possesses overt yes/no question particles, it should also have (non)-overt wh-particles. The clause is typed as interrogative by either a question particle, or by the movement of a wh-phrase to the Spec CP position; no language can have the two mechanisms. Cheng's Clausal Typing Hypothesis is stated below.

(20)   Clausal Typing Hypothesis

Every clause needs to be typed. In the case of typing a wh-question, either a wh-particle in C is used or else fronting of a wh-word to the Spec of C is used, thereby typing a clause through C by Spec-head agreement.

(Cheng 1997: 22)

Cheng discusses Mandarin Chinese and English as examples of wh-in-situ and wh-movement languages respectively. She argues that Mandarin Chinese exhibits wh-particles which are base-generated in C. Thus, the clause is typed as interrogative without the need for wh-phrases to move. The operation Move in a wh-in-situ language is costly and is not compatible with Chomsky's (1989) Principle of Economy of Derivation. In Mandarin Chinese, wh-phrases move at LF level to the [Spec CP]

position for scope selection. In English, the clause is typed as interrogative by the need to move the wh-phrase, which inherently carries the [+wh] feature, into C.

Languages which have both wh-fronting and wh-in-situ strategies are problematic for Cheng's hypothesis. In order to eliminate the clash between this apparent optionality and her hypothesis, Cheng argues that in these optional fronting languages (e.g. EA and Bahasa Indonesia), the fronted argument wh-phrase is analysed as the subject of a reduced cleft construction, while the fronted adjunct wh-phrase is the result of a topicalisation process. Cheng claims that these seemingly optional wh-movement languages are wh-in-situ languages which exhibit a base-generated wh-particle in matrix C.

Cheng divides wh-phrases in EA into argument and adjunct wh-phrases. She argues that a wh-question with fronted argument wh-phrase is an instance of a cleft structure. She proposes that in EA, relative clauses, cleft structures and wh-questions have similar structures as illustrated by the following examples:

(21)   il-raagil   illi   Mona   šaafit-uh   (Relative Clause)
       the-man   that   Mona   see (3SF.PAST)-him
       'the man that Mona saw'

(22)   (dah)   Muhammad   illi   gih   (Cleft Structure)
       this   Muhammad   that   come (3SM.PAST)
       'It is Mohammed who came.'

(23)   miin   illi   Mona   Darabit-uh?   (Wh-question)
       who   that   Mona   hit (3SF.PAST)-him
       'Who did Mona hit?'

           (Cheng 1997: 44)

Cheng proposes a wh-cleft analysis for wh-questions with fronted argument wh-phrases based on the similarity between a cleft structure (as in (24)) and a wh-question with a fronted wh-phrase which resembles a reduced cleft[4] structure (as in (25)):

---

[4] McCloskey (1979: 90) suggests that in a full cleft structure, a copula verb and an expletive normally precede a constituent in a Focus position (a clefted noun). If the copular and the pronominal argument are missing, the resulting structure is a reduced cleft. Cheng (1997) follows McCloskey (1979) in differentiating between cleft and reduced cleft structures.

(24)   It is [CP [DP Sharon [CP OPᵢ that [IP Marcia likes tᵢ]]

(25)   [CP [IP miinᵢ [CP OPᵢ illi [IP Mona šaafit-uhᵢ]]]?
        who   that   Mona   see (3SF.PAST)-him
        'Who did Mona see?'

        (Cheng 1997: 53)

She presumes that the wh-phrase *miin* 'who' in (25) is base generated in its s-structure position as the subject which is followed by the predicate *illi Mona šaafit-uh* 'that Mona saw'. Within this predicate clause, an empty category moves to the [Spec CP] position to form an operator-variable structure.

According to Cheng (1997), fronting the adjunct wh-phrases is similar to topicalising an NP or a PP.

(26)   fi-l-šaariᶜ   dah,   Mona kaanit bitddawar ᶜala ša'a.   (Topicalisation)
        on-the-street DEM   Mona was   looking   for apartment
        'On that street, Mona was looking for an apartment.'

(27)   maᶜa miin Mona raaHit   il-Qaahira?   (Wh-question)
        with whom Mona go (3SF.PAST) to Cairo
        'With whom did Mona go to Cairo?'

        (Cheng 1997: 47)

Cheng claims that the fronted adjunct wh-phrase in (27) is an instance of topicalisation, whereby *illi* has to be absent[5].

To summarise, Cheng's main idea is that in EA, wh-questions with fronted argument and adjunct wh-phrases are instances of wh-cleft and topicalised constructions respectively. Accordingly, EA does not reveal true optionality.

2.5 Partial wh-movement

In addition to wh-in-situ and wh-movement languages, some languages form their wh-questions via the application of partial wh-movement. Examples of these languages are

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[5] In Chapter 6, I will provide a detailed analysis of *illi*, and account for its role in the formation of wh-question. The question of why *illi* has to be absent within adjunct wh-questions will be addressed in Chapter 7.

Malay (Cole & Hermon 2000), German (McDaniel 1989; Sabel 2000), Hungarian (Horvath 1997), Kikuyu, Slave and Iraqi Arabic (Fanselow 1997).

Sabel (2000) investigates partial wh-movement in German, whereby a wh-phrase neither gets fronted, nor remains *in situ*. The wh-phrase goes half way to the embedded [Spec CP] of the clause. In addition, the wh-expletive *was* 'what' is realised in the [Spec CP] position of the matrix clause. This idea is illustrated by the following example:

(30)   [$_{CP1}$ Was   meinst   du   [$_{CP2}$ wen$_i$ [$_{IP}$ Peter   Hans   t$_i$ vorgestellt   hat]]]?
       WH   think   you.$_{nom}$ who.$_{acc}$ P.$_{nom}$ H.$_{dat}$ introduced   has
       'Who do you think Peter introduced to Hans?'

(Sabel 2000: 410)

Sabel (2000) argues that partial wh-movement in German meets the Wh-Criterion proposed by Rizzi (1996) as illustrated below:

(31)   [$_{CP1}$ Was   meinst   du   [$_{CP2}$ wen$_i$ [$_{IP}$ Peter   t$_i$ die   Leute
       WH   think   you   who.$_{dat}$ Peter.$_{nom}$ the   people.$_{acc}$

vorgestellt   hat]]]?
introduced   has
'To whom do you think Peter has introduced to the people?'

(Sabel 2000: 414)

Sabel argues that in (31), the verb *meinen* 'think' selects a [-wh] complement. This yields a mismatch between the wh-phrase *wen* 'who' in [Spec CP] of the embedded clause which is [-wh], and the [+wh]-phrase *was* in the matrix clause. This mismatch results in a violation of the Wh-Criterion. Thus, in order to satisfy the Wh-Criterion, Sabel suggests that the wh-expletive *was* (which is [+wh]) is a wh-operator that heads the chain (*was, wen, t*). The [+wh] feature is transferred to the head of the chain, so the Wh-Criterion is satisfied if it is applied to the wh-chain in which *wen* is a [-wh] element similar to an intermediate trace.

Sabel (2000: 436) proposes a feature-based analysis to account for partial wh-movement in German. He suggests the presence of a strong [+Focus] feature in C^0 and a weak [+wh] feature in the same head.

(32)   [CP1 Was meinst du [CP2 was Peter glaubt [CP3 wen_i   Maria t_i liebt]]]
          WH   think you   WH P.   believes   who_acc M.   loves

        (Sabel 2000: 437)

In the above example, the wh-expletive *was* checks the [+Focus] feature in the two heads C_1 and C_2. The Focus feature occurs in the head C_1 and in all the head-Cs embedded under it. The wh-phrase *wen* 'who' has to move to the [Spec CP3] position to check the strong [+Focus] feature in C^0. The insertion of the wh-expletive and the movement of the wh-phrases are triggered by the need to check the strong [+Focus] feature in C^0.

To sum up, in German, wh-phrases do not make a full wh-movement of the English type. Rather, they move to the [Spec CP] of the embedded clause provided that the wh-expletive *was* 'what' occupies the [Spec CP] position of the matrix clause. Partial wh-movement in German (which is triggered by feature-checking purposes) satisfies Rizzi's (1996) Wh-Criterion.

2.6 Conclusion

The fact that some typical wh-movement languages have a possibility of wh-in-situ adds to the many implications on the nature and the interpretation of wh-movement. The present chapter presented the minimalist assumptions regarding wh-movement and its effects on interfaces. Two types of movement were referred to: Head-movement and A'-movement. The chapter focused on wh-movement as an example of A'-movement. Optional wh-movement and the arguments for/against it were also discussed. Fukui (1993) advocates optionality if it is not driven by any force, and if it proves to be a costless operation. He argues that optional leftward movement is preferred as it is not costly. Denham (2000), on the other hand, observes that Babine-Witsuwit exhibits true optionality whereby the fronting of wh-phrases is the result of optional selection of C from the lexicon; she suggests that optionality is not the result of Topicalisation, Focus or Clefting. Cheng (1997) argues against optionality in EA; she views the fronting of EA argument wh-phrases as being an instance of cleft structures, while the fronting of adjunct wh-phrases resembles topicalising an NP. Sabel (2000) accounts for partial wh-movement in German in terms of feature-checking.

After reviewing the main predictions that the MP makes as far as wh-movement is concerned, I will discuss in the following chapter the experimental study carried out on some EA speakers to test their grammaticality judgement. The study made use of both quantitative and qualitative research methodology for data analysis.

Chapter 3: Experimental Study on Sentence Judgements

3.1 Introduction

Egyptian Arabic is used here to mean the Cairene dialect (which is the dialect of the Egyptian Capital). It is considered to be the dominant dialect, as it is used in television, radio and other mass media. According to Anwar (1979), Egyptian Arabic is spoken by educated Egyptians on a regular basis; it has a mixed style which draws on Modern Standard Arabic. In Egypt, one can hear Modern Standard Arabic competing with a non-standard dialect in a TV show. It is also notable that educated Egyptians usually adapt the form of language they use to the situation they are in.

Modern Standard Arabic (MSA) is a relatively unified language that exists alongside a wide range of colloquial varieties, each spoken in a different Arab country. In the last decades, after a long period of negligence, there has been an increasing tendency towards investigating and analysing Arabic regional dialects. Examples of the Arabic dialects which have gained substantial consideration in linguistic theory are: Palestinian Arabic (Shlonsky 1997, 2002); Iraqi Arabic (Wahba 1991; Simpson 2000); Lebanese, Syrian, Moroccan, and Kuwaiti Arabic (Brustad 2000; Aoun et al 2010); and Egyptian Arabic (Wahba 1984; Edwards 1988, 2006, 2010).

The present study is a further attempt towards an incorporated analysis of wh-questions in EA. Its major goal is to investigate the different strategies employed by the grammar of EA to form wh-questions. One of the instruments which the present study utilised to achieve its goal is the experimental study introduced below.

This chapter describes the phases and the results of the experimental study which was carried out on sentence judgements. A group of 25 EA speakers were given a questionnaire that contained a sample of wh-questions, and were asked to make grammaticality judgements. The data collected in this study were described and explained both quantitatively and qualitatively as will be discussed later in the chapter. The chapter is organised as follows: section 2 lays down the objectives and the research questions. Section 3 introduces the methodological and the analytical frameworks within which the experimental study was conducted. Section 4 describes the design of the questionnaire with detailed introduction to its different sections. Section 5 focuses on defining the study population and the sample size. Section 6 presents the quantitative

data analysis and its results. Section 7 introduces the subsequent qualitative phase. Section 8 sums up the findings of the experimental study. Section 9 concludes the chapter.

3.2 Objectives

The experimental study was intended to investigate the issue of apparent optionality in EA. The main thread of the chapter will address the following questions: (1) what are the common strategies that EA speakers use to form wh-questions; (2) if there is more than one strategy, what is the preferred one; (3) can all wh-phrases in EA either be fronted or remain *in-situ*? (If the answer to this last question is no, what is the category of wh-phrases that are deprived of this apparent optionality); (4) what are the factors that may affect the informants' grammaticality judgements; and (5) do the experimental findings support/refute the hypothesis that EA is a non-wh-movement language? The experimental study was carried out as a complementary method of analysis that aimed at seeking the informants' judgement on the well-formedness of some wh-questions.

EA, as an example of a non-standard form of language, embraces a wide range of syntactic structures as far as wh-questions are concerned. I claim that these syntactic structures are variants of the two basic strategies of question formation defined in EA. In addition to seeking grammaticality judgements, a small group of EA speakers were later interviewed and consulted for their intuitions regarding the presuppositions which these structures may be associated with (the interview results are discussed in Chapters 6 and 7). Thus, the main objective of the present study was to carry out grammaticality judgements on the basic and the derived structures of EA wh-questions. In pursuit of this aim, a group of EA speakers were asked to make inferences about the (un)grammaticality of some syntactic structures, rather than the presuppositions associated with each syntactic structure.

3.3 Research methodology (data collection and analysis)

To answer the 'what' and the 'why' questions, the study used one of the research methods that has recently become a leading trend in the social sciences[1]. It is a mixed methods research which combines quantitative and qualitative research methods in one

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[1] For more detailed overview on the mixed methods research, the reader is referred to Creswell (1994); Tashakkori &Teddlie (1998, 2003); and Angouri (2010) among others.

study (Creswell 2003: 208-209). A short summary will suffice here as the remainder of the chapter presents a detailed description of the research methods.

The data were collected and analysed both quantitatively and qualitatively to ascertain whether or not the findings of the two research methods address the research questions of the chapter. For the quantitative data collection, I used what Burns (2009: 117) calls non-observational methods, whereby data were collected via a closed-response questionnaire on different types of wh-questions. The aim of this quantitative phase was to obtain an overview regarding common strategies of forming wh-questions.

For the qualitative data collection, an observational method (Brown 2009: 200) was employed, whereby the data were collected via the open-response[2] questions on the questionnaire. This observational method gave the informants the option to provide a range of possible answers, which may reflect their own views, on the formation of wh-questions in EA. The subsequent qualitative phase of the study investigated the factors that seemed to affect the informants' grammaticality judgements.

For the application of the mixed research methods, the *Explanatory Design* technique (Ivankova& Creswell 2009) was used. First, the quantitative data were collected and analysed. Then the qualitative data were processed. The weight was placed on the quantitative phase which focused on data collected from a 48-item questionnaire from 25 informants, while the qualitative phase focused on the structures reported by the informants. The results will be reported in the same sequence order as indicated in figure 1:

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[2] Rasinger (2010: 64) calls the type of question that asks the respondents to provide their answers, rather than to choose from possible answers, 'open-ended questions'; further details on the open/closed response questions are included in the next section.

Mixed research methods
⬇
Quantitative Data Collection (Closed-Response Questionnaire)
⬇
Quantitative Data Analysis   (Statistical Technique)
⬇
Qualitative Data Collection   (Open-Response Questionnaire)
⬇
Qualitative Data Analysis
⬇
Interpretation of Results   (Quantitative and Qualitative)
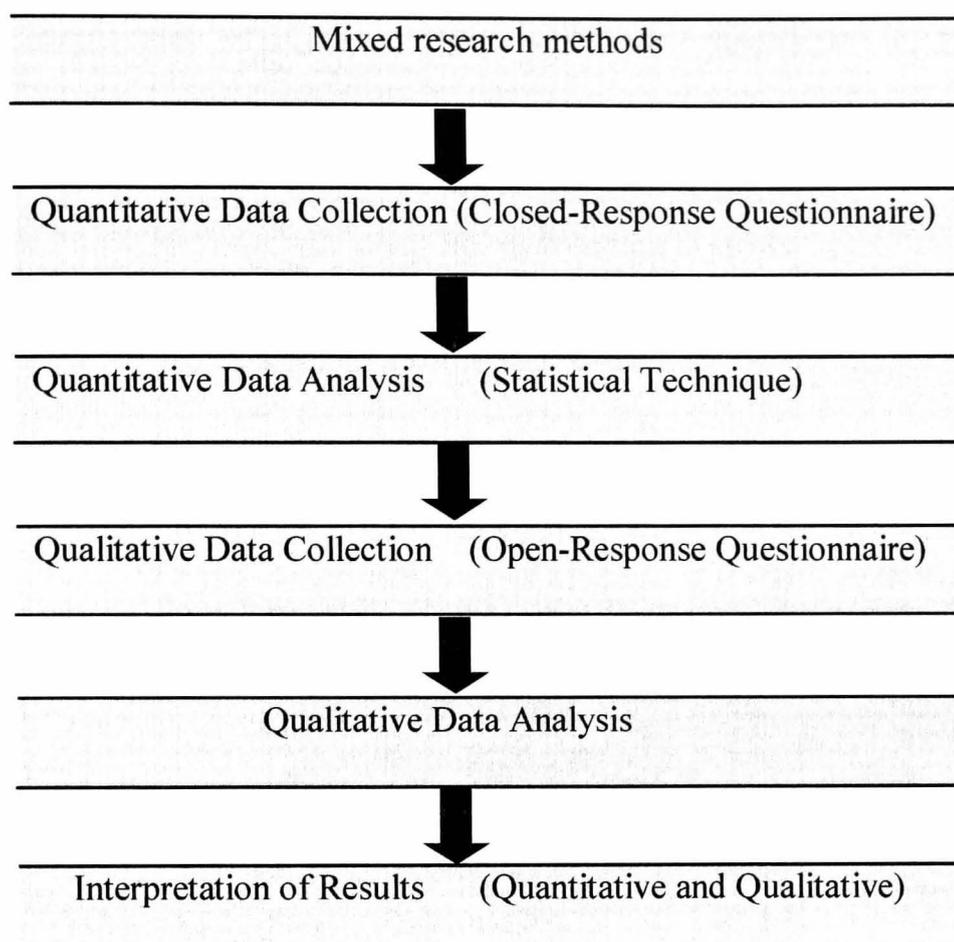
Figure 1: Procedures of the *Explanatory Design*

3.4 Questionnaire: length, organisation and ethics

Some critics argue against the use of grammaticality judgements; for example, Henry (2005: 1599-1600) argues that one potential criticism of grammaticality judgements is that a native speaker of a non-standard dialect might be aware of the fact that the structures he/she uses in his/her daily life are viewed as being ungrammatical by the speakers of the standard dialect. She adds that relying on corpora is a more valid methodology, and more profitable than seeking grammaticality judgements because a corpus usually traces the frequency of, and the speakers daily usage of, some phenomena in linguistics.

Culicover (1997: 1), on the other hand, points out that 'the methodology that has proven most productive in the development of linguistic theory has been to closely examine selected sentences and phrases that native speakers of a language judge to be possible, impossible, and marginal'. For the purposes of this study, Culicover's (1997) methodology was adopted. Therefore, the data were collected via a questionnaire which was aimed at measuring some EA native speakers' perception of their language, and

testing their ability to make grammaticality judgement for wh-questions. Since the present study focuses mainly on a single aspect of the syntax of EA, namely wh-questions, data collected by a corpus (which are based on either observation or recording) are not considered to be more reliable than the use of a questionnaire. This claim can be justified in two main reasons: first, it is not possible to ensure that a large corpus of informal speech could offer sufficient data regarding wh-questions; second, data collected by corpora could trace and keep a record of the correct and the most common structures that the native speakers use. This type of data is not sufficient since a corpus does not capture grammatical/ungrammatical structures. I suggest that the ungrammaticality of certain wh-constructions with fronted wh-phrases could have its implications on the analysis of EA as a wh-in-situ language.

The questionnaire was based on grammaticality judgements, whereby the informants were given some wh-questions, and were asked to decide whether or not these questions were grammatical within their native language. In addition, the informants were asked to provide the grammatical counterparts (from their point of view) for the structures which they judged to be ungrammatical. This, in fact, aims at reflecting the *emic*[3] nature of this portion of the questionnaire.

The questionnaire involves 48-questions containing both closed-response questions, whereby informants choose 'right' or 'wrong', and open-response questions that ask the informants to supply written answers in the space provided in their own words. Numerical data were collected from the closed-response items questionnaire, and were analysed quantitatively. For open-response questions which aimed at eliciting data and comparing responses, the informant who judged a structure to be ungrammatical was asked to write the correct structure to the best of his/her knowledge. The questionnaire contains different sections; each represents a wh-question type. Some informants were approached personally, while others were contacted by email. In both cases, the response rate was high. The complete questionnaire comprises of a total of seven sections (see Appendix A).

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[3] The term *emic* is taken from (Heigham & Croker 2009: 8) where it is defined as a way of allowing the participants to get involved in the research context.

Before the actual study was conducted, a pilot study was carried out to test the feasibility of the questionnaire and to ascertain whether it was valid or needed modification and refinement. In this study, content, structure and response were considered to signify whether the questionnaire was valid or not. It is worth noting that the initial questionnaire which was designed for the pilot study started with more grammatical[4] structures. During the pilot study, it was apparent that when the informants were exposed first to these grammatical structures, they tended to employ them later as the grammatical counterparts they were asked to give. As a consequence, the questionnaire was redesigned in this experimental study to begin with the structures which were believed to be deviant. In the modified questionnaire, the informants were first exposed to a set of deviant sentences to guarantee that their judgement of a certain sentence was not influenced by another sentence of the same type as suggested by Greenbaum (1973: 205). Table 1 summarises the types of questions presented in the questionnaire.

Section 1 includes a set of fill-in questions that ask the informants to provide brief items of information (e.g. background and knowledge). This type of question is designed to investigate whether or not different aspects (e.g. educational and demographic) interact with the informants' daily use of wh-questions. It also collects some demographic and bio-data items. For example, question 4 asks the informants to state their city of origin: the purpose of this is to investigate whether or not people who live in the lower part of Egypt tend to be less influenced by the non-standard dialects than those from Upper Egypt. Another example is question number 5 which seeks the grammaticality judgements of those who spent part of their life living within any Arabic- speaking country other than Egypt. It was anticipated that those who had lived in some Arabic-speaking countries other than Egypt (e.g. Saudi Arabia, United Arab Emirates and Kuwait) were likely to have been influenced by the standard form of spoken Arabic which prevails within each respective country. I made particular reference to these Arabic-speaking countries because it is anticipated that these countries have a large population of Egyptian families residing within them. The questionnaire was designed to be anonymous.

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[4] I use the phrase 'more grammatical' here drawing on my intuitions as a native speaker of EA.

Table 1: The different types of questions and their labels

Section number	Type of question	Question label	Example
1	Biographical information	f-qs	In which part of Egypt is your city of origin situated?
2	*illi*+wh-phrase questions	*illi*+wh-qs	illi raaH la-ha **anhi mustašfa**? 'Which hospital did he go to?'
3	wh-phrase+*illi*-questions	wh+*illi*-qs	**miin illi** faaz b-l-gayza? 'Who won the prize?
4	Embedded wh-in-situ	e-wh-i	il-kul ᶜirif il-Hadsa HaSalit **feen**. 'All knew where the accident took place.'
5	Embedded wh-fronted	e-wh-f	il-kull ᶜirif **leeh** HaSalit il-Hadsa. 'All knew why the accident took place.'
6	Simple wh-fronted	s-wh-f	**miin** faaz b-l-gayza? 'Who won the prize?
7	Simple wh-in-situ	s-wh-i	'asbaab il-Hadsa **eeh**? 'What are the causes of the accident?'

To summarise, the questionnaire opens with some questions that ask about the informants' social and educational backgrounds. Sections 2-7 correspond to different types of wh-questions; in each section there are seven examples. Section 2 presents wh-questions with initial *illi* and *in situ* wh-phrases (*illi*+wh-qs). Section 3 presents another form of *illi*-question whereby a wh-phrase is fronted and followed by *illi* (wh+*illi*-qs). Section 4 provides embedded wh-questions with *in situ* wh-phrases (e-wh-i). Section 5 presents embedded wh-questions whereby wh-phrases are fronted within the embedded questions (e-wh-f). Section 6 considers simple wh-questions with fronted wh-phrases (s-wh-f). Section 7 presents simple wh-questions with *in situ* wh-phrases (s-wh-i).

3.5 The informants

The informants consisted of 25 postgraduate PhD students from different institutions within the UK. Six of the informants were linguistically non-naive informants. They were chosen to ascertain whether or not their linguistic background may affect their grammaticality judgements. This idea is suggested by Henry (2005: 1599) who argues that speakers trained in linguistics suggest more efficient responses since they are aware of what a grammaticality judgement means.

All my informants belong to the age group of 30-45 years old. The informants have all been educated to the same standard; they each hold an MA and are currently working towards achieving a PhD within the UK. Although the informants are from different cities within Egypt, some of them have spent a number of years living in other Arabic-speaking countries, either as a child or as a mature employee. In the qualitative phase, I investigated whether or not the demographic and the social discrepancies among the informants affected their responses to the questionnaire.

3.6 Quantitative data analysis

The major claim of this present work is that EA has actual cases of optionality. The experimental study was carried out to ascertain whether or not its results advocate/contradict this claim. The following hypotheses about EA wh-questions are adopted: first, EA is a wh-in-situ language whereby the *in situ* strategy is the most common and the most preferred form of wh-question; second, the type and the position of the wh-phrase can have predictable effects on grammaticality judgements; and third, *illi* cannot co-occur with all wh-phrases. These hypotheses can be supported provided that the *in-situ* position achieves a higher rate of grammaticality than the fronted position. These hypotheses can also be maintained by comparing and contrasting the distribution of wh-phrases (argument and adjunct) in simple and embedded wh-questions. Thus, for grammaticality judgements, three variables will be considered: the type of the wh-question (e.g. simple or embedded), the category of the wh-phrase (e.g. argument or adjunct), and the position of the wh-phrase (e.g. fronted or *in situ*). The grammaticality judgement regarding a wh-question is a variable process; it depends on the type and the position of the respective wh-phrase. In order to assign a variable value to a wh-question, predefined criteria (e.g. the type of the wh-phrase and the position it

assumes within the wh-question) were used. The relation between the biographical data and the respective grammaticality judgement was also tested. The data were included within all data matrices and were analysed in the subsequent qualitative phase.

3.6.1 Data coding

The first step of data processing involved converting the answers that the informants gave into numerical form via coding procedures. The answers of the closed-response items were re-coded into a binary system of 'right' and 'wrong' responses, whereby each pre-determined response option was assigned a number. The number '1' was assigned to the answer 'right' and the number '2' was assigned to the answer 'wrong'. Furthermore, in order to identify the 25 informants in the first column, numbers from 1 to 25 were assigned to each informant. Within the gender variable, 'male' was assigned the number 1 and 'female' was assigned the number 2. Table 2 illustrates the numerical value ascribed to each item in Section 1, which also includes fictive data about the informants.

Table 2: Biographical data matrix

Item		Numerical Value
Gender	Male	1
	Female	2
Subject area	Linguistics	1
	Engineering	2
	Maths	3
	Biology	4
	Physics	5
	Fine arts	6
	Other	7
Demography	Lower Egypt	1
	Middle Egypt	2
	Upper Egypt	3
Living in other Arabic country	Yes	1
	No	2
Self-assessed knowledge of MSA	Very Good	1
	Good	2
	Some	3
	Little	4
	None	5

Each section of the questionnaire was also coded into a data matrix, resulting in six data matrices; each matrix presents a type of wh-question (see Appendix B). The data for initial *illi* with *in situ* wh-phrases (*illi*+wh-qs) were represented in Table 7. The data for the wh-questions with fronted wh-phrases followed by *illi* (wh+*illi*-qs) were displayed in Table 8. The data for embedded wh-in-situ questions (e-wh-i) and embedded wh-fronted questions (e-wh-f) were presented in Tables 9 and 10 respectively. The data matrices for simple wh-fronted questions (s-wh-f) and simple wh-in-situ questions (s-wh-i) were presented in Tables 11 and 12 respectively.

3.6.2 The quantitative analysis

The quantitative data were coded into six data matrices using Microsoft's Excel Spreadsheet. Due to the small sample size, simple descriptive statistics were used for the purpose of data analysis and to convert the score for each grammaticality judgement regarding six types of wh-constructions to a percentage, bearing in mind that each section of the questionnaire encompasses both argument and adjunct wh-phrases. At this stage, the percentage of the informants who agreed on the *fronting* strategy was measured and compared to that of the *in situ* strategy, then the strategy which gained the greatest percentage (with which wh-phrase, in which position) was decided.

The results of the questionnaire were distributed amongst six figures; each figure represents the number of informants who judged the respective structure to be grammatical (see Appendix C). To facilitate comparison of the results, the following tables display the percentage of argument/adjunct wh-phrases that were judged to be grammatical (in different positions):

Table 3: The percentage of argument wh-phrases judged as being grammatical

The position of the wh-phrase	The wh-phrase *miin* 'who'		The wh-phrase *eeh* 'what'		The wh-phrase *anhi* 'which'	
	Number	Percentage	Number	Percentage	Number	Percentage
simple-wh-in-situ 's-wh-i'	0	0%	19	76%	20	80%
simple-wh-fronted 's-wh-f'	14	56%	22	88%	7	28%
embedded-wh-fronted 'e-wh-f'	18	72%	20	80%	11	44%
embedded-wh-in-situ 'e-wh-i'	0	0%	22	88%	20	80%
wh-phrase+*illi*-questions 'wh+*illi*'	25	100%	7	28%	16	64%
illi+wh-phrase questions '*illi*+wh'	14	56%	0	0%	8	32%

As shown in Table 3, 14 of the 25 informants (56%) judged the wh-question with the fronted wh-subject *miin* 'who' to be grammatical. This percentage suggests that the *in situ*[5] wh-subject *miin* is anticipated to be more acceptable. However, the wh-question with final wh-subject (without *illi*) was judged to be ungrammatical by all the informants. The argument wh-phrase that was accepted as being grammatically correct in both fronted and *in situ* positions is the subject wh-phrase *eeh* 'what'. The fronted object wh-phrase *anhi* was judged to be grammatically correct by 28% of the informants, while its *in situ* counterpart was judged to be more acceptable as it gained

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[5] I use the phrase *in situ* in this particular example to refer to non-initial wh-phrases. The fact that all the informants have judged the structure with non-initial wh-subject (or what I refer to as *in situ* wh-phrase) to be ungrammatical can be explained in terms of the unavailability of the VOS word order in EA. This does not mean that wh-arguments cannot occur in clause-final positions; in Chapter 6, I will discuss some wh-questions with final arguments and will suggest that they are variants of *illi*-questions. For example, *illi fataH il-baab **miin*** 'who opened the door?' will be claimed to be derived from **miin** *illi fataH il-baab* 'who opened the door?'

80%. All the informants agreed that the wh-question with the fronted argument wh-phrase *miin* 'who' followed by *illi* was grammatically correct. The following phenomena highlight the role which *illi* plays in the formation of wh-questions; the fronted *miin* without *illi* was considered to be grammatical by 56% of the informants, and that the same wh-phrase was considered to be grammatical by 100% of the informants when it is followed by *illi*. This will be discussed later in Chapter 6. The informants judged the structure *illi+eeh* to be ungrammatical, while the structure *illi+anhi* was found more acceptable by 32% of the informants.

For the grammaticality judgments regarding the adjunct wh-phrases (e.g. *feen* 'where', *leeh* 'why', *izzayy* 'how', and *imta* 'when'), see Table 4 below.

Table 4: The percentage of adjunct wh-phrases judged as being grammatical

The position of the wh-phrase	The wh-phrase *feen* 'where'		The wh-phrase *leeh* 'why'		The wh-phrase *izzayy* 'how'		The wh-phrase *imta* 'when'	
	N-	Percent-	N-	Percent-	N-	Percent-	N-	Percent-
simple-wh-in-situ 's-wh-i'	24	96%	24	96%	24	96%	25	100%
simple-wh-fronted 's-wh-f'	17	68%	18	72%	20	80%	9	36%
embedded-wh-fronted 'e-wh-f'	19	76%	20	80%	18	72%	20	80%
embedded-wh-in-situ 'e-wh-i'	24	96%	22	88%	22	88%	22	88%
wh-phrase+*illi*-questions 'wh+*illi*'	0	0%	0	0%	0	0%	0	0%
illi+wh-phrase questions '*illi*+wh'	0	0%	0	0%	0	0%	0	0%

Adjunct wh-phrases, in contrast to argument wh-phrases, were judged to be grammatical in both fronted and *in situ* positions. The fronted wh-adjunct *imta* 'when'

achieved a lower rate of grammaticality (36%) compared to other fronted wh-adjuncts. All the informants advocated the *in situ* wh-adjunct *imta* 'when' as being grammatical (in simple wh-questions). The table also evinces that all the informants declined the adjunct wh-questions with *illi* (deeming these structures ungrammatical). The percentages displayed in the above table also suggest that adjunct wh-phrases enjoy optionality, in contrast to argument wh-phrases which seem to be more constrained. The above percentages indicate that the wh-in-situ strategy scored a higher rate of grammaticality (in simple and embedded wh-questions). For example, in simple wh-questions, the *in situ feen* 'where', *leeh* 'why' and *izzayy* 'how' achieved a grammaticality rate of 96%, while *imta* 'when' gained a grammaticality rate of 100%. In fronted positions, a percentage change in the rate of grammaticality was recorded. For instance, the fronted *feen* 'where' gained a grammaticality rate of 68% in simple wh-questions, while its *in situ* counterpart achieved a grammaticality rate of 96%. On the other hand, the *in situ izzayy* 'how' had a grammaticality rate of 88%, compared to a grammaticality rate of 72% for the fronted option.

In summary, the results of the quantitative analysis are: (1) wh-questions with *in situ* wh-phrases gained the highest rate of grammaticality amongst the informants; (2) the percentage of the informants who advocated the fronted wh-phrase *miin* 'who' followed by *illi* was (a grammaticality rate of) 100% compared to a grammaticality rate of 0% for the *in situ* (non-initial) *miin* 'who'; and (3) all the informants judged the structures where *illi* co-occurs with the adjunct wh-phrases to be ungrammatical.

3.7 The subsequent qualitative phase

This section discusses how the data were qualitised[6]. In other words, it demonstrates how the data collected quantitatively were employed to process the qualitative analysis. Let us recall that the questionnaire opens with some background questions which measure demographic information (e.g. gender, age, city of origin etc.), in addition to a question about the degree of MSA proficiency. The qualitative data were collected via the open-response items on the questionnaire. The informants were asked to provide the correct structure for the wh-questions they judged to be ungrammatical. The qualitative analysis was carried out in two stages: first, the data provided by the informants themselves were collected, and then the possible effects of the educational, social, and

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[6] The verb *qualitise* was first used by Dörnyei (2007: 271).

demographic aspects in relation to sentence judgement were investigated. The sequence order that was followed in the quantitative analysis was also followed in this qualitative phase.

3.7.1 The qualitative data

In the previous section, it was recorded that the informants differ in their judgements regarding the argument wh-phrases *miin* 'who' and *eeh* 'what'. With regard to these wh-phrases, the important point to note here are the structures which the informants gave for (in order to correct) the wh-questions they judged to be ungrammatical. Most of the informants (18 out of 25) judged the structure [*eeh* 'what'+ *illi* 'that'+ *asbaab* 'causes' (noun)] to be ungrammatical as in (1), and they suggested that the structures in (2) were the grammatical counterparts[7].

(1)   eeh   illi   asbaab   il-Hadsa?
        what that causes (N) the accident
        'What are the causes of the accident?

(2)   a. eeh   illi   sabbib   il-Hadsa?
           what that cause (3SM.PAST) the-accident
           'What caused the accident?'

        b. asbaab   il-Hasdsa   eeh?
           causes(N)   the accident   what
           'What are the causes of the accident?

        c. eeh   asbaab   il-Hasdsa?
           what causes(N)   the accident
           'What are the causes of the accident?

It is of note that in (2a), the verb *sabbib* 'caused' substituted the NP *asbaab* 'causes' in (1). In (2b), the *in situ* strategy was chosen, while in (2c), *illi* was deleted. The two wh-questions with the wh-phrase *anhi* 'which' that achieved lower rates of grammaticality are the ones that appear in (3); whereby (3a) scored a 44% grammaticality rate, while (3b) scored only a 32% grammaticality rate. The grammatical options provided by the informants are listed in (4):

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[7] One of the informants provided a completely different structure as a grammatical counterpart for the wh-question he/she judged to be ungrammatical; for example, the wh-question *il-Hadsa HaSalit izzayy* 'how did the accident take place' was suggested as a grammatical counterpart for the structure in (1); I will ignore these structures, and will focus on the ones whereby the same wh-phrase was employed.

(3)   a. il-garaayid   ʻaalit anhi mustašfa il-naas wadduu-h li-ha.
          the-newspapers said which hospital people took-him to-it
          'The newspapers said which hospital people took him to.'

        b. illi raaH   la-ha anhi mustašfa?
          that went to-it which hospital
          'Which hospital did he go to?'

(4)   a. il-garaayid   ʻaalit il-naas wadduu-h anhi   mustašfa.
          the-newspapers said people took-him which hospital
          'The newspapers said which hospital people took him to.'

        b. raaH anhi mustašfa?
          went which hospital
          'Which hospital did he go to?'

        c. huwwa raaH anhi mustašfa?
          he   went which hospital
          '(he) which hospital did he go to?'

Let us recall that all the informants rejected the wh-question with final *miin* 'who' (without *illi*) deeming it to be ungrammatical, whereas a small percentage of them (56%) accepted the wh-question in (5); with the fronted wh-phrase *miin* 'who' without *illi*; as being grammatical. The grammatical structures suggested by the rest of the informants are demonstrated in (6).

(5)   miin faaz b-l-gayza?
        who won with-the-prize
        'Who won the prize?'

(6)   a. miin illi faaz b-l-gayza?
          who that won with-the-prize
          'Who won the prize?'

        b. huwwa miin illi faaz b-l-gayza?
          he   who that won with-the-prize
          'Who won the prize?'

The questionnaire included seven wh-questions regarding the wh-phrase *miin* 'who'. It was recorded that on occasion, when judging one of these structures as being ungrammatical, the wh-question in (6a) was offered as an option with greater grammaticality, however, a small number of informants suggested that the wh-question in (6b) with the pronoun *huwwa* 'he' was a more grammatical option.

That one of the linguistically non-naive students recommended the wh-question in (7a) as the grammatical counterpart for the one in (7b), was also recorded.

(7)   a. eeh   kaanit   asbaab   il-Hadsa?
            what   was   causes   the-accident
            'What were the causes of the accident?'

         b. eeh   illi   asbaab   il-Hadsa?
            what   that   causes   the-accident
            'What are the causes of the accident?'

As illustrated in Table 4, adjunct wh-phrases were accepted as being grammatical in both fronted and *in situ* positions. All the informants rejected the structures where *illi* appeared in adjunct wh-questions, as being ungrammatical; the following structures were suggested as more grammatical options:

(8)   a. huwwa   raaH   il-mustašfa   izzayy?
            he   went   the-hospital   how
            'How did he go to the hospital?'

         b. il-Hadsa   HaSalit   imta?
            the-accident   took place   when
            'When did the accident take place?'

         c. feen   šaari^c il-sawra?
            where   street   Al-Sawra
            'Where is Al-Sawra Street?

         d. šaari^c il-sawra   feen?
            street   Al-Sawra   where
            'Where is Al-Sawra Street?'

         e. il-kull ^{c}irif   il-Hadsa   HaSalit   leeh.
            all   knew   the-accident   took place   why
            'All knew why the accident took place.'

         f. il-kull ^{c}irif   il-Hadsa   leeh   HaSalit.
            all   knew   the-accident   why   took place
            'All knew why the accident took place.'

It is of note that those who judged the wh-question *feen šaari^c il-sawra* 'where is Al-Sawra Street?' to be ungrammatical supplied *šaari^c il-sawra feen* 'where is Al-Sawra Street?' as a more grammatical option, and vice versa. This suggests that the informants saw no difference between the fronted and the *in situ* wh-adjuncts in single wh-questions. These wh-questions support the major claim of this study, as they suggest

true optionality. As illustrated by the example in (8a), some informants formed the wh-question by using a form of pronoun such as *huwwa* 'he'. It is also of note that one of the grammatical counterparts revealed the scrambling of the subject over the wh-phrase as in (8f), whereby the wh-phrase *leeh* 'why' occurs between the subject *il-Hadsa* 'the accident' and the verb *HaSalit* 'took place'. The structures suggested by the informants and the high percentage which the *in situ* strategy gained (see Tables 3 & 4) have their implications on the results of the experimental study (see Section 3.8).

3.7.2 Variable effects of grammaticality judgements

This section discusses the factors which seemed to affect the informants' grammaticality judgements. Firstly, it was noted that the most prominent factor was the knowledge that the informants had of MSA. The informants who rated their proficiency of MSA as 'very good' or 'good' demonstrated a preference for the fronting strategy over the *in situ* strategy. A possible reason for this is that in MSA, the fronting strategy is more common in simple wh-questions (see Chapter 1, Section 1.5.4).

Secondly, one of the linguistically non-naive informants has suggested the wh-question *eeh kaanit asbaab il-Hadsa* 'what were the causes of the accident?' as being a grammatical counterpart for *eeh asbaab il-Hadsa* 'what are the causes of the accident?' This may reflect a tendency towards forming a full sentence with a verbal constituent (copula *kaan* 'was'), which is affected by the pattern employed in English wh-questions.

Thirdly, the demographic aspect, with regard to making grammaticality judgements, did not seem to have a remarkable effect on the informants' responses. Looking at the responses offered by two informants from two different demographic distributions (e.g. Upper and Lower Egypt), it was found that they suggested similar structures when providing grammatical counterparts for sentence structures which they deemed to be ungrammatical. A possible explanation for this is that the informants, all PhD students who have worked as assistant lecturers, tend to speak the form of language which is familiar amongst educated people; hence, their local dialects disappear within the context of their work environment. In line with Schütze's (1996: 25-26) argument that the informants' acceptability or refusal judgement of a certain structure is an act of performance and behaviour, I propose that the informants may reflect their attitudes

(which seem to be very much influenced by the world of academia within which they operate and interact) towards a given sentence when forming (and indeed performing) their grammaticality judgements (via the spoken/written word).

3.8 Summary of results and recommendations

The following results (as reported) were obtained from the questionnaire: (1) EA has real cases of optionality, as most informants have judged the wh-questions *feen šaariᶜ il-sawra* 'where is Al-Sawra Street?' and *šaariᶜ il-sawra feen* 'where is Al-Sawra Street?' to be grammatical. Likewise, the two wh-questions *miin illi faaz bi-lgayza* 'who won the prize?' and *illi faaz bi-lgayza miin* 'who won the prize' were also judged to be grammatical although the former achieved the highest rate of grammaticality (100%); (2) since the informants did not vote for one strategy against another, optionality is claimed to exist; (3) the *in situ* strategy appears to be the most common strategy of forming wh-questions in EA; and (4) *illi* cannot be associated with all wh-phrases.

While there is much scholarly debate regarding the precise definitions of terms such as grammaticality, acceptability, and preference, it is not within the scope of this study to distinguish between these definitions. Rather, the term grammaticality judgement is used as the working definition for the purposes of this study. It can be argued that while making a grammaticality judgement on a certain wh-question, the informants intuitively give out the response that answers some questions they have in mind such as: 'Does the structure sound familiar?', 'Do I normally use it?', or 'Does it make sense?'.

One limitation of the questionnaire is that it cannot investigate all possible structures in a given language, even if a single aspect of its grammar is being investigated. This study chose a mixed research method, whereby the quantitative analysis was followed by a subsequent qualitative phase for (mutually) complementary purposes. This study calls for further research on the wide range of wh-constructions which the qualitative phase revealed.

3.9 Conclusion

The experimental study described in this chapter was carried out in two phases: the quantitative phase and the qualitative phase. The quantitative phase revealed that EA speakers (with certain wh-phrases) voted for both the *in situ* and the fronting strategies. This in fact supported the existence of optionality. Thus, the main aim of the subsequently chapters is to account for the syntactic structures which show this optionality. The quantitative phase also revealed that the *in situ* strategy has achieved the highest rates of grammaticality. Tables 3 and 4 demonstrated that the informants preferred the wh-in-situ strategy over the fronted strategy. This result will be incorporated in the overall analysis of EA wh-questions where it will be argued that EA is a non-wh-movement language. Proving that the *in situ* strategy is the most preferred and the most economical option satisfies the economy principles of the Minimalist Program discussed in Chapter 2.

The quantitative phase revealed that not all wh-phrases show optionality; this result implies the existence of some constraints that deprive certain types of wh-phrase of the apparent optionality. Accordingly, an investigation into the way wh-phrases behave regarding extraction and the constraints on movement will be discussed later in the thesis.

As for the second phase of the experimental study (i.e. the qualitative data analysis), it focused on collecting data which were suggested by EA speakers. The analysis of wh-questions in EA will be based on the data drawn from this phase. These data will be discussed and compared in the chapters to follow and a unified account for the wide range of syntactic structures of wh-questions in EA will be proposed.

Thus, the experimental study aimed to introduce EA wh-questions as they are used on a daily basis and to demonstrate the relative contributions of the quantitative and the qualitative data analysis to understanding the syntax of wh-questions in EA. In the rest of the thesis, it will be claimed that the apparent optionality which EA has is not genuine and that there are some interpretive properties associated with the movement of argument/adjunct wh-phrases to left periphery positions such as Focus and Topicality.

The experimental study revealed that the informants' responses for ungrammatical structures fall into four broad categories: (1) some informants form a wh-question by fronting its wh-phrase without *illi*; (2) others prefer fronting wh-phrases such as *miin* 'who' followed by *illi*; (3) a large number of informants tend to leave all wh-phrases *in situ*; and (4) the last group of informants found there to be no difference between *in situ* and fronted adjunct wh-questions. These variations in grammaticality judgements could possibly be motivated by the existence of true optionality. The informants suggested some structures which might be derived from the fronted and also the *in situ* strategies.

The present chapter concludes with a table that summarises the distribution of wh-phrases in simple/embedded wh-questions:

Table 5: The distribution of wh-phrases in simple and embedded wh-questions

wh-phrase	s-wh-f	s-wh-i	e-wh-f	e-wh-i	wh+*illi*	*illi+wh*
miin 'who'	√	×	√	×	√	√
eeh 'what'	√	√	√	√	√	×
anhi 'which'	√	√	√	√	√	×
feen 'where'	√	√	√	√	×	×
leeh 'why'	√	√	√	√	×	×
izzayy 'how'	√	√	√	√	×	×

√ = grammatical   ×=ungrammatical

The following chapter will be devoted to describing the wh-questions included in the questionnaire and those which emerged from the qualitative data analysis. Further types of question will also be addressed, for example; yes/no questions, and discourse-based wh-questions which are referred to as Discourse-Condition Questions (DCQs).

Chapter 4: Description of wh-questions in Egyptian Arabic[1]

4.1 Introduction

In the previous chapter, the findings of the experimental study (which aimed at seeking grammaticality judgements of a group of EA native speakers) were discussed. During the qualitative phase, the informants provided a wide range of wh-questions which they judged to be grammatical. The present chapter offers a detailed description of these wh-questions and the strategies employed in their formation. The different syntactic realisations of wh-phrases in simple and embedded wh-questions will also be described.

Recall that Wahba (1984) has divided wh-questions in EA into nominal, non-nominal and *in situ* wh-questions, while Osman (1990) has divided them into relativised[2], non-nominal and *in situ* wh-questions (see Chapter 1). In the present work, wh-questions are divided into two types: argument wh-questions (subject and object) and adjunct wh-questions. The reason for this division is that wh-phrases are argued not to exhibit a unified behaviour within all types of wh-questions. This claim can be supported by the results of the experimental study carried out in Chapter 3, whereby some wh-phrases achieved different rates of grammaticality within simple and embedded wh-questions. Thus, analysing wh-questions according to the type of wh-phrase may underline certain asymmetries in the grammar of EA (e.g. argument/adjunct and/or subject/object asymmetries). The following representation introduces the different types of wh-phrases in EA:

Wh-phrases in EA

```
                        Wh-phrases in EA
                       /              \
        Argument wh-phrases        Non-argument wh-phrases
         /      |      \              /              \
     miin    eeh   anhi+NP   prepositional wh-phrases   adjunct wh-phrases
     who    what    anhi        /  |  \    \              /  |  \    \
                          maᶜa miin b-kaam l-miin ᶜala-miin   izzayy leeh imta feen
                          with whom how much to-whom about-whom  how   why  when where
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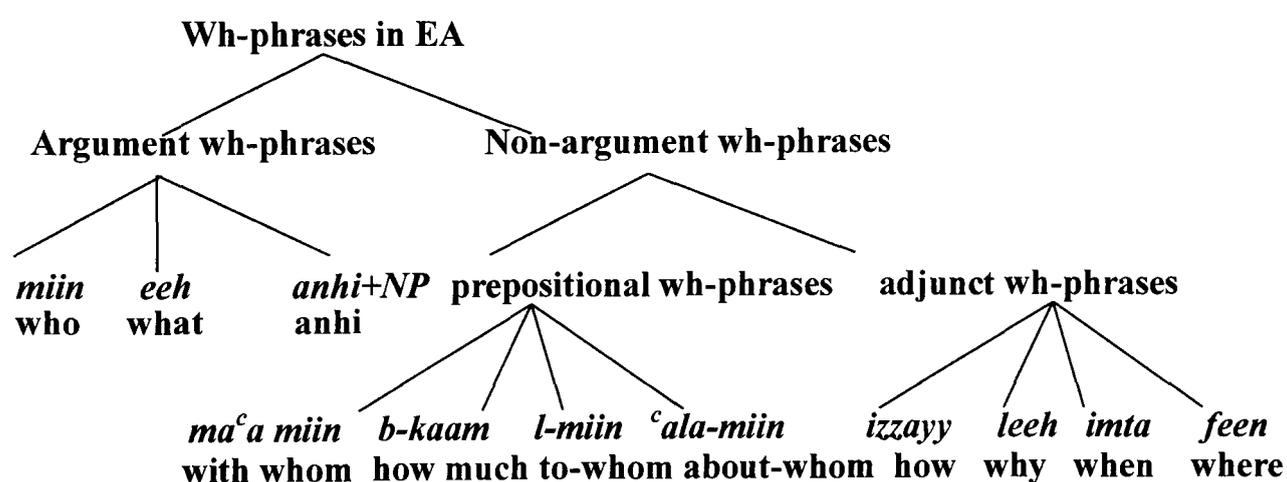
[1] From here on the examples are my own unless cited.
[2] Osman (1990: 115) has employed the phrase 'relativised wh-questions' to refer to nominal wh-questions based on the similarity between this type of wh-question and relative clauses.

In this chapter, I will provide a detailed description for the following two strategies of question formation: the first involves the fronting of wh-phrases (i.e. wh-fronting strategy), and the second involves the occurrence of wh-phrases in their base-generated positions (i.e. wh-in-situ strategy). I will also explain yes/no questions and some discourse-based questions which I will refer to as Discourse-Condition Questions (DCQs).

The present chapter is divided as follows: section 2 describes the fronting strategy coupled with illustrative examples. Section 3 considers the wh-in-situ strategy, with both argument and adjunct wh-phrases. Section 4 presents an interesting type of *illi*-questions, whereby wh-arguments appear in a clause-final position. Section 5 discusses yes/no questions and what marks them. Section 6 offers some illustrative examples of Discourse Condition Questions (DCQs). Section 7 sums up the robust features of wh-questions within EA, and concludes the chapter.

4.2 The wh-fronting strategy

In EA, all wh-phrases can be fronted and the extraction sites are marked by either gaps or resumptive pronouns which the wh-phrases bind. In the subsequent sections, both argument and adjunct wh-phrases will be described.

4.2.1 Fronted wh-arguments

Subject wh-phrases can occur in a clause-initial position, as in the following examples:

(1)   miin   fataH   il-baab?
        who   open (3SM.PAST)   the-door
        'Who opened the door?'

(2)   anhi   bint   fihmit   il-dars?
        which girl   understand (3SF.PAST) the-lesson
        'Which girl understood the lesson?'

(3)   eeh   ma^{c}na   il-kilma   di?
        what   meaning the-word   this
        'What is the meaning of this word?'

In the above examples, the argument wh-phrases occur in their canonical positions as the subjects of the IPs which they precede. According to the VP-Internal Subject

Hypothesis (Koopman & Sportiche 1991), the subject originates within the VP, and it moves to the [Spec IP] position to satisfy the Extended Projection Principle[3] (EPP). A detailed account for the position of subjects in EA is offered in Chapter 5, Section 5.5.

In the above examples, the subject wh-phrases *miin* 'who' and *anhi* 'which' can be followed by *illi*, in contrast to the subject wh-phrase *eeh* 'what' as illustrated by the following examples:

(4)   miin   illi   fataH   il-baab?
        who   that   open (3SM.PAST)   the-door
        'Who opened the door?'

(5)   anhi   bint   illi   fihmit   il-dars?
        which girl   that   understand (3SF.PAST) the-lesson
        'Which girl understood the lesson?'

(6)   *eeh   illi   ma^{c}na   il-kilma   di?
        what   that   meaning   the-word   this
        'What is the meaning of this word?'

In Chapter 3, it was reported that almost all the informants judged the wh-question in (7) (which is similar to the one in (6)) to be ungrammatical. The informants suggested the structure in (8) instead.

(7)   *eeh   illi   asbaab   il-Hadsa?   *eeh+illi+*NP
        what   that   causes[+N]   the-accident
        'What are the causes of the accident?'

(8)   eeh   illi   sabbib   il-Hadsa?   *eeh+illi+*VP
        what   that   caused (3SM.PAST)   the accident
        'What caused the accident?'

The ungrammaticality of the wh-questions of the structure *eeh+illi+*NP (as in (6) and (7)) can be avoided by replacing the NP with a VP. One way to account for the contrast in the above two examples is to propose that *illi* is a relative pronoun[4] which has to be associated with a nominal head. The relative pronoun *illi* links a preceding nominal head to a following predicate. When the nominal head is [+human], the structure wh-

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phrase+*illi*+NP is well-formed as in (9). If the nominal head is [-human], the structure is ruled out as in (10).

(9) a. il-raagil$_i$ illi mudarris$_i$ fi-l-gam^{c}a   [+human]+*illi*+NP
         the-man that tutor   in-the-university
         'the man who is a university tutor'

     b. miin illi mudarris f-il-gam^{c}a?   *miin*+*illi*+[+human]
        who that tutor   in-the-university
        'Who is a University tutor?'

(10) a. *il-*mašaakil*   illi asbaab   il-Hadsa   [-human]+*illi*+NP
         the-problems that causes (N) the-accident
         'the problems that are the causes of the accident'

     b. *eeh illi asbaab   il-Hadsa?   *eeh*+*illi*+[-human]
        what that causes (N) the-accident
        'What are the causes of the accident?'

The contrast between the examples in (9) and (10) illustrates that the subject wh-phrase *eeh* 'what' cannot be associated with [+human] (or animate) NPs. This idea highlights a discrepancy between the subject wh-phrase *miin* 'who' and *eeh* 'what' as summarised below.

The subject wh-phrase *miin* 'who', in contrast to *eeh* 'what', can be followed by definite/indefinite NPs. It can also be followed by NPs which are in the genitive case, as in the following examples:

(11) a. miin il-mudarris fi-l-gam^{c}a?   *miin*+ [definite NP/+human]
        who tutor   in-the-university
        'Who is the university tutor?'

     b. miin mudarris fi-l-gam^{c}a?   *miin*+ [indefinite NP/+human]
        who tutor   in-the-university
        'Who is a university tutor?'

     c. miin mudarris il-gam^{c}a?   *miin*+ [+human]
        who tutor   the-university
        'Who is the tutor of the university?'

(12) a. eeh   il-asbaab?   *eeh*+ [definite /-human]
        what   the-causes
        'What are the causes?'

b. eeh   asbaab   il-Hadsa?   *eeh*+ [-human]
   what cause (GEN)   the-accident
   'What are the causes of the accident?

c. *eeh   asbaab?   *eeh*+[-definite/-human]
   what   causes
   'What are the causes?

The wh-phrase *eeh* 'what' can be followed by definite NPs or NPs in the genitive case as in (12a &b), but it cannot be associated with indefinite NPs as seen by the illicit structure in (12c). As for the use of the copula in the above examples, it is argued, for example by Anwar (1979) that the verb 'be' is a dummy verb which functions only as a tense marker. In the above examples, the present tense is the unmarked non overt tense.

The ungrammaticality of the examples in (10b) and (12c) illustrate that the subject wh-phrase *eeh* 'what' cannot be associated with both [+human] and [-definite] NPs. If the NP *asbaab il-Hadsa* 'the causes of the accident' is replaced by a [+human] NP, it yields an illicit structure. This is in fact identifying an asymmetry between the subject wh-phrases *miin* 'who' and *eeh* 'what'.

(13)   a. *eeh   il-mudarris   fi-l-gam^c a?   *eeh*+ [definite/+human]
          what tutor   in-the-university
          'What is the university tutor?'

       b. *eeh   mudarris   fi-l-gam^c a?   *eeh*+ [indefinite/+human]
          what tutor   in-the-university
          'Who is a university tutor?'

       c. *eeh   mudarris   il-gam^c a?   *eeh*+ [+human]
          what tutor   the-university
          'What is the tutor of the university?'

The ungrammatical wh-questions with the subject wh-phrase *eeh* 'what' are listed below.

(14)   a. *eeh   illi   asbaab   il-Hadsa?   *eeh*+*illi*+[-human]
           what that   causes (N)   the-accident
           'What are the causes of the accident?'

b. *eeh   asbaab?   *eeh*+ [-definite/-human]
  what   causes
  'What are the causes?'

c. *eeh   il-mudarris   fi-l-gam^ca?   *eeh*+ [+human][5]
  what   tutor   in-the-University
  'What is the University tutor?'

Based on the above discussion, the subject wh-phrase *eeh* 'what' can have the following syntactic realisations:

(15)   a. eeh   asbaab   il-Hadsa?   *eeh*+ [-human]
          what   causes (N.GEN)   the-accident
          'What are the causes of the accident?'

        b. eeh   illi   sabbib   il-Hadsa?   *eeh*+ *illi*+ VP
          what   that   cause (3SM.PAST) the-accident
          'What are the causes of the accident?'

        c. eeh   il-asbaab?   *eeh*+ [+definite/-human]
          what   the-causes
          'What are the causes?

In embedded wh-questions, subject wh-phrases can also be followed by *illi* as in the following examples:

(16) a. Ali biyis'al miin (illi) fataH il-baab.
Ali ask (3SM.PROG) who (that) open (3SM.PAST) the-door
'Ali is asking who opened the door.'

b. Ali biyis'al eeh (illi) fataH il-baab.
Ali ask (3SM.PROG) what (that) open (3SM.PAST) the-door
'Ali is asking what opened the door.'

c. Ali biyis'al anhi bint (illi) fataHit il-baab.
Ali ask (3SM.PROG) which girl (that) open (3SF.PAST) the-door
'Ali is asking which girl opened the door.'

Object wh-phrases, on the other hand, can be extracted, whereby they bind a variable whose position is marked by a resumptive pronoun. The fronted object wh-phrase[6] should obligatory be followed by *illi* as illustrated by the following examples:

(17) miin$_i$ illi Salim itgawwiz-ha$_i$?
who that Salim marry (3SM.PAST)-her
'Who did Salim marry?'

(18) eeh$_i$ illi il-walad ha-yizaakir-uh$_i$?
what that the-boy will-study (3SM.INFIN)-it
'What will the boy study?'

(19) (anhi bint)$_i$ illi Salim itgawwiz-ha$_i$?
which girl that Salim marry (3SM.PAST)-her
'Which girl did Salim marry?'

Deleting either *illi* or the resumptive pronoun, or both yields ungrammaticality as in the following examples respectively:

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[6] The obligatoriness of *illi* and the resumptive pronoun in fronted object wh-questions is a basic difference between EA on one hand, and Iraqi Arabic and Palestinian Arabic on the other hand. This idea is illustrated by the following examples:

(i) Mona sa'alit Ali šeno Ro'a ištarat? (IA)
Mona ask (3SF.PAST) Ali what Ro'a buy (3SF.PAST)
'Mona asked Ali what Ro'a bought.'
(Wahba 1991: 256)

(ii) miin$_i$ l-'asad 'akal e$_i$ mbaariH ? (PA)
who the-lion eat (3SM.PAST) yesterday
'Who did the lion eat yesterday?'
(Shlonksy 2002: 138)

(iii) * Mona sa'alit Ali eeh Ro'a ištarat? (EA)
Mona ask (3SF.PAST) Ali what Ro'a buy (3SF.PAST)
'Mona asked Ali what Ro'a bought.'

(20) *miin Salim itgawwiz-ha?
who Salim marry (3SM.PAST)-her
'Who did Salim marry?'

(21) *eeh illi il-walad ha-yizaakir?
what that the-boy will-study (3SM.INFIN)
'What will the boy study?'

(22) *anhi bint Salim itgawwiz ?
which girl Salim marry (3SM.PAST)
'Which girl did Salim marry?

Object wh-phrases can be fronted within embedded wh-questions where *illi* and the resumptive pronoun are also obligatory as demonstrated by the following contrast:

(23) a. hiyya ᶜayza tiᶜraf anhi bint illi Salim
she want (3SF.PRES) know (3SF.INFIN) which girl that Salim

itgawwiz-ha?
marry (3SM.PAST)-her
'She wants to know which girl Salim married.'

b.*hiyya ᶜayza tiᶜraf anhi bint Salim
she want (3SF.PRES) know (3SF.INFIN) which girl Salim

itgawwiz?
marry (3SM.PAST)
'She wants to know which girl Salim married.'

Based on the above discussion, some variations between the subject wh-phrases *miin* 'who' and *eeh* 'what' are argued to exist. The subject wh-phrase *miin* 'who' can be followed by *illi* and definite/indefinite NPs, so the structures *miin+illi*+NP and *miin+illi*+VP are both grammatical. The subject wh-phrase *eeh* 'what' seems to be more restricted. It has to be followed by either definite NPs, or NPs in the genitive case. For *illi* to co-occur with the subject *eeh* 'what', *illi* has to be followed by a VP. In all syntactic structures, the subject wh-phrase *eeh* 'what' cannot be associated with [+human] (i.e. animate) NPs. Accordingly, the structures *eeh+illi*+VP and *eeh*+[+definite/-human] are the only grammatical options for the subject wh-phrase *eeh* 'what'.

A common property between the fronted object wh-phrases *miin* 'who' and *eeh* 'what' is that they both require the occurrence of *illi* and the resumptive pronoun. The fronted object wh-phrase *eeh* 'what' has to be associated with [-human] NPs as illustrated by the following examples:

(24)   a. miin$_i$ illi Mona 'ablit-uh$_i$?   [+human]
          who that Mona   meet (3SF.PAST)-him
          'Who did Mona meet?'

        b. eeh$_i$ illi   Mona ištarat-uh$_i$?   [-human]
          what that Mona buy (3SF.PAST)-it
          'What did Mona buy?'

4.2.2 Fronted wh-adjuncts

Like argument wh-phrases, adjunct wh-phrases can be fronted. However, a basic distinction between these two types of wh-phrases is that only the former can be followed by *illi*. This idea is pointed up by the following examples of adjunct wh-phrases.

(25)   a. feen   kitaab Salim?
          where book   Salim
          'Where is Salim's book?'

        b.* feen   illi   kitaab Salim?
           where that book   Salim

(26)   a. imta   ha-t'aabil   il-mudiir?
          when will-meet (2SM.INFIN) the-manager
          'When will you meet the manager?'

        b.*imta illi ha-t'aabil   il-mudiir?
          when that will-meet (2SM.INFIN) the-manager

(27)   a. izzayy xaragit   liwaaHidha?
          how go(3SF.PAST)   alone
          'How did she go out alone?'

        b.*izzayy illi xaragit   liwaaHidha?
          how that go(3SF.PAST) alone

(28)   a. leeh 'afalti   il-baab?
          why close (2SF.PAST) the-door
          'Why did you close the door?'

b.*leeh   illi   'afalti   il-baab?
    why that close (2SF.PAST) the-door

Adjunct wh-phrases can also be fronted in embedded wh-questions, as illustrated by the following examples:

(29)   a. Mona sa'alit   feen   il-kitaab.
          Mona ask (3SF.PAST) where the book
          'Mona asked where the book is.'

      b. ᶜirifna   izzayy waSal   bi-surᶜa.
         know (1PLU.PAST) how   arrive (3SM.PAST) quickly
         'We knew how he arrived quickly.'

4.2.3 Fronted prepositional wh-phrases

As shown by the representation in Section 4.1, EA has prepositional wh-phrases which are composed of a preposition affixed to either an argument or an adjunct wh-phrase. For example, the prepositional wh-phrase *maᶜa miin* 'with who' is composed of the preposition *maᶜa* 'with' and the wh-phrase *miin* 'who', while the prepositional wh-phrase *ᶜala-feen* 'off to where' is composed of the preposition *ᶜala* (literally meaning 'on', but interpreted as 'off to') and the adjunct wh-phrase *feen* 'where'. An essential difference between a prepositional argument wh-phrase and a prepositional adjunct wh-phrase is that only the former allows preposition stranding[7], and hence it can form a wh-question similar to the English example 'Who did you give the present to'. The idea is clarified by the following examples where the prepositions appear in boldface:

(30)   a**ᶜala** miin   bititkallimu?
          on who   talk (2PLU.PROG)
          'Who are you talking about?'

      b. miin illi bititkallimu   **ᶜal**-eh?
         who that talk (2PLU.PROG) on-him
         'Who are you talking about?'

(31)   a. **bi**-kaam   ilᶜarabiyya di?
          with-how much the-car   this
          'How much is this car?'

---

[7] Wahba (1984) suggests that since relative clauses do not allow pied-piping, they cannot be derived by a movement rule (see Chapter 1, Section 1.4.1.2).

b. *kaam   il-^{c}arabiyya di   **bi**?
    how much   the-car   this   with

In (30b), the wh-phrase is extracted and the preposition is stranded. In this example, the presence of *illi* and the cliticisation of the resumptive pronoun onto the preposition are obligatory, as indicated by the ungrammaticality of the following structure:

(32)   * miin   ~~illi~~   bititkallimu ^{c}~~al-eh~~?
        who   that talk (2PLU.PROG)   on-him
        'Who are you talking about?'

The ungrammaticality of the above example emphasises the role of *illi* and the resumptive pronoun in wh-extraction as will be discussed later in the thesis.

4.3 The wh-in-situ strategy

The second strategy employed by the grammar of EA to form wh-questions requires the wh-phrases to remain *in situ*. To describe the wh-in-situ strategy, I will use the same examples which represented the fronting strategy in the previous section. These examples, along with the structures drawn from the experimental study (see Chapter 3), are essential for underlining real cases of optionality which EA is argued to possess. Wh-phrases which can/cannot reveal optionality will be distinguished.

4.3.1 *In situ* wh-arguments[8]

Object wh-phrases, similar to other wh-phrases in EA, can remain *in situ* as in the following examples:

(33)   a. Salim   itgawwiz   miin?
        Salim   marry (3SM.PAST)   who
        'Who did Salim marry?'

        b. il-walad   ha-yizaakir   eeh?
        the-boy   will-study (3SM.INFIN) what
        'What will the boy study?'

---

[8] In Section 4.2.1, I referred to initial wh-subjects as fronted wh-phrases to clarify that they occur in a clause-initial position. These initial wh-subjects are in fact *in situ* since they appear in their canonical positions as the subjects of the IPs they precede. I referred to the VP-Internal Subject Hypothesis to show that the only movement which the wh-subjects undergo is the movement to the Spec IP position to satisfy the EPP. So, in this section, only *in situ* wh-objects will be described.

c. Salim itgawwiz anhi bint?
Salim marry (3SM.PAST) which girl
'Which girl did Salim marry?'

In embedded wh-questions, the *in situ* option is also available as demonstrated by the following examples:

(34)   a. Mona ᶜirfit Salim itgawwiz miin.
Mona know (3SF.PAST) Salim marry (3SM.PAST) who
'Mona knew whom Salim married.'

b. il-walad iftakar ha-yizaakir eeh.
the-boy remember (3SM.PAST) will-study (3SM.INFIN) what
'The boy remembered what he will study.'

c. hiyya ᶜayza tiᶜraf Salim itgawwiz anhi bint.
she want (3SF.PRES) know (3SF.INFIN) Salim marry (3SM.PAST) which girl
'She wants to know which girl Salim married.'

In Section 4.2.1, object wh-phrases are fronted when elements such as *illi* and the resumptive pronoun are there. In the *in situ* strategy, object wh-phrases remain *in situ* without these elements. Recall that the results of the experimental study discussed in Chapter 3 revealed that the *in situ* strategy scored a higher rate of grammaticality among the EA speakers.

4.3.2 *In situ* wh-adjuncts

Adjunct wh-phrases are probably the most controversial type of wh-phrase as they present true cases of optionality. As pointed out earlier, adjunct wh-phrases (both fronted and *in situ*) cannot co-occur with *illi*. All the informants consulted for their grammaticality judgements declined the structures where *illi* appeared in adjunct wh-questions. I will now present some examples whereby adjunct wh-phrases (which appear in boldface) can either be fronted or left *in situ* in both simple and embedded wh-questions.

(35)   a. **feen** kitaab Salim?
where book Salim
'Where is Salim's book?'

b. kitaab Salim **feen**?
book Salim where
'Where is Salim's book?'

(36)   a. **imta**   ha-t'aabil   il-mudiir?
          when will-meet (2SM.INFIN) the-manager
          'When will you meet the manager?'

   b. ha-t'aabil   il-mudiir   **imta**?
          will-meet (2SM.INFIN) the-manager when
          'When will you meet the manager?'

(37)   a. **izzayy** xaragit   liwaaHidha?
          how   go (3SF.PAST) alone
          'How did she go out alone?'

   b. xaragit   liwaaHidha **izzayy**?
          go (3SF.PAST) alone   how
          'How did she go out alone?'

(38)   a. ^cirifna   **leeh** 'afalti   il-baab.
          know (1PLU.PAST) why close (2SF.PAST) the-door
          'We knew why you closed the door.'

   b. ^cirifna   'afalti   il-baab **leeh**.
          know (1PLU.PAST) close (2SF.PAST) the-door why
          'We knew why you closed the door.'

To account for the apparent optionality which adjunct wh-phrases demonstrate, the above structures will be argued to have different interpretations as will be discussed in Chapter 7.

4.3.3 *In situ* prepositional wh-phrases

The examples presented in Section 4.2.3 illustrate that prepositional wh-phrases can be fronted with/without the preposition. Similar to argument and adjunct wh-phrases, prepositional wh-phrases can remain *in situ*, and hence they too emphasise optionality as in the following examples:

(39)   a. **ma^ca**   **miin**   il-filuus?
          with   who   the-money
          'With whom is the money?'

   b. il-filuus   **ma^ca**   **miin**?
          the-money with   who
          'With whom is the money?'

(40)   a. ^c**ala**   **miin**   bititkallimu?
          on   who   talk (2PLU.PROG)
          'Who are you talking about?'

b. bititkallimu   ᶜala   miin?
talk (2PLU.PROG) on   who
'Who are you talking about?'

4.4 Wh-arguments in clause-final positions

In this section, I will present some wh-questions which, to my knowledge, have not received attention in the literature. These wh-questions involve argument wh-phrases in a clause-final position. Recall that in Section 4.2.1, it was pointed out that the initial wh-subjects are in fact *in situ*, as they appear in the canonical positions of subjects. Let us consider the following examples:

(41)   a. illi   fataH   il-baab   miin?
that open (3SM.PAST) the-door who
'Who opened the door?'

b. *fataH   il-baab   miin?
open (3SM.PAST) the-door who
'Who opened the door?'

(42)   a.*illi maᶜna   il-kilma   di   eeh?
that meaning the-word   this what
'What is the meaning of this word?'

b. maᶜna   il-kilma   di   eeh?
meaning   the-word   this what
'What is the meaning of this word?'

In (41a), the subject wh-phrase *miin* 'who' occurs in a clause-final position if *illi* is there; deleting *illi* yields ungrammaticality as in (41b). As illustrated earlier, the subject wh-phrase *eeh* 'what' cannot occur with *illi* if the latter is followed by NP, as suggested by the ungrammaticality of (42a). The contrast between the examples in (41b) and (42b) emphasises the asymmetry between the subject wh-phrases *miin* 'who' and *eeh* 'what' proposed in Section 4.2.1. In Section 4.2.1, I claimed that *illi* can occur with the subject wh-phrase *eeh* 'what' if it is followed by a VP, the example is repeated below:

(43)   eeh   illi   sabbib   il-Hadsa?
what that cause (3SM.PAST)   the accident
'What caused the accident?'

In the above wh-question, the subject wh-phrase *eeh* 'what' can move to a clause-final position yielding the following structure:

(44)   illi   sabbib   il-Hadsa   eeh?
           that   causes (3SM.PAST)   the accident what
           'What caused the accident?'

Object wh-phrases can also occur in clause-final positions as exemplified below.

(45)   illi   Salim   itgawwiz-ha   miin?
           that   Salim   marry (3SM.PAST)-her   who
           'Who did Salim marry?'

(46)   illi   il-walad   ha-yizaakir-uh   eeh?
           that   the-boy   will-study (3SM.INFIN)-it   what
           'What will the boy study?'

(47)   illi Salim   itgawwiz -ha   anhi   bint?
           that   Salim   marry (3SM.PAST)-her   which   girl
           'Which girl did Salim marry?'

To summarise: In this section, I presented some wh-questions which have argument wh-phrases in clause-final positions. I claim that these structures are variants of the two basic strategies of question formation identified in EA. The above examples illustrate that when argument wh-phrases are followed by *illi*, they can occur in clause-final positions and vice versa. In Chapter 6, argument wh-phrases followed by *illi* will be analysed in terms of Focus, whereby the fronted wh-phrase is claimed to move to the [Spec FocusP] position. Wh-questions with final subjects/objects will be argued to have the structure [TopicP   FocusP].

4.5 Yes/No questions

In EA, a yes/no question can be marked by the phrase *yaTara* 'I wonder' which is argued to be a question particle as in the following example:

(48)   yatara   ha-yiigi   bukra?
           (I wonder) will-come (3SM.INFIN) tomorrow
           'I wonder if he will come tomorrow.' (lit: will he come tomorrow?)

The question particle *yatara* 'I wonder' can also mark direct/indirect wh-questions as seen below.

(49)   a. yatara   il-kitaab   feen?
         I wonder   the-book   where
         'I wonder where the book is.' (lit: 'where is the book?')

       b. yatara   Mona   ᶜirfit   il-kitaab   feen?
         (I wonder)   Mona   know (3SF.PAST)   book   where
         'I wonder if Mona knew where the book is.'
         (lit: did Mona know where the book is?)

Baker (1970: 207) argues that 'if' and 'whether' are the lexical realisations of Q particles. In EA, *law* and *iza* (lit: if), which correspond to 'if' and 'whether', may introduce yes/no questions. The two Q particles *law* and *iza* 'if' differ from *yaTara* 'I wonder' as they have to occur within clausal complements which are indirect yes/no questions; this idea is clarified by the following examples:

(50)   a. Mona   ᶜayza   tiᶜraf   law   inti   lissa   zaᶜlaana.
         Mona   want (3SF.PRES)   know (3SF.INFIN)   if   you (F)   still   angry (F)
         'Mona wants to know whether/if you are still angry.'

       b. Mona   ᶜayza   tiᶜraf   iza   inti   lissa   zaᶜlaana.
         Mona   want (3SF.PRES)   know (3SF.INFIN)   if   you (F)   still   angry (F)
         'Mona wants to know whether/if you are still angry.'

A yes/no question can also be introduced by another element which is argued to function as a Q particle; this element is a full pronoun such as *huwwa* 'he'.

(51)   a. huwwa   il-mudiir   waSal?
         he [+Q]   the-manager   arrive (3SM.PAST)
         'Has the manager arrived?'

       b. humma   il-banaat   waSal-u?
         they [+Q]   the-girls   arrive (3PLUF.PAST)
         'Have the girls arrived?'

In line with Cheng's (1997) Clausal Typing Hypothesis, I suggest that the pronouns in the above examples are question particles which type the structures as yes/no questions (a detailed account of these pronouns is proposed in Chapters 6 and 7).

A yes/no question is also marked by a rising intonation morpheme apart from the occurrence of any of the above mentioned wh-particles. In the following example, the

rising intonation morpheme (represented by the rising arrow) works alone to type the structure as a yes/no question.

(52)　katabti　　　　il-gawaab? ⇑
　　　 write (2SF.PAST)　the-letter
　　　 'Did you write the letter?'

Thus, in (51), both the Q particles (*huwwa* and *humma*) and the intonation morpheme work together to mark the structures as yes/no questions, whereas in (52), the structure is identified as a yes/no question solely by the intonation morpheme.

4.6 Other wh-constructions in EA

4.6.1 Discourse-Condition Questions (DCQs)

This section describes a type of wh-question which resembles idiomatic expressions; I refer to this type of question as Discourse Condition Questions (DCQs).

(53)　a. izzayyy-ak (2SM)?
　　　　'How are you?'

　　　 b. izzayyy-ik (2SF)?
　　　　 'How are you?'

In the above examples, the adjunct wh-phrase *izzayy* 'how' changes to *izzayyy* before suffixes, the vowel form also changes. The following examples present some other DCQs which are used (on a daily basis) by the EA speakers:

(54)　a. ᶜaamil　　eeh?
　　　　do (2SM)　what
　　　　'How are you doing?'

　　　 b.*eeh　　ᶜaamil?
　　　　 what　do (2SM)
　　　　 'How are you doing?'

(55)　a. axbaar-ak　　eeh?
　　　　news-your　what
　　　　'What is your news?' (lit: How are you?)

　　　 b. eeh　　axbaar-ak?
　　　　 what　news-your
　　　　 'What is your news?'

The DCQs in (54)-(55) are subject to the same constraints as other wh-questions. For example, the impossibility of fronting the wh-object without *illi* and the resumptive pronoun yields the ungrammaticality of the wh-question in (54b). In (55), the NP *axbaar-ak* 'your news' is [-human], so the wh-subject *eeh* 'what' can optionally be fronted as argued in Section 4.2.1.

A further interesting type of wh-question which contradicts some properties ascribed to adjunct wh-questions are those where adjunct wh-phrases are followed by *illi*. These wh-questions are argued to be rhetorical questions rather than information seeking questions. These questions may be used to reflect some inner thoughts (e.g. disbelief, surprise or exclamation) on the part of the addressee. I suggest that these structures are also DCQs where alternation between the fronting and the *in situ* strategies is not possible.

(56) a. imta   illi   'atmann-ah   yiHSal!
    when   that   wish (1S.PRES)-it   happen (3SM.INFIN)
    (lit: When shall my wishes come true?)

    b.*illi   'atman-ah   yiHSal   imta!
    that   wish (1S.PRES)-it   happen (3SM.INFIN)   when
    (lit: When shall my wishes come true?)

(57) a. izzayy   illi   'albis-uh   innaharda   'albis-uh   bukra!
    how   that   wear (1S.PRES)-it   today   wear (1S.PRES)-it   tomorrow
    (lit: How can I wear tomorrow what I wear today!)

    b.*illi   albis-uh   innaharda   albis-uh   bukra   izzayy!
    that   wear (1S.PRES)-it   today   wear (1S.PRES)-it   tomorrow   how
    (lit: How can I wear tomorrow what I wear today!)

The DCQs in (56)-(57) call for a pragmatic/syntactic-based account which is beyond the interest of the present study. In Chapter 7, I will provide some wh-questions which have the structure [wh-adjunct+[$_{RC}$ $\varnothing^9$ *illi*+ VP]].

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[9] This symbol occurs in lieu of the non-overt head of the relative clause.

4.6.2 Wh-questions with two conjoined wh-phrases[10]

It is of note that EA does not have multiple fronting wh-questions of the Bulgarian[11] type. However, a string of two wh-phrases conjoined by elements such as *wi* 'and' can be employed as in the following examples:

(58) miin wi miin illi biyil^{c}ab il-nahrda?
      who and who that play (3SM.PROG) today
      'Who is playing with whom today?' (lit: which two teams will play today?'

The example in (58) is an information seeking question. It has two conjoined wh-phrases in a fronted position. It is possible to have the two conjoined wh-phrases *in situ* as seen below:

(59) illi biyil^{c}ab il-naharda miin wi miin?
      that play (3SM.PROG) today who and who
      'Who is playing with whom today?' (lit: which two teams will play today?')

4.6.3 Wh-questions with universal quantifiers

An interesting property of argument wh-phrases, in particular the wh-phrases *miin* 'who' and *eeh* 'what', is that they can have the force of universal quantification[12] in conjunction with the complementiser *law* 'if'.

(60) a. law miin 'aabil-ni, miš ha-tkallim ma^{c}aah.
       if who meet (3SM.PAST)-me not will-talk (1S.INFIN) with-him
       'Whoever meets me, I will not talk to him.'

---

[10] MSA has similar structures as pointed out in Chapter 1, Section 1.5.2; however, in MSA, the two wh-phrases have to be distinct. For example, the wh-phrase *kayfa* 'how' can be conjoined to the wh-phrase *mata* 'when'.

[11] Bulgarian is one of the languages that have multiple fronting wh-questions as seen below:
    (i) koj kogo kakvo e pital?
        who whom what is asked
        'Who asked whom what?'
                        (Boeckx & Grohmann 2003: 5)

[12] Japanese is one of the languages that seem to have similar constructions as in the following example:
    (i) Dare-ga ki-te-mo, boku-wa awa-nai.
        who-N come I -T meet-not
        'No matter who may come, I will not meet him.'
                        (Nishigauchi 1990: 17)

b. law   eeh   HaSal,   ha-ruuH   il-Hafla.
if   what   happen (3SM.PAST)   will-go (1S.INFIN)   the-party
'Whatever happens, I will go to the party.'

4.7 Conclusion

This chapter aimed at sketching out the basic strategies of question formation as well as the other possible structures that are argued to be variants of these strategies. The present chapter also highlighted the asymmetry between the subject wh-phrases *miin* 'who' and *eeh* 'what'; while *miin* 'who' can be followed by definite/indefinite NPs and NPs in the genitive case, *eeh* 'what' can only be followed by definite NPs and NPs in the genitive case. Furthermore, the subject wh-phrase *miin* 'who' can be followed by [*illi*+NP/VP], whereas *eeh* 'what' takes [*illi*+VP]. This chapter illustrated the subject/object asymmetry which emerged from the following stages: wh-extraction; co-occurrence with *illi*; and appearance of resumptive pronouns. The examples presented here illustrated that while *illi* is optional with wh-subjects, in contrast to wh-objects, resumptive pronouns can occur with fronted wh-objects, in contrast to wh-subjects.

The chapter also described both wh-questions with final argument wh-phrases and yes/no questions. The latter was argued to be introduced by some elements such as *ya-tara* 'I wonder' and the pronoun *huwwa* 'he' which have the grammatical function of question particles.

In this chapter, I presented a type of question which is referred to as Discourse-Condition Questions (DCQs); some of these DCQs (which resemble idiomatic expressions) are unaltered, while others show optionality.

Although EA does not seem to exhibit multiple wh-questions available in Bulgarian and Serbo-Croatian, two wh-phrases can be conjoined by co-ordinator elements (e.g. *wi* 'and' and *aw* 'or'). The fronted conjoined wh-phrases can optionally remain *in situ*. Having described the fronting and the *in situ* strategies of question formation in EA, each strategy will be analysed in a separate chapter. Thus, the following chapter will discuss the *in situ* argument wh-phrases. It will investigate the behaviour of this type of wh-phrase to find out whether or not it undergoes wh-movement.

Chapter 5: Analysis of *in situ* argument wh-phrases in EA

5.1 Introduction

The main hypothesis which the present chapter advocates is that argument wh-phrases can reveal island insensitivity under certain conditions; therefore, argument wh-phrases are argued not to be derived by wh-movement of the English type. This hypothesis will be tested by investigating whether or not argument wh-phrases obey the standard constraints on wh-movement such as the Subjacency Condition, and the constraints subsumed under it (e.g. the Wh-Island Constraint and the Complex NP Constraints). It is anticipated that the properties of this type of wh-phrase will provide non-trivial implications for the overall analysis of wh-questions within EA. In this chapter, the different syntactic structures of argument wh-questions underlined in Chapter 4 will be discussed and compared in terms of the economy conditions set forth by the MP. Besides, some aspects of the grammar, such as the position of subject and the possible word orders identified in EA, will be discussed.

This chapter is organised as follows: section 2 discusses some wh-in-situ languages where the LF movement approach is posited. The most important literature which will be reviewed is Huang (1982), Lasnik & Saito (1984), and Pesetsky (1987). Section 3 presents two major works that contradict Huang's LF approach, namely Aoun & Li (1993) and Simpson (2000), whilst section 4 discusses the way in which wh-in-situ is accounted for within the framework of the MP. Section 5 discusses the position of the subject, the possible word orders within EA, and the scope properties of argument wh-phrases. Section 6 examines the behaviour of argument wh-phrases with respect to the Subjacency Condition, and the constraints subsumed under it. Section 7 proposes some descriptive generalisations on wh-extraction, and compares EA argument wh-phrases to their French counterparts. Section 8 identifies the role of resumptive pronouns within argument wh-questions. Section 9 analyses argument wh-phrases (subject and object) within non-*illi* wh-questions, and investigates the manner in which wh-phrases *in situ* are interpreted and assign scope. Section 10 employs the intervention effects to argue against LF movement of wh-in-situ in EA. Section 11 summarises and concludes the chapter.

5.2 LF movement approach to wh-phrases *in situ*

The standard assumption regarding wh-phrases *in situ* is that they move at LF to a clause-initial position to obtain scope. The example in (1b) illustrates LF movement of the wh-phrase *in situ* 'which essay'.

(1)   a. Which student$_i$ [t$_i$ wrote which essay$_k$]?

      b. [Which essay$_k$ [which student$_i$ [t$_i$ wrote t$_k$]]]

Huang (1982) and Lasnik & Saito (1984) advocate LF movement, while Aoun & Li (1993) and Pesetsky (1987) contradict it. Thus, Aoun & Li (1993) assume that what moves is not the wh-phrase *in situ*; rather, it is a Qu-operator with which the wh-phrase is co-indexed. Pesetsky (1987) interprets wh-phrases *in situ* as indefinites which do not need to move. He claims that they are interpreted in their *in situ* position. Pesetsky has developed a proposal by Baker (1970) (exemplified in (2)), and offered an interpretative mechanism referred to as unselective binding.

(2)   Baker-style representation

      [[$_{comp}$ Q$_{i,j}$ [who$_i$] e$_i$ read what$_j$]

                (Pesetsky 1987: 99)

Pesetsky (1987) argues that the Q-operator in an example like (2) unselectively binds the wh-phrases 'who' and 'what'.

Within the Principles and Parameters (P& P, Chomsky 1981) framework, LF is an abstract level of representation, while the MP views it as a syntactic level of derivation which results from the continuous application of a derivational process. The MP assumes that the derivational process starts at the point of lexical insertion till the derivation receives interpretation. The reason why some pre-minimalist proposals have advocated LF movement of wh-phrases *in situ* is that such a type of movement obeys the constraints imposed on overt syntactic movement (e.g. the ECP[1]). Among the

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[1] Aoun et al (1981) proposed the [Comp] indexing mechanism where the wh-phrase in the [Spec CP] position must antecedent govern its trace. Huang (1983: 118) accounts for the ungrammaticality of the example in (i), which has the LF representation in (ii), in terms of the violation of the ECP (Chomsky 1981) which requires all traces to be properly governed. In (ii), the wh-phrase 'why' does not govern its trace, so t$_k$ is not properly governed.

    (i)   *[$_{comp i}$ What$_i$] [did you buy t$_i$why]]?

arguments for LF movement of the wh-phrases *in situ* are Huang (1982) and Lasnik & Saito (1984) who agree that in Chinese and Japanese, wh-movement to the [Spec CP] position takes place at LF. In the subsequent sections, each proposal will be reviewed separately.

5.2.1 Huang[2] (1982)

Chomsky (1977) defines LF as the level which expresses whatever aspects of semantic representation are determined by properties of sentence grammar. Huang (1982) draws attention to the locality of movement, and shows support for LF movement. Huang (1982: 177-178) argues that languages should not be classified depending on whether they exhibit a wh-movement rule or not. Rather, they are to be classified according to the way they apply this movement rule (i.e. in syntax or at LF). According to Huang, this classification explains why wh-questions in all languages have similar semantics, but different syntactic representations.

Huang (1982) argues that wh-questions and cleft sentences in Chinese do not undergo movement in overt syntax. He claims that wh-in-situ observes some conditions on movement. Within a wh-question, the wh-phrase occurs in its base-generated position, then, at LF, it moves to another position leaving behind a variable. In its new A'-position, the moved wh-phrase binds this variable. Huang (1982) illustrates the idea by the example in (3), followed by its LF representation in (4).

(3)   ni   xihuan   shei?
          you   like   who
          'Who do you like?'

    (ii) [[$_{compi}$ why$_k$ what$_i$] [did you buy t$_i$ t$_k$]]?

In the MP, as suggested by Chomsky (1995: 91), the ECP has acquired a descriptive nature highlighting cases of violation visible at LF.

[2] In his (1998) 'Logical Relations in Chinese and the Theory of Grammar', which is a revision of a (1982) PhD thesis, Huang suggests three main properties for the LF level:

    (i)   Quantificational expressions occur in operator positions (i.e. COMP position), whereas non-quantificational expressions occur in argument positions (i.e. subject and object positions).

    (ii) The quantifiers (e.g. operators) bind the variable they c-command; accordingly, all variables must be bound.

    (iii) LF level is motivated by the need to disambiguate language.

To support his claim for the existence of this level, Huang argues that a quantified NP binds a pronoun which acts as the variable in an argument position, similar to the binding of an empty category by the moved wh-phrase. He also argues that both quantificational NPs and wh-phrases that move in overt syntax undergo movement in LF.

(4)   [Shei$_i$ [ni   xihuan   e$_i$]]
        who   you   like

(Huang 1982: 370)

The following examples demonstrate LF movement of the wh-in-situ in Chinese.

(5)   a. Zhangson   wen   wo   [shei   mai-le   shu].
           Zhangson   ask   me   who   bought   books
           'Zhangson asked me who bought books.'

        b. Zhangson   wen   wo   [shei$_x$ [$_x$ mai-le   shu]]]
           Zhangson   ask   me   who   bought   books
           'Zhangson asked me for which x, x bought books.'

(6)   a. Zhangson   xiangxin   [shei   mai-le   shu]?
           Zhangson   believe   who   bought   books
           'Who does Zhangson believe bought books?'

        b. [shei$_x$ [Zhangson   xiangxin   [$_x$ mai-le   shu]]]
           who   Zhangson   believe   bought   books
           'For which x, Zhangson believes x bought books.'

(7)   a. Zhangson   zhidao   [shei   mai-le   shu]?
           Zhangson   know   who   bought   books
           'Who does Zhangson know bought books?' or
           'Zhangson knows who bought books.'

        b. Zhangson   zhidao   [shei$_x$ [$_x$ mai-le   shu]]]
           Zhangson   know   who   bought   books
           'Zhangson knows for which x, x bought books.'

or

        [shei$_x$ Zhangson   zhidao   [x mai-le   shu]]]
        who   Zhangson   know   bought   books
        'For which x, Zhangson knows x bought books.'

(Huang 1982: 371-372)

Huang treats wh-phrases as quantifiers based on the fact that they exercise similar scope properties. In (5a) the wh-phrase *shei* 'who' has scope over the embedded clause, whilst in (6a) it takes wide scope over the matrix clause. In (7a) the wh-phrases can take either scope, resulting in two different readings. Huang claims that LF movement is a process proposed for non-overt wh-movement languages.

Huang argues that in Chinese, wh-phrases *in situ* can freely violate island conditions, as illustrated by the example in (8) which can have either (9) or (10) as its LF representation.

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

(9)   [s' shei$_x$ [s ni   xiang-zhidao [s' sheme$_y$ [s x mai-le y]]]]
        who   you   wonder   what   bought

(10)   [s' sheme$_y$ [s ni   wxiang-zhidao [s' shei$_x$ [s x mai-le y]]]]
        what   you   wonder   who   bought

(Huang 1982: 382)

Huang (1982: 384-385) argues that in (9) and (10), the wh-phrases *shei* 'who' and *sheme* 'what' have wide scope. In addition, the relation between the wh-phrase *shei$_x$* and its variable *x* in (9), and that between the wh-phrase *sheme$_y$* and its variable *y* in (10) violate the ECP subsumed under the Subjacency Condition.

Huang argues that when a wh-phrase has wide scope, it can violate the Subjacency Condition, as in (9) and (10). By contrast, adjunct wh-phrases which have narrow scope obey the Wh-Island Constraint as seen below.

(11)   ni   xiang-zhidao [shei   weisheme   da-le   Zhangsen]?
        you   wonder   who   why   beat   Zhangsen
        'For which person x, you wonder why x beat Zhangsan'
        (Not: for which reason x, you wonder who beat Zhangsan for x)

(12)   ni   xiang-zhidao [shei   zeme   pian-le   Zhangsan]?
        you   wonder   who   how   cheated   Zhangsen
        'For which person x, you wonder how x cheated Zhangsan'
        (Not: for which way x, you wonder who cheated Zhangsan in x)

Huang argues that this fact can be a universal property in LF since English maintains this generalisation, as in the following examples:

(13)   a. Who remembers why we bought what?

         b. LF: *Who remembers what we bought why?

                (Huang 1982: 385)

The example in (13b) violates the Subjacency Condition as the wh-phrase 'what' moves at LF to a position where it has matrix scope. Huang employs the argument-adjunct asymmetry resulting from LF raising of Chinese wh-phrases *in situ* to underline the existence of LF movement rule.

Although Huang (1982) is one of the major works written on Chinese wh-constructions, it did not account for the question particle *ne* which can optionally be employed. While Huang (1982) analyses Chinese wh-phrases as operators, Aoun & Li (1993) and Cheng (1997) argue that the question particle *ne* is in essence a question operator.

5.2.2 Lasnik & Saito (1984)

For Lasnik & Saito, a basic similarity between LF movement and movement in overt syntax is the ECP account of the traces resulting from movement. In the two types of movement, traces must be properly governed. Lasnik & Saito (1984) view the ECP as a universal constraint that should hold at the LF level as in the following examples:

(14)   Who$_1$ [t$_1$ saw what$_2$]

(15)   *what$_2$ [did who$_1$ see t$_2$]

                (Lasnik & Saito 1984: 240)

The examples in (14) and (15) will have the LF representations in (16) and (17) respectively:

(16)   [who$_1$ what$_2$]$_1$ [t$_1$ saw t$_2$]

(17)   [who$_1$ what$_2$]$_2$ did t$_1$ see t$_2$

In overt syntax, the syntactic traces in (14) and (15) are properly governed: in (14), 'who$_1$' properly governs t$_1$, whilst in (15) 'see' lexically governs t$_2$. Regarding the traces resulting from LF movement in (16)-(17), the verb 'saw' governs t$_2$ which results from LF movement of the wh-phrase 'what$_2$' in (16). In (17), LF movement of the wh-phrase 'who' results in a trace t$_1$ which is not lexically governed, as the index of the trace is

different from the index of Comp. To account for the violation of the ECP in (17), Lasnik & Saito propose the Comp-indexing algorithm in (18).

(18)   Comp-indexing (at s-structure)

$[_{comp} ... X_i ...] \rightarrow [_{comp} ... X_i ...]_i$

(Lasnik & Saito 1984: 241)

In (17), the index of Comp $[who_1 \; what_2]_2$ is not the index of 'who$_1$' and its trace t_1. For Lasnik & Saito, this suggests that there are some parameters which interact with the ECP. Thus, they propose the following condition, and claim that it holds universally at LF.

(19)   A Comp is [+ wh] if and only if it is headed by a [+ wh] element

(Lasnik & Saito 1984: 284)

Thus, the above condition is argued to hold for all languages with syntactic wh-movement. An S-structure filter for English in (20) accounts for the ungrammaticality of (21).

(20)   *Comp if it is headed by a [+ wh] element
       [-wh]

(21)   *$[_{S'} [_{Comp} Who_1] \; t_1 \; knows \; [_{S'} [_{Comp} what_2] \; John \; bought \; t_2]]$
       [+wh]   [-wh]

(Lasnik & Saito 1984: 284)

The ungrammaticality of the LF representation in (21) is due to a violation of the universal condition in (19). The embedded Comp is [-wh], as it heads the [-wh] element 'what'.

To summarise: Lasnik & Saito (1984) suggest that the ECP account is one of the fundamental similarities between LF movement and movement in syntax. The ECP (which they claim to hold universally) requires proper government of the traces which result from both LF movement and overt movement.

5.2.3 Pesetsky (1987)

Pesetsky (1987) claims that wh-phrases *in situ* are interpreted in their *in situ* position where they gain scope; therefore, they do not need to move. He refers to this interpretative mechanism as unselective binding. Pesetsky's proposal, which contradicts wh-movement, rests upon dealing with some wh-phrases *in situ* as indefinites which do not need to move (1987: 103). The following examples explain how indefinites are interpreted in Pesetsky's proposal:

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

(23)   [always$_{i,k}$ [if a man$_i$ owns a donkey$_k$, he$_i$ beats it$_k$]]

(Pesetsky 1987: 101)

In (22), indefinites such as 'a man' and 'a donkey' lack their own quantificational force; they act as variables which are bound by some binders like 'always'. According to Pesetsky, these binders can unselectively choose more than one variable to bind. Thus, the example in (22) has the representation in (23), whereby the binder 'always' binds the two variables which occur in the position of indefinites.

Pesetsky (1987) classifies wh-in-situ into two types: non-D-linked and D-linked[3] wh-in-situ. In line with Chomsky (1976), he argues that non-D-linked wh-in-situ can satisfy the Superiority Condition[4] if they undergo movement at LF as illustrated by the following licit structure:

(24)   *who*$_i$ did you persuade *e*$_i$ to read *what*?

(Pesetsky 1987: 104)

Pesetsky argues that a wh-phrase *in situ* undergoes LF movement where it gets adjoined to the wh-phrase in Spec CP; thus, he proposes the following representation for the example in (24).

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[3] The notion D-linking originates in Pesetsky (1987). He refers to D-linked wh-phrases as the wh-expressions which imply the existence of a set of elements previously established in the discourse. Thus, in the following example, the wh-phrase 'which book' is asking a question about one of a set of books previously known in the discourse:
  (i) Which book did you read?
    (Pesetsky 1987: 108)
Non-D-linked wh-phrase such as 'who' and 'what' are less associated with a pre-existing set.

[4] The Superiority Condition proposed by Chomsky (1973) is one of the constraints on movement; it necessitates that within a multiple wh-question, the trace of the moved wh-phrase must c-command the wh-in-situ.

(25)   [$_{S'}$ what$_j$ [$_{S'}$ who$_i$ [$_S$ you persuade e_i to read e_j]]]
          (Pesetsky 1987: 106)

In the above representation, LF movement of the non-D-linked wh-phrase *in situ* 'what' satisfies the Subjacency Condition, as the trace it left behind is properly governed by the verb 'read'. Regarding D-linked wh-phrases *in situ* (e.g. *which*-phrases), Pesetsky argues that they involve no movement, and assign scope in the manner discussed in Baker (1970). The Baker-style proposes that a wh-phrase-in-situ assigns scope by co-indexing with a Q morpheme in the [Spec CP] position of the wh-question as in the following example:

(26)   [[$_{CP}$ Q$_{i,j}$ who$_i$] e$_i$ bought which book$_j$]

For Pesetsky (1987), D-linked which-phrases are not quantifiers, and they act as indefinites similar to the ones in (22) and (23) above. He suggests the following examples to illustrate these D-linked which-phrases which resemble the indefinites 'a man' and 'a donkey' in (22) and (23) respectively.

(27)   Mary asked which book$_i$ which man$_k$ read e$_i$

(28)   Mary asked Q$_{i,k}$ [which book$_i$ which man$_k$] read e$_i$
          (Pesetsky 1987: 106)

Pesetsky (1987) concludes that the scope of the D-linked wh-phrases is assigned through the unselective binding in a manner which is similar to the way the scope is assigned to the indefinites.

5.3 Against LF movement of wh-phrases *in situ*

In the preceding sections, Huang (1982) and Lasnik & Saito (1984) were reviewed as two approaches to LF movement of wh-in-situ. In this section, some arguments against LF movement of the wh-phrases *in situ* (e.g. Aoun & Li 1993 and Simpson 2000) will be outlined.

5.3.1 Aoun & Li (1993)

Aoun & Li (1993) argue that wh-phrases *in situ* do not undergo LF movement; what moves is a question operator (Qu-Operator). In Chinese, the non-overt question operator is overtly raised. The wh-phrase and the operator are co-indexed, so the scope of the wh-phrase *in situ* is defined via its reference to that operator. Aoun & Li illustrate this idea by the example below.

(29) [Qu$_i$ [ta   renwei [Zhangsan   weishenme$_i$ Laile]]]?
        he   think   Zhangsan   why   came
        'Why does he think Zhangsan came?'

        (Aoun & Li 1993: 219)

In support of their claim against LF raising of Chinese wh-phrases *in situ*, Aoun & Li (1993: 207) suggest the following example in order to underline the interaction between the operator 'only' and the wh-phrase *in situ*:

(30) Ta   zhi   xihuan   shei?
        he   only   like   whom
        'Who does he only like?'

Aoun & Li refer to the Principle of Lexical Association (PLA) to argue against LF movement of the wh-phrase *shei* 'whom' in (30).

(31) Principle of Lexical Association

        An operator like *only* must be associated with a lexical constituent in its c-command domain.

        (Aoun & Li 1993: 206)

LF raising of the wh-phrase *shei* 'whom' yields the following LF representation:

(32) Shei$_k$ Ta   zhi   xihuan   x$_k$
        whom   he   only   like
        'Who does he only like?'

According to Aoun & Li (1993), the example in (32) violates the PLA, as the wh-phrase *shei* 'whom' is no longer in the c-command domain of the operator *'only'*: rather. it crosses the operator *'only'*. The scope of the wh-phrase *in situ* is determined by its

reference to the Qu-operator with which it is co-indexed. Thus, they suggest that, wh-phrases no longer need to move to obtain scope. They further add that, in an example like (33), the wh-phrase *in situ shenme* 'what' is co-indexed with the matrix Qu-operator where it obtains matrix scope.

(33)   [cp Qu_i [IP Zhang   shuo [cp Li   maile   shenme_i]]]?
            Zhang   say   Li   bought   what
            'What did Zhang say Li bought?'
      (Aoun & Li 1993: 217)

Aoun & Li contradict LF movement of the wh-phrases *in situ*, as this movement gives rise to argument-adjunct asymmetry as far as the violation of the Subjacency Condition, in particular the ECP, is concerned. To account for this asymmetry, they propose a Generalised Binding Account which states that the relation between the Qu-operator and the wh-phrases *in situ* is the same as the relation between a binder and a bindee. In this respect, they propose the following generalisation about this asymmetry:

(34)   Adjunct wh-phrases *in situ* such as 'why' and 'how' must be antecedent-
        governed in their own clause, whereas argument wh-phrases *in situ* do not need
        a local antecedent.
        (Aoun & Li 1993: 219)

In the following example, Aoun & Li suggest that the Qu-operator is base-generated in the embedded clause; it has to move to the matrix [Spec CP] position to antecedent-govern the adjunct wh-in-situ *weishenme* 'why'. As a consequence, the wh-phrase *in situ* does not need to move in LF.

(35)   [Qu_i [ta   renwei [Zhangsan   weishenme_i laile]]]?
        he   think   Zhangsan   why   came
        'Why does he think Zhangsan came?'

To sum up, Aoun & Li (1993) argue against LF movement of Chinese wh-phrases *in situ*. They propose that what moves is a Qu-operator with which the wh-phrase is interpreted and co-indexed. They offer the descriptive generalisation in (34) to account for the argument-adjunct asymmetry without the need for LF raising. They claim that the ECP effects can be maintained without LF movement of the wh-phrases *in situ*.

5.3.2 Simpson (2000)

Simpson (2000) proposes a further account against LF movement based on the idea that LF movement is not a valid counterpart to overt wh-movement. He argues that overt movement shows island sensitivity, whereas LF movement violates island constraints. This discrepancy between overt movement and LF movement can be highlighted via the following Chinese examples:

(36)   a. 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'

        b.*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'

           (Simpson 2000: 14)

Simpson (2000) proposes the following representation to explain LF movement of the wh-phrase *in situ shei* 'who' in (36a):

(37)   *shei$_k$ ni   mai-le   [[t$_k$ xie]   de   shu]
          who you buy-ASP   write rel. book
          'Who is the x such that you bought books that x wrote'

The example in (37) proves island violation as the result of the movement of the *in situ* wh-phrase *shei* 'who' out of a syntactic island formed by a relative clause. Similarly, the example in (36b) is ruled out by the movement of the argument NP *Zhangsan* out of a relative clause (which is an island) to a topicalised position. In (36b), the overt movement of *Zhangsan* confirms island sensitivity, contrary to LF movement of the wh-phrase in (37). The idea that LF movement can violate island constraint (as in (37)), whereas overt movement proves island sensitivity (as in (36b)), leads Simpson to propose that LF movement cannot be a proper counterpart of overt movement.

One of the arguments that Simpson (2000) employs to highlight the discrepancy between overt movement and LF movement is the Principle of Lexical Association (Aoun & Li 1993). Simpson suggests that the PLA can account for the interpretative differences that hold between the two types of movement, as in the following examples:

(38) Which girl said she only liked what?

(39) Ta   zhi   xihuan   shei?
     he   only   like   who
     'Which person is such that he only likes that person (and not others)?'

(Simpson 2000: 17)

Simpson (2000) argues that the PLA demands that the operators 'only' and *zhi* in the above two examples be associated with the wh-phrases '*what*' and *shei* respectively. If the wh-phrases undergo LF raising, these operators will be associated with the traces of the wh-phrases; hence, the PLA is violated.

Simpson also employs the phenomenon of parasitic gaps[5] to contradict LF movement. He suggests that the A'-chains which are formed as a result of overt movement allow parasitic gaps, contrary to wh-phrases *in situ*. The idea is illustrated by the contrast in (40).

(40)   a. What$_i$ did John send off e$_i$ without having copied e$_i$?

        b.*Who$_i$ did John give t$_i$ what$_k$ without having copied e$_k$?

In (40a), the overt movement of the wh-phrase 'what' licenses the parasitic gaps marked by the empty categories, contrary to LF movement in (40b) which yields an illicit structure. Investigating some phenomena such as island sensitivity, the PLA and the parasitic gaps leads Simpson to conclude that LF movement of the wh-phrases *in situ* is problematic and unnecessary.

To sum up, Huang (1982) and Lasnik & Saito (1984) advocate LF movement in Chinese and Japanese, whilst Aoun & Li (1993) and Simpson (2000) contradict this type of movement. Arguments for LF movement pose a problem for the MP which cannot account for a movement operation which takes place after the Spell-Out point. In

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[5] Chomsky (1982: 54) argues that when two empty categories are co-indexed with a wh-phrase, the first empty category is the trace left behind by overt movement, whereas the other empty category is a parasitic gap which is c-commanded by the wh-phrase in A'-position. Authors such as Taraldsen (1981) and Engdhal (1983) offer a detailed analysis of Parasitic Gaps.

the following section, the minimalist assumptions regarding wh-in-situ will be recapped.

5.4 Argument wh-in-situ and the Minimalist Program

Reinhart (1998) accounts for wh-in-situ within the framework of the MP. She discusses the Superiority Condition (Chomsky 1973) as one of the problems which wh-in-situ poses for the MP. She highlights this problem by the following contrast:

(41)   a. Who e discussed what with you?

        b.*/?What did who discuss e with you?

            (Reinhart 1998: 30)

The Superiority Condition decides which wh-phrase undergoes overt movement and which remains *in situ*. In (41b), the overt movement of the wh-phrase *in situ* 'what' yields a Superiority effect. The MP calls for more economical derivations, whereby movement has to take the shortest steps. In (41a), the wh-phrase 'who' is closer to the [Spec CP] position than the wh-phrase 'what', so the movement of 'who' is less costly than that of the wh-phrase 'what'. The other problem which Reinhart (1998) discusses is the ECP violation which results from LF movement of wh-phrases *in situ*, as in the following example:

(42)   a. */? What did who discuss e with you?

        b. LF: *[Who_1 [$what_2$]]$_2$ [e_1 discussed e_2 with you]

            (Reinhart 1998: 31)

The example in (42a) is ruled out by the overt movement of the wh-phrase *in situ* 'what'. The ungrammaticality of the LF representation in (42b) is due to adjoining 'who' to 'what' in the [Spec CP] position, whereby 'who' becomes unable to c-command and antecedent-govern its trace; hence, the example violates the ECP.

Reinhart (1998) discusses Chomsky's 'absorption' mechanism employed to interpret wh-in-situ when a wh-phrase is adjoined to the [Spec CP] position. This idea is illustrated by the following examples:

(43)   a. Who e bought which book?

        b. for which (x, y), x bought y, and book(y)

        (Reinhart 1998: 32)

According to the absorption mechanism, the example in (43a) has the LF representation in (43b) where the N-restriction 'book' remains *in situ* as long as the wh-phrase 'which book' also remains *in situ*.

Regarding the question of why the MP cannot account for LF movement of wh-phrases *in situ*, Reinhart (1998: 33) suggests that the MP calls essentially for more economical derivations. Thus, LF movement of wh-phrase *in situ* should no longer exist as it is a more costly operation. The best option for wh-phrases *in situ* is to be interpreted in their base-generated positions, whereby they can assign scope. Reinhart (1998) adds that LF movement violates the principle of the economy of derivation subsumed under the MP as illustrated below.

(44)   a. Who knows where to find what?

        b. for which (x, y), x knows where to find y

        (Reinhart 1998: 33)

According to Reinhart (1998), LF movement of the wh-phrase *in situ* 'what' in (44) adjoins 'what' to 'who'; this movement is banned by the MP which requires movement to take the shortest step. Therefore, the wh-phrase 'what' takes a shorter step if it is adjoined to the lower wh-phrase 'where', not to the higher wh-phrase 'who'. This explains why the MP contradicts LF movement in (44b). Reinhart suggests that the Subjacency Condition provides a good reason for the MP to reject LF movement, as in the following examples:

(45)   Who reads the books that who writes?

(46)   *Who do you read books that e writes?

        (Reinhart 1998: 34)

Reinhart argues the overt movement of 'who' in (46) cannot violate the Subjacency Condition, whereas the wh-phrase *in situ* 'who' in (45) is permitted to violate it. This, according to Reinhart, predicts that both LF and SS are two distinct levels of

representations[6] which are eliminated in the MP which assumes that LF is derived through one derivation only. The derivation enters the PF interface after being Spelled-Out at any stage. In the MP, violating the Subjacency Condition by wh-phrases *in situ* implies that these wh-phrases do not actually move (I will adopt this minimalist assumption later to propose a non-movement analysis for wh-phrases in EA).

After recapitulating some theories which interpret wh-in-situ, I will analyse the EA data collected in Chapter 3 and described in Chapter 4. The analysis will be built on three axes; first I will investigate the behaviour of argument wh-phrases with respect to the standard constraints on movement, and will see whether argument wh-questions are derived by a movement rule of the English type or not; second, I will account for the derivation of some wh-questions in terms of the economy considerations called for by the MP; and third, I will adopt a minimalist account for the licensing of the *in situ* argument wh-phrases in EA.

5.4.1 The economy of derivation

This section is a brief introduction to the economy condition sketched out in Chomsky (1995). According to the economy consideration assumed by the MP, movement is a Last Resort operation which saves the structure from crashing. The MP proposes the principle of Procrastinate which prefers movement not to take place until LF. To ensure more economical derivations, movement should take the shortest steps. Derivations with shorter steps normally block the ones with longer steps (Chomsky 1995: 202). Thus, in the subsequent sections, two competing derivations will be compared in terms of economy. The minimalist assumption regarding optionality, which is one of the problems addressed in terms of economy, is that a language cannot have a system which allows both overt and covert movement. For that reason, two derivations which share the same lexical items cannot undergo both overt and covert movement.

5.4.2 Licensing argument wh-phrases

The MP assumes that wh-movement is a feature-driven operation that takes place to check morphological features. Thus, what triggers wh-movement is the need to check a certain feature in a checking domain of a head. In English wh-questions, the wh-phrase

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[6] Chomsky (1995: 189-191) argues that LF and PF are the only levels of representations. These levels must satisfy the external interface conditions. Therefore, D-structure and S-Structures were eliminated.

carries a strong [wh] feature that needs to be checked in a proper checking domain. The head C which carries a [wh] feature attracts the [wh] feature on the wh-phrase, and pied pipes the whole category (i.e. the wh-phrase) to its specifier position. Thus, the wh-phrase moves to the Spec CP position for feature checking necessity. Chomsky (1995: 199) argues that the [+wh] feature on the wh-phrase enters into the checking domain of the [wh] feature in C^o by the operations Merge or Move. The MP assumes that wh-phrases satisfy their scopal properties either in the [Spec CP] or in a position adjoined to it.

The MP distinguishes between [+interpretable] and [-interpretable] features. Chomsky (1995) argues that [-interpretable] features must be eliminated via feature checking before the derivation reaches LF level. If these features remain till the end of the derivation, the whole derivation will crash. As [+interpretable] features are required for interpretation, they cannot be eliminated. The [wh] features on the head C and the wh-phrase are both [+interpretable].

In the MP, overt movement takes place before Spell-Out, whereas covert movement occurs after Spell-Out. The MP presumes that a strong feature crashes at PF, so it must be eliminated before Spell-Out. Since wh-movement is triggered by the need to check the strong [wh] feature on the wh-phrase, it is restricted to overt syntax. Hence, the wh-phrase which carries the [+interpretable] feature does not need to move at LF to enter into a checking relation with the [-interpretable] features.

When features move overtly, whilst the whole category (i.e. the wh-phrase) is left behind for economy considerations, the resulting structure will not satisfy the PF condition. The MP assumes that formal features, rather than wh-phrases, can move at LF; formal features cannot move in overt syntax. In a wh-in-situ question, the [+wh] feature rather than the wh-phrase undergoes LF movement to the Spec CP position, and the structure can safely converge. The MP assumes that wh-phrases which carry weak [wh] features do not undergo wh-movement, as these weak features do not need to be checked overtly.

The MP proposes the Procrastinate Principle which requires weak features to be checked covertly via LF movement. However, the Procrastinate Principle prefers overt movement if it saves the structure from crashing.

The minimalist assumption regarding chain formation is that the operator and the variable are not co-indexed in the Numeration. They are co-indexed when the wh-phrase moves to a higher position in the clause. The head of the chain has to be higher in the clause for the wh-phrase and the variable to form a proper chain. Since wh-phrases *in situ* do not move to a higher position in the clause, they cannot be co-indexed with their variables; hence, no proper chain is formed. The [wh] feature has to be assigned to a functional head which acts as the operator [Op]. This operator moves to the [Spec CP] position where it binds the variable (i.e. the wh-phrase *in situ*) and forms a proper chain with it.

Following these minimalist assumptions, wh-phrases *in situ* in EA are argued to be licensed via LF movement of [Op] which tolerates the [wh] feature. I propose that argument wh-phrases in EA carry weak [wh] features; hence, the head C which has a strong [wh] feature cannot attract[7] these wh-phrases. Accordingly, I suggest that what moves in EA argument wh-questions is not a wh-phrase; rather, it is an operator which carries the [wh] feature that matches the feature on the wh-phrase *in situ*. When this operator moves at LF, a convergent derivation is produced. Thus, I claim that argument wh-in-situ questions are licensed via LF movement of formal features allowed in the MP. The [+wh] feature that undergoes movement to the [Spec CP] position enters into a checking relation with the [+wh] feature of the wh-phrase *in situ*. Feature strength is one of the main differences noted to exist between EA and English.

5.4.3 Scope properties of wh-in-situ in EA

The way wh-phrases *in situ* obtain their scope has been analysed in different ways. For instance, Chomsky (1981) and Huang (1982) assume that within the theory of LF movement, wh-phrases *in situ* obtain their scope via a covert operation of Move α. Pesetsky (1987), on the other hand, proposes an unselective binding procedure where a Q-morpheme directly binds the wh-phrase in an unselective manner. Watanabe (1991)

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[7] Chomsky (1995: 311) has reformulated the notion of checking theory as Attract/Move. He argues that the notion Attract/Move is the formal expression of the feature checking property of natural languages.

argues that wh-phrases acquire their scope by being co-indexed with a Qu-operator which moves overtly to the Spec of CP. Chomsky (1995: 199) argues against Watanabe's proposal as it implies that the wh-operator feature is universally strong; hence, it assumes no parametric variation among languages. Chomsky (1995: 222) assumes that wh-phrases *in situ* do not need to move to a [+wh] checking position; they can assign their scope from their *in situ* position which are the [wh] checking position. Wh-phrases *in situ* assign scope by being co-indexed with the [wh] feature on a functional head which moves covertly to the Spec of CP.

To investigate the scope of wh-phrases *in situ* in EA, let us consider the following examples:

(47)   a. [$_{IP1}$ She wonders [$_{IP2}$ what$_i$ he bought x$_i$]]].

     b. [$_{IP1}$ What$_i$ does [she think [$_{IP2}$ he bought x$_i$]]]?

(48)   Mona   ištarat   eeh?
      Mona   buy (3SF.PAST)   what
      'What did Mona buy?'

(49)   a. Mona   bitis'al   Sami   ištara   eeh.
       Mona   ask (3SF.PROG)   Sami   buy (3SM.PAST)   what
       'Mona is asking what Sami bought.'

     b. Mona   bitis'al   eeh   illi   Sami   ištara-ah.
       Mona   ask (3SF.PROG)   what   that   Sami   buy (3SM.PAST)-it
       'Mona is asking what Sami bought.'

In (47a) and (47b), the wh-phrase 'what' has embedded and matrix scope respectively. To define the scope of wh-phrases *in situ* in EA, the minimalist assumption that wh-phrases *in situ* are interpreted and obtain their scope without the need to move either in overt syntax or at LF is adopted. Thus, in (48), the wh-phrase *in situ eeh* 'what' has wide scope resulting in a direct question reading, whereas in (49), wh-phrase *eeh* 'what' has embedded scope: in (49a), the wh-phrase *eeh* 'what' remains *in situ* within the embedded IP as the direct object of the verb *ištara* 'bought', whilst in (49b), it is extracted out of its *in situ* position to be fronted within the embedded IP. In (49b), *illi* and the resumptive pronoun are inserted.

In EA, the selectional restrictions of some verbs may yield ambiguity, as in the following example:

(50)   Mona   iftakarit   Sami   ištara   eeh.
       Mona   remember/think (3SF.PAST) Sami   buy (3SM.PAST) what
       a. 'Did Mona remember what Sami bought?'
       b. 'Mona remembered what Sami bought.'
       c. 'What did Mona think that Sami bought?'

The above example can be interpreted as a yes/no question which is marked by an intonation morpheme (as in a). In this case, the wh-phrase *eeh* 'what' has a quantificational force; it is composed of the features [-wh] and [+nominal]. The negative particle *la'* 'not' can be conjoined to the yes/no question by the conjunction *wala* 'or':

(51)   Mona   iftakarit   Sami   ištara   eeh   wala   la'?
       Mona   remember (3SF.PAST) Sami   buy (3SM.PAST) what   or   not
       'Did Mona remember what Sami bought or not?'

If the verb *iftakarit* is interpreted as 'remember', it subcategorises for a non-interrogative complement; hence, the wh-phrase *eeh* 'what' assigns narrow scope, as in (50b) repeated in (52).

(52)   Mona   iftakarit   Sami   ištara   eeh.
       Mona   remember (3SF.PAST) Sami   buy (3SM.PAST)   what
       'Mona remembered what Sami bought.'
       Lit (Mona remembered the thing(s) which Sami bought)

If the verb *iftakarit* is interpreted as 'thought', the narrow scope reading is no longer possible, as in (53). The wh-phrase *eeh* 'what' has to obtain wide scope, as in (50c) repeated in (54):

(53)   *Mona   iftakarit   Sami   ištara   eeh.
        Mona   think (3SF.PAST) Sami   buy (3SM.PAST) what
       '*Mona thought what Sami bought.'

(54)   Mona   iftakarit   Sami   ištara   eeh?
       Mona   think (3SF.PAST) Sami   buy (3SM.PAST) what
       'What did Mona think that Sami bought?'

Fronting the wh-phrase *eeh* 'what' in (52) disambiguates the sentence; the verb *iftakarit* is interpreted as 'think', while the wh-phrase *eeh* 'what' gains wide scope resulting in a direct question reading, as in the following example:

(55)   eeh   illi   Mona   iftakarit   Sami   ištaraa-h?
           what   that Mona   think (3SF.PAST)   Sami   buy (3SM.PAST)-it
           'What did Mona think that Sami bought?'

Based on the above examples which demonstrated scope properties[8] of wh-phrases *in situ*, I propose the following descriptive generalisations:

(a) When the verb subcategorises for a [+interrogative] complement, the wh-phrase has wide scope whether it is fronted or *in situ*.

(b) When the verb subcategorises for a [-interrogative] complement, the wh-phrase has narrow scope over the embedded clause.

The above descriptive generalisations are derivable from the following universal selectional restrictions stated in Huang (1998: 180):

(56)   a. Interrogative verbs: [+___[+wh]]

          b. Non-interrogative verbs: [+___[-wh]]

          c. Optional interrogative verbs: [+___([+wh])]

This set of selectional restrictions is represented by the following Chinese examples respectively:

(57)   [Zhansan wen   wo   [[shei]ᵢ   [tᵢ mai-le   shu]]]
                   ask   I   who   buy-ASP book

(58)   [[shei]ᵢ [Zhangsan xiangxin [tᵢ mai-le   shu]]]
            who   believe   buy-ASP book

(59)   a. [[shei]ᵢ [Zhangsan zhidao [tᵢ mai-le   shu]]]
           who   know   buy-ASP book

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[8] Wh-phrases in Iraqi Arabic exercise similar scope properties as illustrated in Chapter 1, (Section 1.4.5.1).

b. [Zhangsan zhidao   [shei$_i$] [t$_i$ mai-le   shu]]]
      know   who   buy-ASP book

In (57), verbs like *wen* 'ask' selects a [+wh] complement; in (58), the verb *xiangxin* 'believe' subcategorises for a [-wh] complement; and in (59), the verb *zhidao* 'know' can take both ([+wh] and [-wh]). The examples presented in this section indicate that the selectional restriction imposed on some languages such as English and Chinese is also observed in EA.

5.5 The position of subject and word order in EA

5.5.1 Word order in MSA and EA

Koopman & Sportiche (1991) propose that subjects are base-generated within VPs: a proposal referred to as the VP-Internal Subject Hypothesis[9]. According to this hypothesis, the subject moves from its canonical position within the VP to the [Spec IP] position. This idea is illustrated by the example in (60), followed by its representation in (61).

(60)   The police arrested the thief.

(61)   [$_{IP}$ [$_{DP}$ the police]$_i$ I [$_{VP}$ t$_i$ v' arrested the thief]]]

Koopman & Sportiche (1991) argue that what triggers the subject to move from its base-generated position within the VP to the [Spec IP] position is the need to receive nominative case under Spec-Head agreement with I. Plunkett (1993) claims that the subject originates in VP, and moves to the [Spec IP] position when focused or topicalised. She bases her claim on the idea that within VSO sentences (as in (62)), the agreement relation between the subject and Agr$_s$ category on the verb is absent. In (63), the topicalised subject moves to the left of the wh-phrase[10]:

(62)   ya-drusu   al-Tullaab-u.
         study (3SM.IMP)   the-students-NOM
         'The students are studying.'

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[9] For a detailed discussion of the VP-Internal Subject Hypothesis, the reader is referred to Koopman & Sportiche (1991) and Kuroda (1988) among others.

[10] In Chapter 6, I will discuss similar structures, and will argue that the wh-phrase is in Spec FocusP, whereby a TopicP can cross over it.

(63)   al-Tullaab-u   ayna   ya-drus-uuna?
       the-students-NOM   where   study(3MPLU-IMP)
       'The students where are (they studying?'

(Plunkett 1993: 242-3)

Ouhalla (1999) suggests further examples which demonstrate the lack of agreement in VSO word order, in contrast to SVO as seen below.

(64)   ra'a   'al-'awlaad-u   Zayd-an.   (VSO)
       see (3SM.PAST)   the-boys (3PLUM.NOM)   Zayd (ACC)
       'The boys saw Zayd.'

(65)   'al-'awlaad-u   ra'a-w   Zayd-an.   (SVO)
       the-boys (3PLUM.NOM)   see (3PLU.PAST)   Zayd (ACC)
       'The boys saw Zayd.'

(Ouhalla 1999: 338)

Ouhalla (1999) argues that the verb *ra'a* 'he saw' in (64), does not agree in number and person with the subject NP *'al-awlaad-u* 'the boys'. This lack of agreement indicates that the subject NP *'al-awlaad-u* 'the boys' is in the Spec of VP. Thus, in SVO sentences, agreement holds between the subject and the Agr$_s$ category on the verb (i.e. Spec-Head agreement with I), and the subject is in the [Spec IP] position as in (65). Lack of Spec-Head number agreement suggests that the subject is not in the [Spec IP] position, as in (64), where the VSO order is derived.

The above examples highlight the dependency between the position of subject and word order. In this respect, Ouhalla (1991) and Plunkett (1993) suggest that if the verb moves to I^0, while the subject remains inside the VP, the VSO word order is derived. If, on the other hand, the subject moves and the verb remains in I^0 or V, an SVO word order is produced (as in English-type languages).

Within the framework of P&P, subjects in MSA move to the Spec of IP to be assigned nominative case by the finite I (either under government or Spec-Head agreement) as in (66).

(66)　a. al-rajulu　　　　katab-a　　　　qaSiidat-an.
　　　　the-man (NOM)　write (3SM.PAST)　poem (ACC)
　　　　'The man wrote a poem.'

　　b. [IP al-rajului　[I'　[VP ti kataba　qaSiidatan]]]
　　　　the-man　　　　　　　wrote　a poem

The Extended Projection Principle (EPP), which states that a sentence must have a subject, has acquired a more comprehensive meaning within the framework of the MP (Chomsky 1995). In the MP, the subject which originates within the VP should move to the [Spec IP] position (the VP-Internal Subject Hypothesis). The MP accounts for the raising of the subject in terms of feature strength. Chomsky (1995: 340) argues that there are two main functional categories within IP: T and Agr. The functional category T is responsible for checking the tense feature of the verb and the Case of the subject. It also specifies the [Spec IP] position for the subject to satisfy the EPP. The Agr category, on the other hand, checks the features of subject and object and specifies the position for the object DPs. When the formal features of the subject are covertly raised to Agr_s, the case and the agreement features of the subject are checked. It is the strong D-feature of I which triggers subject raising to the nearest checking domain which is the [Spec IP] position.

5.5.2 Word order in EA topicalised constructions

As discussed in the previous section, if the subject originates within the VP and the verb moves to the finite I^0, the resulting word order will be VSO; a word order which the grammar of EA does not allow in matrix sentences, as seen by the ungrammaticality of (67).

(67) a. *katab　　　　　　Ali　　id-dars.
　　　　write (3SM.PAST)　Ali　　the-lesson
　　　　'Ali wrote the lesson.'

　　b.*[IP [I' katabi [VP Ali [V' ti id-dars]]]
　　　　　　wrote　　Ali　　　　the-lesson

Edwards (2010: 96) suggests that the VS order is preferred if the subject is indefinite, or the verb is intransitive, or both.

(68)   a. il-'utubiis   daxal   fi   ᶜimara   wi   maat   xamsa.
        the-bus   enter (3SM.PAST) in   building and   die (3SM.PAST) five
        'The bus went into a building and five people died.'

       b. itnašar   il-kitaab   da   min   xamas   siniin.
        publish (3SM.PASSIVE) the-book   DEM   from   five   years
        'That book was published five years ago.'

(Edwards 2010: 96)

For Edwards (2010), EA has SVO as a basic word order, as in (69); other word orders are "permissible variants of SVO order" (p. 97), as in (70-71).

(69)   Ali   katab   id-dars.   (SVO)
       Ali   write (3SM.PAST) the-lesson
       'Ali wrote the lesson.'

(70)   id-dars$_i$,   Ali   katab-uh$_i$.   (OSV)
       the-lesson   Ali   write (3SM.PAST)-it
       'As for the lesson, Ali wrote it.'

(71)   id-dars$_i$,   katab-uh$_i$ Ali.   (OVS)
       the-lesson   write (3SM.PAST)-it Ali
       'As for the lesson, Ali wrote it.'

In (70), the object NP '*id-dars* 'the lesson' is topicalised and a resumptive pronoun which marks the topicalisation site is cliticised onto the verb *katab* 'wrote'. In (71), the subject NP 'Ali' is not in the [Spec IP] position; rather, it appears at the right periphery of the sentence in a position lower to the VP. The position occupied by the topicalised object NP *id-dars* 'the lesson' cannot be the [Spec IP] as this would falsely entail that the NP *id-dars* 'the lesson', rather than the NP 'Ali', is the subject of the sentence. In this respect, Shlonsky (1989) distinguishes between two notions of 'subject': a semantic subject and a syntactic (structural) subject[11]. He claims that "while not all sentences

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[11] Shlonsky (1989) analyses null and displaced subjects in Hebrew. He argues that Hebrew is a null subject language that does not possess expletives similar to the English-type languages. In English, the subject position can be occupied by 'it' or 'there', whereas in EA, the subject position can host the expletive *fi* 'there' which appears in boldface in the following example:

   (i) fi   banaat   biyitkallim-u   maᶜa-h.
       there girls   talk (3PLUF.PROG)-they with-him
       'There are girls talking to him.'

In Shlonsky's terms, the structural subject position is occupied by *fi* 'there', while the semantic subject of the sentence is the DP *banaat* 'girls'. I propose the following representation for (i):

   (ii) [$_{IP}$ [$_{PP}$ fi [$_{DP}$ banaat$_i$ [t$_i$ ᵣ [$_{v'}$ biyitkallim-u$_i$ maᶜa-h$_k$]]]]]]]
          there   girls   talking   with-him

have semantic subjects, they all have syntactic subjects" (p. 1). Shlonsky explains this idea by the following examples:

(72)   a. Bill ate the cake.

b. The cake was eaten by Bill.

(Shlonsky 1989: 1)

Shlonsky (1989) argues that in (72a), the NP 'Bill', which occupies the Spec IP position, is both the semantic and the syntactic subject of the sentence. In (72b) the position of the subject is occupied by the semantic object 'the cake'.

Returning to the examples in (70) and (71), I argue that the object NP *id-dars* 'the lesson' which occupies the left periphery[12] of the clause heads a topic projection or TopP (as suggested by Rizzi (1997)). The topic is followed by a comment clause or a complex predicate which adds new information about that topic. The two examples in (70) and (71), will have structures similar to the one in (73) proposed by Rizzi (1997: 291):

(73)   TopP

XP   Top'

Top°   YP

XP = topic   YP = comment
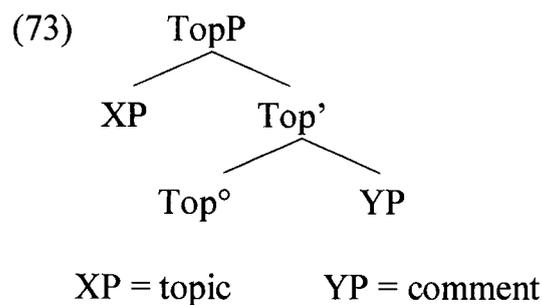
Rizzi (1997) argues that in the above representation, Top° is a higher predication which has a similar function to AgrS within the IP system; it takes a topic as its specifier. Adopting Rizzi's (1997) topic-comment structure, the examples in (70) and (71) have the topic NP *id-dars* 'the lesson' which is set off from the rest of the clause by a comma-intonation; the examples in (70) and (71) are repeated below:

The checking domain of subject DPs is the Spec of IP which is occupied by the expletive *fi* 'there'. The DP *banaat* 'girls' is raised at LF where it adjoins to *fi* 'there' for case checking as suggested by Chomsky (1995: 200).

[12] Rizzi (1997: 282) argues that the left periphery hosts three types of elements, interrogative pronouns, relative pronouns, topics and focalised elements. These elements will be discussed in detail in Chapter 6.

(74) id-dars$_i$,   Ali   katab-uh$_i$.   (OSV)
      the-lesson   Ali   write (3SM.PAST)-it
      'As for the lesson, Ali wrote it.'

(75) id-dars$_i$,   katab-uh$_i$ Ali.   (OVS)
      the-lesson   write (3SM.PAST)-it Ali
      'As for the lesson, Ali wrote it.'

In (74), the object is topicalised, whilst the comment clause has the subject as its Spec. The example in (74) will have the following representation:

(76)   [$_{TopP}$ [id-dars$_k$ [$_{Top'}$ [$_{Top}°$ [$_{IP}$ Ali$_i$ [t$_i$ $_{I'}$ [$_{V'}$ katab-uh$_k$]]]]]]]
       the-lesson   Ali   wrote-it

The above representation underlines two movement operations: the first one is the movement of the subject NP 'Ali' from the [Spec VP] to the [Spec IP]; the second movement involves the topicalisation of the object NP *id-dars* 'the lesson' from its canonical position as the direct object of the verb *katab* 'wrote' to the [Spec TopP]. In (75), the object NP *id-dars* 'the lesson' is topicalised, while the subject NP 'Ali' does not occur in its base-generated position as the Spec of VP, nor does it move to the [Spec IP] position. The example in (75) (which has the subject NP 'Ali' in a clause-final position) will have the following representation:

(77)   [$_{TopP}$ [id-dars$_i$ [$_{Top'}$ [$_{Top}°$ [$_{IP}$ [$_{I'}$ [$_{VP}$ Ø [$_{V'}$ katab-uh$_i$ Ali]]]]]]]
       the-lesson   wrote-it   Ali

The structures in (74) and (75) arise two questions: first, what triggers the topicalisation of the object NP; and second, what allows the subject to occur in a clause-final position. The MP provides the answer to these questions: Chomsky (1995: 199) argues that what allows the object NP to be topicalised is the strong NP-feature[13] of Agr$_o$. To answer the second question, Chomsky argues that a VSO language has a strong V-feature which allows its verb to move to I° to check its tense feature; hence, the overt raising of the verb results in a post-verbal subject. I argue that the latter minimalist assumption cannot be maintained in EA for the following reason: in EA, verbs have weak V-feature that prevents their movement; consequently, EA has a default SVO, rather than a VSO,

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[13] Chomsky (1995: 199) discusses the NP-features of tense 'T' and Agr in English. He argues that English has a strong NP-feature of T, the subject should raise to Spec IP prior to Spell-Out. English, on the other hand, has a weak NP-feature of Agr; this explains why English does not allow overt object shift.

word order. To account for what triggers the verb movement in (75), I propose, following Haegeman & Ürögdi (2009), that when an element is enriched with an additional feature, it can safely move. Accordingly, I suggest that when the verb is topicalised, it moves, and crosses over the subject NP 'Ali'. Thus, the example in (75) has the structure [TopicP TopicP NP[14]]

It is notable that in (74), the extraction site of the object NP *id-dars* 'the lesson' is marked by a resumptive pronoun which is co-indexed with the topicalised object[15]. To form a wh-question within the topicalised constructions[16] in (74) and (75), the subject wh-phrase *miin* 'who' can occur in the same positions occupied by the subject NP 'Ali' as exemplified below.

(78)   a. id-dars$_i$ miin   katab-uh$_i$?
          the-lesson   who   write (3SM.PAST)-it
          'As for the lesson, who wrote it?'

      b. [$_{TopP}$ [id-dars$_k$ [$_{Top'}$ [$_{Top}^0$ [$_{IP}$ miin$_i$ [t$_i$ $_{I'}$ [$_{V'}$ katab-uh$_k$]]]]]]]
            the-lesson   miin   wrote-it

(79)   a. id-dars$_i$ katab-uh$_i$ miin?
          the-lesson   write (3SM.PAST)-it   who
          'As for the lesson, who wrote it?'

      b. [$_{TopP}$ [id-dars$_i$ [$_{Top'}$ [$_{Top}^0$ [$_{IP}$ [$_{I'}$ [$_{VP}$ Ø [$_{V'}$ katab-uh$_i$ miin]]]]]]]
            the-lesson   wrote-it   miin

5.6 Argument wh-phrases and the constraints on movement

As stated at the outset of Chapter 4, wh-questions in EA are divided according to the type of wh-phrase into argument and adjunct wh-questions. In Chapter 4, the different

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[14] Similar structures will be discussed in Chapter 6.

[15] In English and EA, in contrast to in Chinese, the resumptive pronoun cannot be deleted within the topicalised construction, as in the following examples:
   (i)   *That man, who hate?'
   (ii) *il-raagil   dah, miin bi-yikrah?
         the-man   this who hate
         '*this man, who hate?'
   (iii) neige nanhaizi, ni   ren-bu-renshi?
         that boy   you know-not-know
         'That boy, do you know [him]?'   (Huang 1982: 398)

[16] Rizzi (1997: 301) argues that in Italian, a wh-phrase is compatible with a topic following the order [Top Wh] as in the following example:
   (i)   A Gianni, che cosa gli hai ditto?
            'To Gianni, what did you tell him?'

syntactic realisations of argument wh-questions were described. Some wh-questions which have final argument wh-phrases were also identified. In this section, I will investigate the behaviour of argument wh-phrases with respect to the standard constraints on movement (e.g. the Subjacency Condition (Ross 1967; Chomsky 1977)) and the minimalist assumptions on wh-movement (Chomsky 1995). Investigating whether argument wh-phrases are island sensitive or they are immune to wh-movement will decide the appropriate classification of EA. To put it differently, EA argument wh-phrases will be examined to find out if they undergo wh-movement similar to their English counterpart, or they remain *in situ* similar to their Chinese/Japanese counterparts.

5.6.1 The Subjacency Condition

Ross's (1967) 'Constraints on variables in syntax' is one of the major works that lays down the main constraints on wh-movement. Chomsky (1977: 73) proposes the Subjacency Condition as a unified account for Ross's constraints. He argues that, for the Subjacency Condition to be satisfied, no phrase can move from the position Y to X or from X to Y as in (80).

(80)   ...X...$[_\alpha$ ... $[_\beta$...Y...] ...] ... X ..., where α and β are cyclic nodes[17].

One of the constraints subsumed under the Subjacency Condition is the Wh-Island Constraint which states that no element can be extracted out of a wh-island (e.g. an indirect wh-question). If the verb subcategorises for an interrogative complement, no wh-movement can take place out of that wh-complement. This idea accounts for the ungrammaticality of the following English examples:

(81)   *What do you wonder why Mona bought t_i?

(82)   *What$_i$ do you wonder who fixed t_i?

In the above examples, the movement of the wh-phrase 'what' out of the interrogative complement which the verb 'wonder' subcategorises for, yielded a wh-island effect. In

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[17] According to Chomsky (1986b), cyclic nodes such as IP and NP are barriers for movement.

the coming section, I will investigate argument and adjunct islands, and will find out whether or not argument-adjunct asymmetry regarding wh-islands may arise.

5.6.2 Argument wh-island

To test how the Wh-Island Constraint works within embedded wh-questions in EA, let us consider the following examples:

(83)   a. Mona ᶜayza   tiᶜraf   miin   ištara   eeh.
            Mona want (3SF.PRES) know (3SF.INFIN) who buy (3SM.PAST) what
            'Mona wants to know who bought what.'

            b.* eeh   Mona ᶜayza   tiᶜraf   miin   ištara?
              what Mona want (3SF.PRES) know (3SF.INFIN) who   buy (3SM.PAST)
             '*What did Mona want to know who bought?'

In (83a), the wh-phrase *miin* 'who' forms a wh-island within a multiple embedded wh-question. Therefore, movement of the wh-phrase *eeh* 'what' out of this wh-island violates the Wh-Island Constraint and yields the illicit structure in (83b); below are further examples of argument wh-island:

(84)   a. baba   biyis'al   miin   katab   anhi   qiSSa.
            father ask (3SM.PROG) who write (3SM.PAST) which   story
            'Father is asking who wrote which story.'

            b.*anhi   qiSSa baba biyis'al   miin   katab?
              which story   father ask (3SM.PROG) who write (3SM.PAST)
             '*Which story is father asking who wrote?'

The wh-phrase *miin* 'who in (83a) and (84a) has narrow scope resulting in indirect wh-question readings. In (84b), extracting the wh-phrase *anhi qiSSa* 'which story' out of the wh-island headed by the wh-phrase *miin* 'who' resulted in ungrammaticality. The examples in (83b) and (84b) suggest that argument wh-phrases in multiple embedded wh-questions confirm island sensitivity. The following examples present how argument wh-phrases behave in matrix wh-questions:

(85)   a. miin   SallaH   eeh?
            who   fix (3SM.PAST) what
            'Who fixed what?'

b.*eeh_i   illi   miin   SallaH-uh_i?
what   that   who   fix (3SM.PAST)-it
'*What did who fix?'

In (85a), the wh-phrase *miin* 'who' has wide scope. Assuming that the wh-phrase *eeh* 'what' in (85b) has moved to the Spec CP position, the structure will have the following representation:

(86)*
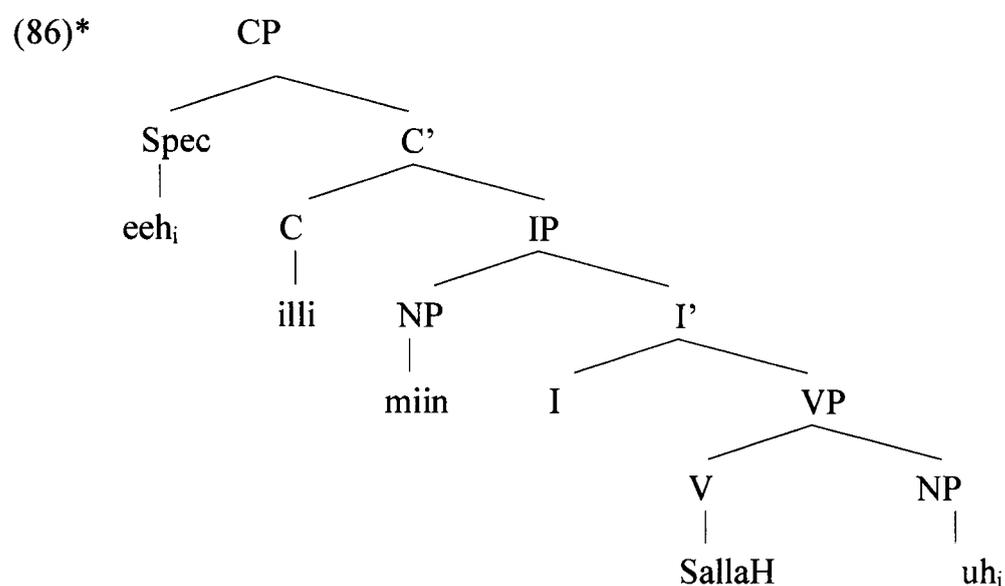
In the above representation, the wh-phrase *eeh* 'what' c-commands the wh-phrase *miin* 'who'. Within the framework of the Principles and Parameters, the ungrammaticality of similar structures is due to violation of the Superiority Condition first introduced in Chomsky (1973). The ungrammaticality of (85b) is the result of extracting the wh-phrases *eeh* 'what' out of a wh-island, giving rise to a wh-island effect.

In the MP, the Subjacency Condition is viewed as one of the locality conditions on movement. In the following example, the ungrammaticality of crossing an intermediate [Spec CP] is an instance of a Subjacency violation:

(87)   *How do you wonder [_{CP} whether [_{IP} John said [_{CP} *t' e* [_{IP} Mary solved the problem *t*]]]]

        (Chomsky 1995: 88)

In the MP, the Subjacency Condition was re-introduced as Shortest Move, which is a condition on economy of derivation. Thus, the ungrammaticality of the example in (85b) can be accounted for in terms of a violation of the economy condition. Assuming that the wh-phrase *eeh* 'what' has moved overtly to the [Spec CP] position, the MP regards this movement as illegitimate. The movement of the wh-phrase *eeh* 'what' violates the Shortest Move, as the wh-phrase *miin* 'who' is closer to the [Spec CP] position than the wh-phrase *eeh* 'what'. In a set of two wh-phrases, it is the wh-phrase which is closer to the [Spec CP] (i.e. the one that takes the shortest step to the nearest A'-position) that must move. As a consequence, the movement of the wh-phrase *miin* 'who' is more economical than the movement of the wh-phrase *eeh* 'what' as seen below:

(88) miin   illi   SallaH   eeh?
      who   that   fix (3SM.PAST) what
      'Who fixed what?'

So far, the extraction[18] possibilities of argument wh-phrases out of an argument wh-island were tested, and it was noted that argument wh-phrases prove argument-island sensitivity. The following examples will test the extraction possibilities of adjunct wh-phrases out of argument wh-islands:

(89) a. inta   ištareet   eeh   li-miin?
         you   buy (2SM.PAST) what   for-who
         'What did you buy for whom?'

      b.* inta   ištareet   li-miin$_i$ eeh   t$_i$?
          you   buy (2SM.PAST) for-who   what
          '*For whom did you buy what?'

The ungrammaticality of the example in (89b) is due to a wh-island violation which results from extracting the wh-phrase *l-miin* 'for what' out of an argument wh-island. The example also violates the economy condition as the wh-phrase *eeh* 'what' is closer to the embedded [Spec CP] position than the prepositional wh-phrase *l-miin* 'to whom'.

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[18] Honcoop (1997: 20) argues that there is cross-linguistic variation among languages as far as extraction out of embedded constituent questions is concerned. In Dutch, extraction is relatively strong, whereas in both English and Hungarian, extraction is said to be weak.

The above discussion suggests that in EA, extraction out of an embedded argument wh-island is not possible. Single argument wh-island, by contrast, allows extraction as seen below:

(90)   a. Ali   šaaf   Suurit   miin?
          Ali   see (3SM.PAST) picture who
          'Whose picture did Ali see?'

       b. miin$_i$ illi   Ali   šaaf   Suurit-uh$_i$?
          who   that Ali   see (3SM.PAST) picture-him
          '*Who did Ali see his picture?'

In (90b), the wh-phrase *miin* 'who' is extracted out of an object island headed by the NP *suurit* 'picture'. Some proposals have accounted for the impossibility of extraction based on island strength. For example, Shlonsky (2009) observes that strong islands embed wh-in-situ, and Cinque (1990) claims that strong islands block extraction. I argue that the contrast between (89b) and (90b) can be accounted for if matrix argument-islands are presumed to be weak, and hence they allow extraction (as in (90b)), whereas embedded argument-islands are strong islands that block extraction (as in (89b)). I also propose a minimalist account for this asymmetry as discussed below.

The MP takes the operation Move to be a Last Resort (see Chapter 2, Section 2.2.2). Movement has to take place to save the structure from crashing. The MP also proposes the Procrastinate Principle which states that overt movement is preferred if it produces a derivation that converges at LF and PF. Based on these minimalist assumptions, I argue that the impossibility of extracting out of embedded argument-island can be seen as the result of the existence of alternative convergent derivations; hence, no movement operation needs to take place. I argue that movement in the case of (89b) is not a Last Resort; in addition, extraction in these examples violates the Procrastinate Principle. However, in some cases (as will be discussed in Chapter 6), extraction is a Last Resort (as in *illi*-questions).

Regarding the cases where extraction yields well-formed structures, two hypotheses will adopted: first, wh-phrases in EA are weak islands, so they allow extraction; second, what facilitates extraction is the employment of some elements such as *illi* and the

resumptive pronoun. For example, in the following wh-question, the weak island formed by the wh-phrase *eeh* 'what' and the use of *illi* and the resumptive pronoun work together to produce a convergent derivation as in (91b).

(91)   a. Mona   ištarat   eeh?
            Mona   buy (3SF.PAST)   what
            'What did Mona buy?'

         b. eeh   illi   Mona   ištarat-uh?
            what   that   Mona   buy (3SF.PAST)-it
            'What did Mona buy?'

5.6.3 Adjunct wh-island

Kehler (2002) argues that there are two types of adjuncts: one that allows extraction and one that does not. Under the first type falls what Kehler (2002) calls "an occasion relation" where the adjunct phrase is not preceded by elements such as 'because', 'after', 'when' etc. Within this type of adjunct, the [Spec CP] position of the lower clause is empty; hence, it allows the wh-phrase to move to the higher [Spec CP] position, as in (92). The second type of adjunct, or what Kehler refers to as "cause-effect relation", does not allow extraction when the lower C is headed by elements like 'because' as in (93).

(92)   What do you want to meet the supervisor to discuss?

(93)   *Who did you worry because Mary abandoned?

The example in (93) has the following structure:

(94)   *[$_{CP}$ who$_i$ did [$_{IP}$ you [$_{VP}$ worry] [because Mary abandoned t$_i$]]]

The ungrammaticality of (93) is due to a violation of the Adjunct-Island Condition (Chomsky 1986b). The string 'because Mary abandoned' is an adjunct which forms an island for extraction. The barrierhood of the adjunct phrase 'because Mary abandoned' is inherited by the matrix IP which in turn rendered a barrier. Other examples do not evince this adjunct-island effect if the position of the head of the adjunct phrase is left empty (as in (95)), or the subject in the two clauses is the same (as in (96)).

(95)   Who$_i$ did Mary decide to argue with t$_i$?

(96)   a. Jane started her PhD last year because she got an offer from York University.

      b. When did Jane$_i$ start her PhD because she$_{i/*k}$ got an offer from York University?

In EA, argument wh-phrases cannot be extracted out of adjunct wh-islands, as seen by the ungrammaticality of the examples in (97b) and (98b). Extraction can only be made possible by the insertion of *illi* and the resumptive pronoun, as in (97c) and (98c):

(97)   a. Mona   firHit   ᶜalašaan   Ali   'aabil   miin?
        Mona   (became happy) because   Ali   meet (3SM.PAST)   who
      '*Who was Mona happy because Ali met?

      b.*miin   Mona   firHit   ᶜalašaan   Ali   'aabil?
        who   Mona   (became happy) because   Ali   meet (3SM.PAST)
      '*Who was Mona happy because Ali met?'

      c. miin$_i$ illi   Mona   firHit   ᶜalašaan   Ali   'aabl-uh$_{i/*k}$?
        who   that   Mona   (became happy)   because   Ali   meet (3SM.PAST)-him
      '*Who was Mona happy because Ali met?'

(98)   a. Mona   firHit   lamma   SaHbit-ha   itgawwizit   miin?
        Mona   (became happy)   when   friend-her   marry (3SF.PAST) who
      'Who was Mona happy when her friend married?

      b.*miin   Mona   firHit   lamma   SaHbit-ha   itgawwizit?
       who   Mona   (became happy)   when   friend-her   marry (3SF.PAST)
      'Who was Mona happy when her friend married?'

      c. miin$_i$ illi   Mona   firHit   lamma SaHbit-ha   itgawwizit-uh$_{i/*k}$?
       who   that   Mona   (became happy) when   friend-her   marry (3SF.PAST)-him
      'Who was Mona happy when her friend married?'

In the preceding section, I offered some examples which illustrated that argument wh-phrases obey the Subjacency Condition, and evince island sensitivity. However, the examples in (97c) and (98c) reflect adjunct-island insensitivity. One way to account for this paradox is to assume Cinque's (1990) classification of islands into strong and weak islands based on the type of wh-movement. Cinque (1990) argues that successive-cyclic movement (e.g. movement of the wh-phrase to the matrix [Spec CP] in a cyclic manner, crossing two CPs in more than one step, leaving behind intermediate traces) observes strong and weak islands, whereas long movement (e.g. movement of the wh-phrase to the matrix [Spec CP] position in a single step crossing two CPs) is subject only to

strong island. In Cinques's terms, strong islands, in contrast to weak islands, impede extraction. For example, English adjunct islands are strong, so they block extraction, as shown by the following example from Cinque (1990).

(99)   *To whom did you leave without speaking t?

(Cinque 1990: 1)

In line with the hypothesis set out in the preceding section, I suggest that EA adjunct islands are weak islands, thus they do not block extraction as in (97c) and (98c) repeated below:

(100) a. miin$_i$ illi   Mona   firHit ^{c}alašaan   Ali   'aabl-uh$_{i/*k}$?
            who   that   Mona   (became happy)   because   Ali   meet (3SM.PAST)-him
         '*Who was Mona happy because Ali met?'

      b. miin$_i$ illi   Mona   firHit   lamma SaHbit-ha   itgawwizit-uh$_{i/*k}$?
            who   that   Mona   (became happy) when   friend-her   marry (3SF.PAST)-him
         'Who was Mona happy that her friend married?'

Argument wh-phrases can be extracted out of an adjunct island which neither impedes extraction, nor yields Adjunct Condition Effect (Chomsky 1986b). The examples in (101 b& c) show the possibility of extracting embedded subjects and embedded objects out of an adjunct island.

(101) a. il-bint   firHit ^{c}alašaan   Ali   'aabil   Salim.
            the-girl   (became happy)   because   Ali   meet (3SM.PAST) Salim
         'The girl was happy because Ali met Salim.'

      b. miin$_i$ illi   il-bint   firHit ^{c}alašaan   t$_i$ 'aabil   Salim?
            who that   the-girl (became happy)   because   meet (3SM.PAST) Salim
         'Who was the girl happy because he met Salim?'

      c. miin$_i$ illi   il-bint   firHit ^{c}alašaan   Ali   'aabil-uh$_i$?
            who   that   the-girl (became happy)   because   Ali   meet (3SM.PAST)-him
         'Who was the girl happy because Ali met him?'

The contrast between the examples in (97b & 98b) and (97c & 98c) implies that extraction can only be made possible with the insertion of *illi* and the cliticisation of the resumptive pronoun, as deleting either of them yields ungrammaticality as seen below:

(102) a. * miin_i ~~illi~~ inta mišeet biduun ma titkallim ma^ca-ah_i?
   who ~~that~~ you leave (2SM.PAST) without not talk (2SM.PRES) with-him
   'Who_i did you leave without talking to t_i?'

b* miin_i illi inta mišeet biduun ma titkallim ma^ca-~~ah_i~~?
   who that you leave (2SM.PAST) without not talk (2SM.PRES) with-~~him~~
   'Who_i did you leave without talking to t_i?'

To conclude, in Sections 5.6.2 and 5.6.3, argument and adjunct islands were investigated. Based on the previous discussion, the following remarks are proposed: (1) wh-phrases in EA are weak islands; (2) they allow extraction under certain conditions; (3) argument wh-phrases are more extractable than adjunct wh-phrases; (4) the use of *illi* and resumptive pronouns facilitate extraction; and (5) extraction out of multiple wh-questions, which are strong islands, yields illicit derivations.

5.6.4 The Co-ordinate Structure Constraint

According to the Co-ordinate Structure Constraint (Ross 1967), no element can move out a coordinate structure as seen by the ungrammaticality of the example in (103).

(103) *Who did you see Ali and t_i at the park?

Regarding the co-ordinate structures in EA, Osman (1990) proposes the following properties: first, within the co-ordinate structure, when a noun and a pronoun are conjoined, the pronoun has to be the first element, as in the following example:

(104) a. hiyya wi Mona fi l-maTaar.
       she and Mona in the-airport
       'She and Mona are in the airport.'

b.*Mona wi hiyya fi l-maTaar.
   Mona and she in the-airport
   'She and Mona are in the airport.'

(Osman 1990: 155)

Second, if the conjoined structure is the object, a clitic has to appear on the verb, as in (105). Wh-extraction out of the co-ordinate structure in (105) yields a well-formed wh-question as in (106).

(105) Ali šaaf-uh$_i$ huwwa$_i$ wi Ahmed fi l-maTaar.
Ali see (3SM.PAST)-him he and Ahmed in the-airport
'Ali saw him and Ahmed at the airport.'

(106) miin$_i$ illi Ali šaaf-uh$_i$ huwwa wi Ahmed fi l-maTaar.
who that Ali see (3SM.PAST)-him he and Ahmed in the-airport
'*Who is the person that Ali saw him and Ahmed at the airport?'
(Osman 1990: 159-160)

Third, if the conjoind NPs are the object of a preposition, a pronominal clitic has to appear on the preposition as in the following example:

(107) Ali raaH ma^{c}aa-ha$_i$ hiyya$_i$ wi Mona il-maT^{c}am.
Ali go (3SM.PAST) with-her she and Mona the-restaurant
'Ali went with her and Mona to the restaurant.'
(Osman 1990: 157)

Fourth, the Co-ordinate Structure Constraint is observed by the argument wh-phrases, as illustrated by the ungrammaticality of the following example:

(108) *miin$_i$ Ali šaaf t$_i$ wi Ahmed fi l-maTaar.
who Ali see (3SM.PAST) t and Ahmed in the-airport
'*Who did he see and Ali at the airport.'
(Osman 1990: 159)

Recall that in the previous sections, it was proposed that deleting either *illi* or the resumptive pronoun within structures that have syntactic islands similar to the one in (106) yields ungrammaticality. Likewise, extraction out of a conjoined structure is not possible if *illi* or the resumptive pronoun is deleted. The idea is illustrated by the ungrammaticality of the following examples:

(109) a.* miin$_i$ ~~illi~~ Ali šaaf-uh$_i$ huwwa wi Ahmed fi l-maTaar.
who ~~that~~ Ali see (3SM.PAST)-him he and Ahmed in the-airport
'*Who is the person that Ali saw him and Ahmed at the airport?'

b.* miin_i illi Ali šaaf-~~uh~~_i   huwwa wi Ahmed fi l-maTaar.
   who that Ali see (3SM.PAST)-~~him~~ he   and Ahmed in the-airport
   '*Who is the person that Ali saw him and Ahmed at the airport?'

Osman (1990) does not address structures where one of the conjoined elements is a wh-phrase. I suggest that in this form of conjoined structure, an NP has to be the first element of the conjoined structure[19] as illustrated below.

(110) a. Mona ᶜazamit   **Ali wi miin** ᶜala il-Hafla?
      Mona invite (3SF.PAST) Ali and who to the-party
      '*Mona invited Ali and who to the party?'

     b.*Mona ᶜazamit   **miin wi Salim** ᶜala il-Hafla?
       Mona invite (3SF.PAST) who and Salim to the-party
       '*Who did Mona invite and Salim the party?'

(111) a. **Mona wi miin** katab-u   qiSSa gidiida?
      Mona and who write (3PLU.PAST)-they story new
      '*Who did Mona and write a new story?'

     b.***miin wi Ali** katab-u   qiSSa gidiida?
       who and Ali write (3PLU.PAST)-they story new
       '*Who and Ali wrote a new story?'

(112) a. Mona itkallimit   maᶜa **Ali wi miin** imbaariH?
      Mona talk (3SF.PAST) with Ali and who yesterday
      '*Who did Mona talk with Ali and yesterday?'

     b.*Mona itkallimit   maᶜa **miin wi Salim** imbaariH?
       Mona talk (3SF.PAST) with who and Salim yesterday
       '*Who did Mona talk with and Salim yesterday?'

     c. miin illi Mona itkallimit   maᶜa-ah huwwa wi **Ali** imbaariH?
      who that Mona talk (3SF.PAST) with-him he and Ali yesterday
      '*Who did Mona talk with and Ali yesterday?'

The argument that extraction is possible if the syntactic island is weak (as suggested by Cinque (1990)) and if *illi* and the resumptive pronoun are employed can be extended to the co-ordinate structure, and hence the example in (112c) can be accounted for.

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[19] I propose that this requirement is a condition on representation, rather than on derivation; however, I will not provide a detailed account for this idea as it falls behind the main thread of the chapter; the focus is on how wh-phrases behave within syntactic islands.

I will now consider a third type of island formed by a Complex NP, and see how argument and adjunct wh-phrases behave within it.

5.6.5 The Complex NP Constraint (CNPC)

Ross (1967) proposes the following definition for the CNPC:

(113) No element contained in the sentence dominated by an NP with a lexical head noun may be moved out of that NP by transformation.

(Ross 1967: 70)

The CNPC prevents a wh-phrase from being extracted out of an island headed by a complex NP as illustrated by the following ungrammatical example:

(114) *Who$_i$ did you believe [$_{NP}$ the rumour [$_{CP}$ that Jane married t$_i$]]

To investigate how the CNPC works in EA, I propose the following example, whereby the complex NP is headed by an NP and modified by a CP:

(115) a. Mona rafaDit fikrit inn Ali yissa^{c}id il-raagil.
Mona refuse (3SF.PAST) idea that Ali help (3SM.INFIN) the-man
'Mona refused the idea that Ali helps the man.'

b. Mona rafaDit fikrit inn Ali yissa^{c}id miin?
Mona refuse (3SF.PAST) idea that Ali help (3SM.INFIN) who
'*Who did Mona refuse the idea that Ali helps?'

The example in (115b) suggests that an argument wh-phrase can occur within an island headed by a complex NP. If the wh-phrase is extracted out of this complex NP, the result will be the following ungrammatical structure:

(116) *miin Mona rafaDit fikrit inn Ali yisaa^{c}id?
who Mona refuse (3SF.PAST) idea that Ali help(3SM.INFIN)
'*Who did Mona refuse the idea that Ali help?'

The ungrammaticality of the above example shows that the Complex NP Constraint is observed in EA. As with extraction out of adjunct-island and Co-ordinate Structure, extraction out of a Complex NP is allowed only with the insertion of *illi* and the resumptive pronoun, as in the following example:

(117) miin$_i$ illi Mona rafaDit   fikrit inn Ali yisaa^{c}id-uh$_i$?
        who that Mona refuse (3SF.PAST) idea that Ali help(3SM.INFIN)-him
        '*Who did Mona refuse the idea that Ali help?'

In the above example, the moved wh-phrase *miin* 'who' is co-indexed with a resumptive pronoun which is cliticised onto the verb *yisaa^{c}id* 'helps', and marks the extraction site. One important property of a complex NP in EA is that extraction out of it gives rise to an argument/adjunct asymmetry, as illustrated by the following contrast:

(118) miin$_i$ illi Mona rafaDit   fikrit inn Ali yisaa^{c}id-uh$_i$?
        who that Mona refuse (3SF.PAST) idea that Ali help(3SM.INFIN)-him
        '*Who did Mona refuse the idea that Ali help?'

(119) *feen$_i$ Mona rafaDit   fikrit inn Ali yisaafir   t$_i$?
        where Mona refuse (3SM.PAST) idea that Ali travel (3SM.INFIN)
        '*Where did Mona refuse the idea that Ali travels?'

The ungrammaticality of the example in (119) suggests that an adjunct wh-phrase cannot be extracted from an island which is headed by a complex NP. In Chapter 7, I will discuss similar structures and will account for their ungrammaticality in terms of violating Rizzi's (1990) Relativized Minimality which bans the movement of an element over a Spec CP position filled by another element. In (119), the embedded Spec CP is occupied by the NP *fikrit* 'idea' whereas the head C hosts the complementiser *inn* 'that'. Based on this argument, I propose that wh-adjuncts are available only *in situ* within a complex NP as further illustrated below.

(120) Mona rafaDit   fikrit inn Ali yisaafir   feen?
        Mona refuse (3SM.PAST) idea that Ali travel (3SM.PRES) where
        '*Where$_i$ did Mona refuse the idea that Ali travels t$_i$?'

5.7 Some descriptive generalisations on wh-extraction

After investigating the extraction possibilities out of a wh-island, an adjunct island, a co-ordinate structure and a complex NP, I propose the following descriptive generalisation on wh-extraction:

(121) Extraction out of Islands

'No argument wh-phrase can be extracted unless followed by *illi* and be

co-indexed with a resumptive pronoun cliticised onto the verb.'

As stated in Section 5.1, investigating the behaviour of argument wh-phrases has implications for the overall analysis of argument wh-questions. The idea that argument wh-phrases can occur within different types of islands implies that the derivation can converge without the application of wh-movement (as in the (a) examples). I agree with Soltan (2010) in proposing a non wh-movement analysis of argument wh-phrases based on the fact that these wh-phrases can be co-indexed with resumptive pronouns, which in turn occur within islands (as in the (b) examples).

(122) a. Mona   firHit   ᶜalašaan   Ali   'aabil   miin?

Mona   (became happy)   because   Ali   meet (3SM.PAST)   who

'*Who was Mona happy because Ali met?'

b. miin$_i$ illi   Mona   firHit   ᶜalašaan   Ali   'aabil-uh$_{i/*k}$?

who   that   Mona   (became happy)   because   Ali   meet (3SM.PAST)-him

'*Who was Mona happy because Ali met?'

(Adjunct Island)

(123) a. Mona   itkallimit   maᶜa   Ali   wi   miin   imbaariH?

Mona   talk (3SF.PAST)   with   Ali   and   who   yesterday

'*Who did Mona talk with Ali and t$_i$ yesterday?'

b. miin$_i$ illi   Mona   itkallimit   maᶜa-ah$_i$ huwwa$_i$ wi   Ali   imbaariH?

who   that   Mona   talk (3SF.PAST)   with-him   he   and   Ali   yesterday

'*Who did Mona talk to and Ali yesterday?'

(Coordinate Structure)

(124) a. Mona rafaDit   fikrit inn Ali   yissaᶜid   miin.
    Mona refuse (3SF.PAST) idea that Ali   help (3SM.INFIN) who
    '*Who did Mona refuse the idea that Ali helps?'

  b. miinᵢ illi Mona rafaDit   fikrit inn Ali yissaᶜid-uhᵢ?
    who   that Mona refuse (3SF.PAST) idea that Ali help (3SM.INFIN)-him
    '*Who did Mona refuse the idea that Ali helps?'

  (Complex NP)

The island insensitivity demonstrated by the wh-questions in (122b)-(124b) suggests that these structures involve no movement rule in their derivation; however, I will argue later in Chapter 6 that the fronting of the argument wh-phrases is the result of movement to the Spec of Focus projection licensed by *illi*.

To test the descriptive generalisation proposed in (121), let us consider the following examples:

(125) Mona ᶜayza   tiᶜraf   miin ištara   eeh.
   Mona want (3SF.PRES) know (3SF.PAST) who   buy (3SM.PAST)   what
   'Mona wants to know who bought what.'

(126) *eehᵢ illi Mona ᶜayza   tiᶜraf   miin ištara-ahᵢ?
   what   that Mona want (3SF.PRES) know (3SF.PAST) who   buy (3SM.PAST)
   '*What does Mona want to know who bought?'

The ungrammaticality of the structure in (126) contradicts the descriptive generalisation in (121). Although *illi* and the resumptive pronoun are inserted, the structure is ruled out. In (126), extracting the wh-phrase *eeh* 'what' to the matrix [Spec CP] crosses the embedded [Spec CP] occupied by the wh-phrase *miin* 'who'. This long movement (as suggested by Cinque (1999)) is subject to the strong island; hence, extraction is not possible. The impossibility of extracting the wh-phrase *eeh* 'what' implies that the descriptive generalisation proposed in (121) should be reformulated. I propose that the resumptive pronoun and *illi* can facilitate extraction out of weak islands only; hence, I suggest the following modified descriptive generalisation:

(127) Extraction out of Weak Islands

   'No argument wh-phrase can be extracted out of a weak island unless followed

   by *illi* and be co-indexed with a resumptive pronoun cliticised onto the verb.'

I will now propose a further modification for the above descriptive generalisation based on certain observations drawn from two types of wh-phrases: prepositional and D-linked wh-phrases respectively. Consider the following example whereby the argument wh-phrase *miin* 'who' is the object of the preposition *ᶜala* 'about':

(128) kuntu   bitikallimu   ᶜala   miin?
       were   talk (2PLU.F/M. PROG)   about   who
       'Who were you talking about?'

For the wh-phrase *miin* 'who' to be extracted, the preposition becomes stranded as seen below:

(129) miin$_i$ illi   kuntu   bitikallimu   ᶜal-eeh$_i$?
       who   that   were   talk (2PLU.F/M. PROG)   about-him
       'Who were you talking about?'

The above example is meant to show that the extraction possibility is to be restricted only to the simple argument wh-phrase *miin* 'who', rather than the whole wh-phrase *ᶜala miin* 'about whom'. Thus, I suggest that the descriptive generalisation has to be restricted to simple argument wh-phrases, rather than wh-objects of propositions.

I will now investigate how extractability works with wh-phrases that have been previously established in the discourse, or what is referred to as D-linked wh-phrases (Pesetsky 1987). I classify D-linked wh-phrases in EA into *anhi* 'which'+NP wh-phrases as in (130), and pied-piped D-linked wh-phrases as in (131b).

(130) a. Ali   'ara   anhi qiSSa? (*anhi*+NP)
          Ali   read (3SM.PAST)   which story
       'Which story did Ali read?'

       b. anhi   qiSSa$_i$ illi   Ali   'ara-ha$_i$?'
          which   story   that   Ali   read (3SM.PAST)-it
       'Which story did Ai read?

(131) a. il-balad$_i$ illi   titmanni   tizuurii-ha$_i$ eeh?
          the-city   that   wish (2SF.PRES)   visit(2SF.PRES)-it   what
       'What is the city that you wish to visit?

       b. eeh$_i$ il-balad$_i$ illi titmanni   tizuurii-ha$_i$?(pied-piped D-linked wh-phrase)
          what the-city   that wish (2SF.PRES) visit (2SF.PRES)-it
       'Which city do you wish to visit?'

The wh-question in (130a) has the structure [IP... [*anhi*+NP]], whereas (131a) has the structure [NP... [*eeh*]]. The wh-phrase *eeh* 'what' in (131a) can be extracted and acquires the interpretation of a D-linked wh-phrase as in (131b) repeated below:

(132)   eeh$_i$ il-balad$_i$ illi   titmanni   tizuurii-ha$_i$?
        what   the-city   that   wish (2SF.PRES)   visit(2SF.PRES)-it
        'Which city do you wish to visit?'

It is noticeable that extracting the wh-phrase in the above example does not need to satisfy the condition on extraction stated earlier, since both *illi* and the resumptive pronoun are already there as part of the relative clause *illi titmanni tizuurii-ha* 'that you wish to visit' which modifies the head noun *il-balad* 'the city'. In (132), the wh-phrase *eeh* 'what' is extracted in a manner similar to the pied-piping of a wh-phrase to a preposition. This is why I refer to this type of wh-phrase as pied-piped D-linked. So far, the two types of wh-phrases which cannot fall under the descriptive generalisation in (127) are: (1) wh-objects of prepositions; and (2) pied-piped D-linked wh-phrases. Thus, I suggest that the only types of wh-arguments that can extracted via the insertion of *illi* and the resumptive pronoun are simple and D-linked wh-phrases; accordingly, the following modified descriptive generalisation is offered:

(133)   Extraction out of Weak Islands

        'No simple argument or D-linked wh-phrase can be extracted out of a weak island unless followed by *illi* and co-indexed with a resumptive pronoun cliticised onto the verb'.

To conclude: in this section, the way argument wh-phrases behave with respect to the different constraints on movement was tested. Some descriptive generalisations about wh-extraction were proposed. In the following section, a brief comparison between EA and French will be made.

5.7.1 Argument wh-phrases in EA and French

In the previous discussion, the fact that wh-phrases *in situ* in EA can occur within syntactic islands was exemplified. In this particular respect, EA is similar to English,

rather than to French, as indicated by the following examples from Cheng & Rooryck (2000):

(134) a. Who likes the book that who wrote?

b. *Jean aime le livre que qui a e´crit?
    Jean like the book that who has written
'Who is the person x such that Jean likes the book that x wrote?'

(Cheng & Rooryck 2000: 3-4)

However, it is only in EA that argument wh-phrases which obtain wide scope can violate the constraints on movement. This suggests that they are not derived by movement; hence, EA can be described as a wh-in-situ language where wh-movement does not take place. In EA, when the wh-phrase occurs inside an island, it can either remain *in situ*, or be extracted with the insertion of some elements (e.g. *illi* and the resumptive pronoun): an option which is not available in English. This discrepancy is derivable from a general principle which divides languages according to the type of movement they exhibit into wh-movement languages (e.g. English) and wh-in-situ languages (e.g. EA).

Although EA and French employ fronted and *in situ* strategies, it is only in EA that the fronted wh-phrases (object wh-phrases) are associated with a resumptive pronoun. In French, on the other hand, fronted wh-phrases leave behind co-referential traces. This idea is illustrated by the following examples respectively:

(135) a. inta šuft miin in-naharda?
    you see (2SM.PAST) who today
'Who did you see today?'

b. miin$_i$ illi inta šuft-uh$_i$ in-naharda?
    who that you see (2SM.PAST) who today
'Who did you see today?'

(136) a. Tu vois qui ce soir?
    you see who this evening

b. Qui$_i$ tu vois t$_i$ ce soir?
    who you see this evening
'Who are you seeing tonight?'

Although French and EA are claimed to have optional wh-movement due to the employment of two strategies for wh-question formation, it is only in EA that a wh-in-situ can occur within an embedded indirect question, as illustrated by the following contrast:

(137) a.*Je me   demande [_{CP} Jean a   vu   qui].
      I myself ask   Jean has seen who
          (Mathieu 1999: 443)

    b. Ali   biyis'al   Salim šaaf   miin.
      Ali   ask (3SM.PROG) Salim see (3SM.PAST) who
    'Ali is asking whom Salim saw.'

The descriptive generalisations proposed in the previous section stressed the importance of *illi* and resumptive pronouns for extraction out of different types of islands. I will now investigate what is peculiar about resumptive pronouns and *illi* which makes them facilitate the extraction of wh-arguments, rather than wh-adjuncts. I will first consider the role of resumptive pronouns[20], then a detailed analysis of *illi* will be offered in the next chapter.

5.8 The role of resumptive pronouns in argument wh-questions

In wh-questions, a chain is formed when the wh-phrase moves to the [Spec CP] position. In argument wh-questions, the wh-phrase occupies an A'-position whereas the trace it binds appears in an A-position. The wh-phrase which carries an interpretable [+wh] feature has to move to C to check the interpretable feature on it, while the trace left behind remains in the base-generated position of the moved wh-phrase. After the un-interpretable feature is deleted, the derivation can safely converge. In the MP (Chomsky 1995), traces are taken to be copies of the moved elements. These copies are visible only to LF as they have to be deleted at PF.

Chomsky (1982) claims that resumptive pronouns avoid violations of constraints on movement. He argues that in some cases, the structure would be ruled out unless the resumptive pronoun is there. McDaniel & Cowart (1999: 16), on the other hand, argue that resumptive pronouns have previously been dealt with as licit substitutes for ungrammatical structures with traces. They claim that since resumptive pronouns are

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[20] For a detailed account of resumptive pronouns, the reader is referred to Kayne (1981) and Shlonsky (1992).

employed to save the structures with traces from crashing, they are best described as a Last Resort procedure as seen by the following examples:

(138) *That is the girl that I wonder when met you.

(139) ? That is the girl that I wonder when she met you.

<div align="center">(McDaniel & Cowart 1999: 16)</div>

The resumptive pronoun appears in (139) to derive a more acceptable structure than the one in (138) with a trace. McDaniel & Cowart (1999: 18) propose a minimalist account for resumptive pronouns where they argue that in (139), at a point prior to the movement of the wh-phrase, the derivation takes an extra step and the trace is Spelled-Out as a resumptive pronoun. They argue against handling syntactic data in isolation. They call for a syntactic theory which analyses syntactic data in terms of the interaction between syntax and phonetics, or syntax and interpretation. McDaniel & Cowart (1999) suggest that resumptive pronouns are used mainly to avoid violation of conditions on representations, rather than on derivation as in (139). Thus, they suggest that the use of resumptive pronouns does not affect the derivation since (139) is not totally acceptable.

5.8.1 Two proposals on resumptive pronouns

In the preceding chapter, I suggested that in EA object wh-question, the wh-phrase has to be co-indexed with a resumptive pronoun which marks the extraction site. I added that deleting the resumptive pronoun yields ungrammaticality as in (140b).

(140)   a. eeh$_i$ illi   Mona   ištarat-uh$_i$?
              what   that   Mona   buy (3SF.PAST)-it
              'What did Mona buy?'

        b.*eeh$_i$ illi   Mona   ištarat   t$_i$?
              what   that   Mona   buy (3SF.PAST)
              'What did Mona buy?'

To account for the use of resumptive pronouns in EA wh-questions, I offer two proposals: first, I suggest, contrary to McDaniel & Cowart (1999), that resumptive pronouns can play a crucial role in enhancing the conditions on derivations. For example, in (140a) the resumptive pronoun saves the structure from crashing by avoiding the violation of conditions on extraction (see Section 5.7). As explained

earlier, deleting the resumptive pronoun yields ungrammaticality in a structure like (140b). This idea leads Soltan (2010) to propose the following resumption constraint on A'-positions (see Chapter 1, Section 1.4.4):

(141)   A'-positions must be resumed.
        (Soltan 2010: 3)

The second proposal is based on a minimalist assumption regarding one of the economy principles stated below.

(142)   α enters the numeration only if it has an effect on output.
        (Chomsky 1995: 294)

The above economy principle states that α, is selected if it affects output conditions: at PF level, α changes the phonetic form; at LF level, α affects the operation of building the numeration from the lexicon. For expository purpose, the examples in (140) are repeated below.

(143)   a. eeh$_i$ illi   Mona   ištarat-uh$_i$?
          what   that   Mona   buy (3SF.PAST)-it
          'What did Mona buy?'

        b.*eeh$_i$ illi   Mona   ištarat   t$_i$?
          what   that   Mona   buy (3SF.PAST)
          'What did Mona buy?'

Assuming the condition in (142) can account for resumptive pronouns in EA, I suggest that in (143a), the resumptive pronoun enters the numeration and changes the output by improving a certain condition on representation at the PF level. This condition necessitates that, for a derivation to converge at PF, oblique object positions and NP-internal positions must be filled with resumptive pronouns as suggested by Shlonsky (1992: 445) in Hebrew[21]. Thus, EA and Hebrew are two languages that require the gaps

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[21] In Hebrew, Shlonsky (1992: 445) cites the following examples to illustrate the necessity of the occurrence of resumptive pronouns in lieu of the displaced NPs:
   (i)   ha-'iš   še-   xašavti   'al-*(av)
       the-man   that- (I)   thought   about-(him)
       'the man that I thought about'

left behind by displaced elements to be filled by resumptive pronouns. This explains why resumptive pronouns and traces do not alternate as illustrated by the ungrammaticality of (143b). In sum, the two proposals suggest that resumptive pronouns are employed to enhance conditions on derivation and representation.

5.8.2 The minimalist assumptions on resumptive pronouns

To account for resumptive pronouns, the MP assumes the existence of a movement operation where at a certain point the derivation is to converge, traces are Spelled-Out as resumptive pronouns. Within English wh-questions, which are mainly derived by a wh-movement rule, resumptive pronouns cannot replace traces since they involve no movement; a resumptive pronoun is base-generated within an island as assumed by Chomsky (1981). The difficulty of extending the minimalist assumption regarding resumptive pronouns to the EA data suggests a non wh-movement account for EA wh-questions. Thus, the use of resumptive pronoun highlights an element of discrepancy between English and EA. Wh-questions are derived by wh-movement in English, whereas in EA, the fronting strategy is derived by a different mechanism. I presume that wh-questions with resumptive pronouns are derived from numerations that have resumptive pronouns (as suggested by McDaniel & Cowart (1999)). Accordingly, resumptive pronouns are selected. Thus, to derive a structure that satisfies the output conditions, resumptive pronouns are picked from the numeration and inserted overtly (Chomsky 1995).

Resumptive pronouns in EA seem to be affixes attached to a head non-distinct from $[+V]^{22}$. They are pronominal copies of any displaced element within a given structure (e.g. a wh-question, a topicalised construction, and a relative clause). They show phi-features agreement with the extracted element. When a wh-phrase is extracted out of its *in situ* position, the PF condition requires a subsequent substitution of the extracted element to satisfy certain conditions on representation, and to guarantee that all items of

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(ii) ha-ʿiš   še-   ra'iti ʿet ʿišt-*(o)
   the-man that- (I) saw   ACC wife-(his)
   'the man whose wife I saw'

[22] Cinque (1990: 55) has reformulated the condition of head government on traces (the ECP) as one of the locality conditions proposed in Chomsky (1986b). According to this condition, a non-pronominal EC 'must be properly head-governed by a head non-distinct from [+V]'. This head can either be a verb or a preposition as both are proper governors.

the numeration are visible at the PF level as suggested before. In sum, the major roles of resumptive pronouns are: to improve conditions on representation; to improve conditions on derivation; to mark the extraction site of any displaced element; and to define the scope of extracted wh-phrases with which it is co-indexed.

It is evident that in resumptive pronouns constructions, *illi* must be employed. In the MP, this means an extra step and a costly operation. Since the MP calls for more economical derivations, EA wh-questions with resumptive pronouns and *illi* should be excluded, as it is possible to produce a more economical derivation with wh-in-situ. For reasons of economy, the structure in (144) can be replaced by a more economical derivation, where the wh-phrase *eeh* 'what' occurs in its base generated position as in (145). Thus, the use of resumptive pronouns is no longer the sole grammatical option. The wh-in-situ strategy employed to form the wh-question in (145) is less costly and more economical.

(144) eeh$_i$ illi   Mona   ištarat-uh$_i$?
      what that Mona buy (3SF.PAST)-it
      'What did Mona buy?'

(145) Mona   ištarat   eeh?
      Mona buy (3SF.PAST) what
      'What did Mona buy?'

However, to derive wh-questions with fronted wh-phrases, the structures which involve the resumptive pronouns become the sole grammatical options; thus, resumptive pronouns have to be selected to satisfy conditions on derivation and representation.

5.8.3 Resumptive pronouns and parasitic gaps

The question now is what is special about resumptive pronouns that allow them to violate constraints on movement? To answer this question, I argue that resumptive pronouns in EA behave like English Parasitic Gaps. Accordingly, I will extend Wahba's (1995) analysis of English parasitic gaps to EA resumptive pronouns. This requires a closer examination of the distribution of Parasitic Gaps in both English and EA. For expository reasons, some English examples will be followed by their EA equivalents.

Chomsky (1982: 54) defines Parasitic Gaps as the immediate co-indexation of two empty categories with a wh-phrase. The first empty category is a wh-trace resulting from overt movement of the wh-phrase. The other empty category is a Parasitic Gap which is, similar to a variable, licensed and c-commanded by the wh-phrase in A'-position; the following are two examples which illustrate Parasitic Gaps (glossed as pg) in both English and EA:

(146) a. Which report$_i$ did you file e$_i$ after you read pg$_i$?

   (Wahba 1995: 60)

   b. anhi   taqriir$_i$ illi   Hafazt-uh$_i$ ba^{c}dama 'aareet-uh$_i$?
   which report that file (2SM.PAST)-it after   read (2SM.PAST)-it
   'Which report did you file after you read?'

It is notable that the resumptive pronouns in (146b) occur in the same positions occupied by the trace and the Parasitic Gap in (146a). This may justify previous analyses of resumptive pronouns as Spell-Out of traces (e.g. Kayne 1981). Wahba (1995) argues that Parasitic Gaps are base-generated empty pronominals. If they have phonological content, they may violate constraints on movement as shown by the ungrammaticality of (147).

(147) *Who$_i$ did you hire e$_i$ because he$_i$ said pg$_i$ would work hard?

   (Wahba 1995: 60)

(148)   miin$_i$ illi   inta ^{c}ayyint-uh$_i$ ^{c}alašaan
    who   that you   hire(3SM.PAST)-him because

    'aal   inn-uh$_i$ ha-yištaghal   kuwayyis?
    say (3SM.PAST) that-he   will-work (3SM.PRES) hard
    '*Who did you hire because he said that he would work hard?'

The examples in (146b) and (148) support the idea that resumptive pronouns, like Parasitic Gaps, are base-generated; they can violate constraints on movement by virtue of having phonological content. The contrast between (147) and (148) suggest that constraints on movement are observed in English as a wh-movement language, in contrast to EA which is a wh-in-situ language. To put it differently, the wh-movement of the wh-phrase 'who' in (147) violates the Adjunct-Island Constraint. By contrast, the

well-formedness of (148) bears out the major claim of the study that EA is a wh-in-situ language, whereby certain conditions on movement may not be observed.

5.8.4 Absence of resumptive pronouns in passive constructions

Following the analysis of resumptive pronouns, their different syntactic realisations can be summed up in the following examples where resumptive pronouns appear in boldface:

(149) miin$_i$ illi   il-mudiir   rafad-**uh**$_i$?
        who   that   the-manager fire (3SM.PAST)-him
        'Who did the manager fire?'

(150) il-mudarris$_i$, il-mudiir   rafad-**uh**$_i$.
        the-teacher, the manager   fire (3SM.PAST)-him
        'As for the teacher, the manager fired him.'

(151) il-mudarris$_i$ illi   il-mudiir   rafad-**uh**$_i$
        the-teacher   that   the-manager   fire (3SM.PAST)-him
        'The teacher whom the manager fired'

The examples in (149)-(151) present three types of displacement: an object wh-question, a topicalised construction and a relative clause respectively. It is worth noting that EA has passive constructions as a further type of displacement. These constructions differ from the structures in (149)-(151) as they do not trigger resumptive pronouns. The passive form of the verb has a past tense as the root. Agreement morphology is realised on the suffixes (which appear in boldface), so the form of the passive verb in the past is as follows:

(152) it-katab   'it was written'

        it-Darab-**it**   'she was hit'

        it-'atal-**u/um** 'they(f/m) were killed'

        it-šagga^c-**na** 'we were encouraged'

In EA, object NPs and CPs[23] can be passivised as seen below.

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[23] I focus here on NP and CP complements. However, some verbs subcategorise for [NP PP] and PPs as seen below:

(153) a. id-dars   it-katab.
      the-lesson   write (3SM.PASSIVE)
      'The lesson was written.'

b. it-katab   inn il-Hukuma   laghat   id-da^cm.
   write (3SM.PASSIVE) that the-government cancel (3SM.PAST) the-benefit
   'It was written that the government has cancelled the benefit.'

In the above passive constructions, the subjects of the active verbs are barred from the post-verbal positions since the by-phrase cannot occur in the passive constructions[24] as illustrated by the ungrammaticality of the following example:

(154) a.*id-dars   it-katab   bi-Ali.
      the-lesson   write (3SM.PASSIVE) by-Ali
      'The lesson was written by Ali.'

The complement CP, in contrast to object NP, cannot be preposed[25] as seen by the following illicit structure:

(155) a.* inn   il-Hukuma   laghat   id-da^cm   it-katab.
         that the-government cancel (3SM.PAST) the-benefit   write (3SM.PASSIVE)
      '*That the government has cancelled the benefit was written.'

The above discussion of the formation of passive in EA points to the absence of the resumptive pronouns from passive constructions. Subject wh-phrases which are in A-

(i)   Ali HaTT   il-kitaab   fi-l-durg.
      Ali put (3SM.PAST) the-book   in-the-desk
      'Ali put the book in the desk.'
(ii) Ali katab   ^cala iS-Sabuura.
      Ali write (3SM.PAST) on   the-board
      'Ali wrote on the board.
[24] The by-phrase disappears if the subject NP is a proper noun. In some cases, particularly with subject NPs, we can add an instrumental phrase in the passive construction as in the following example:
(i) a. il-filuus   Hallat   il-muškila.
       the-money sort out (3SM.PAST) the-problem
       'The money sorted out the problem.'
    b. il-muškila   it-Hallat   bi-l-filuus.
       the-problem sort out (3SM.PASIVE) by-the-money
       'The problem was sorted out by the money.'
[25] In EA, CPs cannot occur in a clause-initial position in any structural environments: for example, it is not possible to topicalise a CP as seen below:
(i) * inn il-Hukuma   laghat   id-da^cm daayi'   il-naas.
       that the-government cancel (3SM.PAST) the-fund   worry (3SM.PAST) the-people
      'That the government has cancelled the fund upset the people.'

position cannot be co-indexed with resumptive pronouns. This is, according to Soltan (2010), the main reason why subject wh-phrases cannot be resumed. Osman (1990: 65-66), on the other hand, suggests that the Highest Subject Restriction (McCloskey 1989) identifies the subject position of relative clauses as one of the clausal positions which exclude resumptive pronouns.

To summarise: In this section, I investigated the role of resumptive pronouns in EA. While Kayne (1981) assumes that a resumptive pronoun is a Spell-Out of a trace, Chomsky (1982) considers it to be base-generated and involves no movement. I suggested that resumptive pronouns enhance conditions on representation and derivation. I presented some wh-questions (which have resumptive pronouns) that are not constrained by the Subjacency Condition. Resumptive pronouns were compared to Parasitic Gaps, whereby it was concluded that resumptive pronouns have phonological contents which allow them to violate constraints on movement. They show agreement with the displaced elements, with the exception of passive constructions where they normally disappear.

5.9 Analysis of argument wh-questions (without *illi*)

According to the Vacuous Movement Hypothesis (VMH) (Chomsky 1986b), a wh-in-situ moves to pre-IP position at LF. Thus, wh-movement does not take place for subject wh-phrases. In (156), it is the object wh-phrase 'what' which undergoes wh-movement.

(156)   What do you wonder [$_{CP}$ who saw t]

In the above example, the subject wh-phrase 'who' does not occupy the embedded [Spec CP] position, so the wh-phrase 'what' can move from its base-generated position to the embedded [Spec CP], then to the matrix [Spec CP]. This is an example of a weak Wh-Island Condition. The embedded question in (156) has the following representation:

(157)   [$_{CP}$ C [$_{IP}$ who saw]]

Chomsky (1986b: 49) assumes that at LF, the subject wh-phrase 'who' moves to a pre-IP position (or Spec IP) to obtain its embedded scope and to satisfy the selectional restriction of the verb 'wonder'. Subject wh-phrases move at LF to the Spec of CP

where they remain *in situ* at S-structure. Chomsky accounts for the grammaticality of the following example in terms of vacuous LF-movement:

(158)   he is the man to whom I wonder [whether John told us [which book to give]]

In the above example, 'whether' is base-generated as the head of CP, it undergoes vacuous LF-movement to the Spec of CP to obtain scope. Later in the MP, Chomsky (1995: 272) argues that subjects carry unchecked features which need to be checked. For this purpose, subjects raise to the nearest position which has to be an appropriate domain for feature checking. In this respect, overt and covert movement are distinguished. With overt movement, the subject is raised to satisfy EPP feature of I as in SVO languages. Covert movement, on the other hand, involves the movement of the features whereas the subject remains in its position as in VSO languages.

Agbayani (2000) discusses two analyses for the position of subject wh-phrases: the first analysis (the VMH) takes the wh-subject to be inside the Spec IP position where no Aux inversion can take place, as in the following example followed by its representation:

(159)   a. Who has fixed the car?

      b. [$_{CP}$ C [$_{IP}$ who has fixed the car]]

         (Agbayani 2000: 703)

Agbayani (2000) claims that within a topicalised construction, the DP moves to the Spec CP, similar to the moved wh-phrases; he proposes the representation in (160b) for the topicalised structure in (160a):

(160)   a. John, I like *t*

      b. [$_{CP}$ John$_i$, C [$_{IP}$ I like *t*$_i$]]

The other analysis of the wh-subject position discussed by Agbayani (2000) presumes that the subject wh-phrase moves to the [Spec CP] position where Aux inversion takes place as seen below.

(161) [cp who2 has1, [IP *t2 ti* fixed the car]]

Agbayani (2000) discusses the Clausal Typing Hypothesis (Cheng 1997) and the Wh-Criterion (Rizzi 1996) as two potential problems for the VMH. To satisfy The Clausal Typing Hypothesis, CP must have either a wh-phrase or a wh-particle to type the structure as a wh-question. For clausal typing, the wh-subject has to move to Spec CP: a type of movement excluded under the VMH. For the Wh-Criterion to be observed, the subject must raise to the [Spec CP] in order to license the [+wh] on C. According to Agbayani (2000), the VMH (which excludes the subject movement) fails to maintain the two proposals of Cheng (1997) and Rizzi (1996). The other problem of the VMH which Agbayani (2000) suggests is the appearance of island effect in some structures when the wh-subjects remain in [Spec IP] as in the following example:

(162) ??What1 does John wonder [cp who bought t1]?

(Agbayani 2000: 705)

In the above example, the embedded subject wh-phrase 'who' creates a wh-island and appears in the embedded Spec CP position, hence blocks the successive movement of the wh-phrase 'what', contrary to the assumption of the VMH.

Regarding the position occupied by subject wh-phrases in EA, let us consider the following examples:

(163) miin   fataH   il-baab?
       who   open (3SM.PAST)   the-door
       'Who opened the door?'

(164) eeh   sabab   il-Hadsa?
       what   cause (N)   the-accident
       'What is the cause of the accident?'

(165) anhi   bint   šaafit   Ali?
       which   girl   see (3SF.PAST)   Ali
       'Which girl saw Ali?'

In Section 5.4.2, the minimalist assumptions regarding the licensing of wh-phrases *in situ* were discussed. It was argued that wh-phrases in EA carry weak [wh] features, so

they do not undergo wh-movement. It was also argued that a functional category (a phonologically null operator inserted after the Spell-Out point) [Op] which bears a strong [wh] feature moves at LF. Following this minimalist assumption, I suggest that in the above wh-questions, the [wh] feature is covertly raised to the [Spec CP] position without pied piping the whole category (i.e. the wh-phrase).

In addition to the VMH which states that subjects move at LF, the VP-Internal Subject Hypothesis is a further account for the position of subjects. It takes subjects to be base-generated in VP. Since the VMH suggests LF movement which is excluded under the MP, the VP-Internal Subject Hypothesis will be adopted for the purposes of this study.

According to the VP-Internal Subject Hypothesis, the subject wh-phrase *miin* 'who' originates within the VP as in (166), then it raises overtly to the [Spec IP] position to satisfy the EPP as in (167).

(166) [$_{IP}$ Spec [$_{I'}$ [$_{I}$ [$_{VP}$ miin [$_{V'}$ fataH   il-baab]]]]]?
       who open (3SM.PAST) the-door
     'Who opened the door?'

(167) [$_{IP}$ miin$_i$ [$_{I'}$ [$_{I}$ [$_{VP}$ t$_i$ [$_{V'}$ fataH   il-baab]]]]]?
   who   open (3SM.PAST) the-door
     'Who opened the door?'

In the Spec IP position, the wh-phrase cannot undergo any further movement due to its weak [wh] feature as suggested earlier. Thus, the [wh] feature undergoes LF movement to the [Spec CP] position where it is checked. Hence, the structure is typed as a wh-question (Cheng 1997). I argue that the wh-phrase in the [Spec IP] position is a wh-in-situ, as its movement to the [Spec IP] is not an instance of wh-movement. It is in the [Spec IP] position where the wh-phrase terminates as nothing triggers any further movement. Therefore, the wh-phrases in (163)-(165) are all *in situ* and they are interpreted and assign scope in [Spec IP]. Based on this argument, the wh-question in (163) will have the following representation:

(168)

```
                    CP
              _____|_____
           [Opi]          C'
           +wh        _____|_____
                     C          IP
                            _____|_____
                           DP         I'
                           |      ____|____
                          miini  I        VP
                                       ___|___
                                      V'      NP
                                      |       |
                                    fataH   il-baab
```
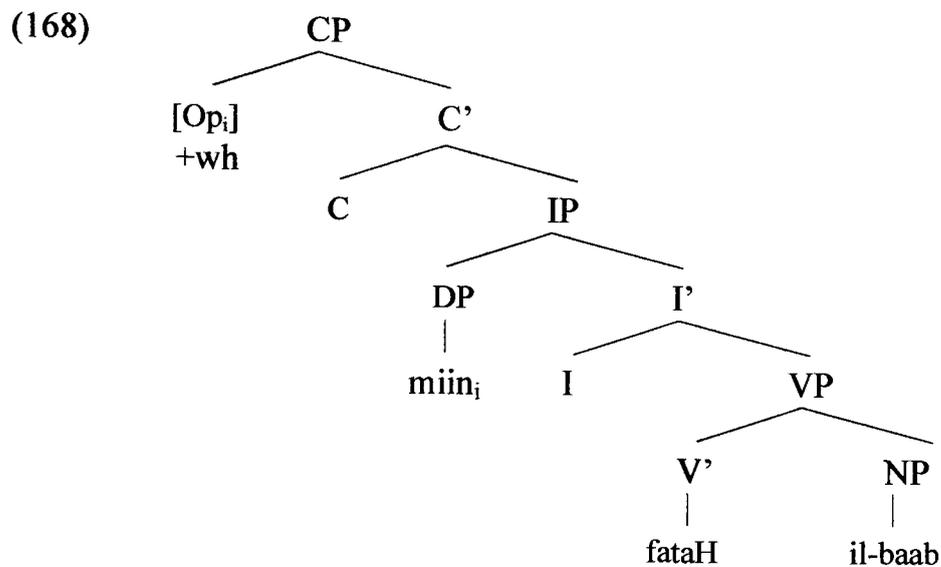
When followed by an NP, rather than a VP, the subject wh-phrase *miin* 'who' can optionally be fronted in a manner which resembles the formation of topicalised constructions. The idea is illustrated by the following examples:

(169) a. miin   SaaHib   il-beet?
       who   owner   the-house
       'Who is the owner of the house?'

       b. SaaHib   il-beet   miin?
       owner   the-house   who
       'Who is the owner of the house?'

(170) a. miin   fataH   il-baab?
       who   open (3SM.PAST)   the-door
       'Who opened the door?'

       b.*fataH   il-baab   miin?[26]
       open (3SM.PAST)   the-door   who
       'Who opened the door?'

To account for the fronting of the NP in (169b), I suggest that they are the result of a topicalisation process; hence, the examples in (169a) and (169b) do not show genuine optionality. Fronting in this example is triggered by a feature which is distinct from the [+wh] feature. Similar topicalised constructions are discussed by Wahba (1984) (see Chapter 1, Section 1.4.1.1).

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[26] The experimental study carried out in Chapter 3 revealed that all the informants judged this structure as ungrammatical.

(171) fi-l-šaari^c_i   dah,   Mona   kaanit   bitdawwar   ^cala   ša'a   t_i.
in-the-street that,   Mona   was   looking   for   an apartment
'In that street, Mona was looking for an apartment.'

         (Wahba (1984: 13)

In certain cases, when the wh-phrase *miin* 'who' is followed by a nominal structure that has a resumptive pronoun co-indexed with the wh-phrase, topicalisation is no longer possible as seen below:

(172) a. miin   beet-ha   bi^ciid?
      who   home-her   far
      'Whose house is far?'

      b.*beet-ha   bi^ciid   miin?
       home-her   far   who
       'Whose house is far?'

The ungrammaticality of (172b) is due to the fact that resumptive pronouns, as argued earlier, occur within an island and involve no movement, and hence topicalisation is not possible.

Object wh-phrases *in situ* are licensed in the same manner discussed above. In the following examples, object wh-phrases occur in their base-generated position. Their [wh] feature is checked via covert movement of [Op] to the [Spec CP] position.

(173) Ali   'aabil   miin?
      Ali   meet (3SM.PAST)   who
      'Who did Ali meet?'

(174) Mona   ištarat   eeh?
      Mona   buy (3SF.PAST)   what
      'What did Mona buy?'

(175) Salim   itgawwiz   anhi   bint?
      Salim   marry (3SM.PAST)   which   girl
      'Which girl did Salim marry?'

The example in (173) will have the following representation:

(176)

```
                    CP
           _____/_____
         [Op_i]              C'
         +wh          _____/_____
                     C              IP
                            _____/_____
                           DP                I'
                           |          _____/_____
                          Ali        I              VP
                                  [+past]      _____/\_____
                                              V'           NP
                                              |            |
                                           'aabil        miin_i
```
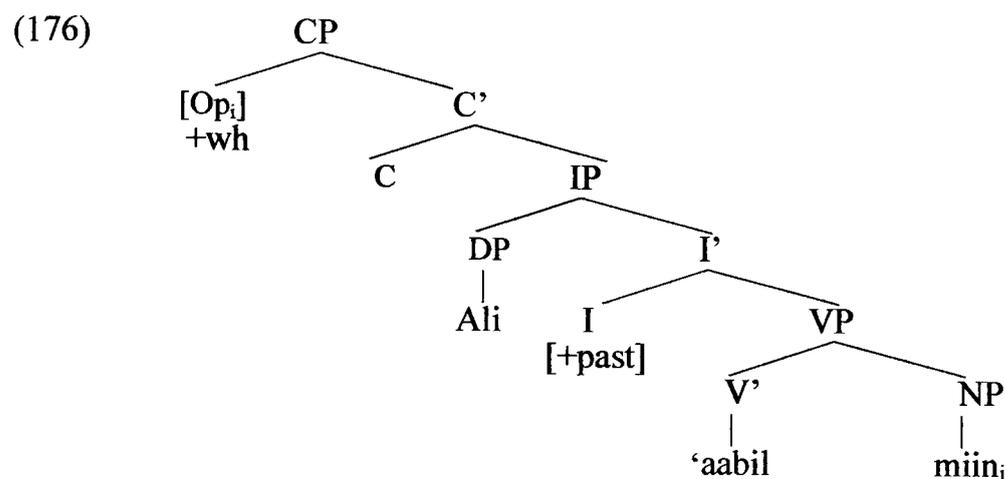
To sum up: In this section, I suggested that subject wh-phrases overtly raise to the [Spec IP] position to satisfy EPP feature of I. They occur in this position by an operation other than wh-movement; hence, they were analysed as wh-phrases *in situ*. Wh-phrases *in situ* are licensed via covert movement of formal features on [Op] to the Spec CP where their [wh] feature is checked. They are interpreted and assign scope in their *in situ* positions.

5.10 Wh-in-situ and the intervention effect in EA

In the previous sections, I provided some examples that show how argument wh-phrases can violate constraints on overt movement; such examples were employed to bear out the major claim that EA is a non-wh-movement language. In Section 5.2, some arguments in favour of LF movement of wh-phrases *in situ* in languages such as Chinese and Japanese were outlined. Some previous analyses in the literature suggest LF movement of wh-phrases in EA (e.g. Wahba 1984; Osman (1990)). In this section, I will make use of the phenomenon of intervention effect to support the *in situ* analysis proposed for argument wh-phrases. I will briefly discuss the intervention effect (Beck 1996), and see how it works within some languages such as German (partial wh-movement), French (optional wh-movement), and English (wh-movement). I will provide EA data with interveners such as quantifiers and negation elements, and see whether or not these data support the core idea of the present work.

Beck (1996) proposes the Minimal Quantified Structure Constraint (MQSC) as one of the restrictions on LF movement. According to this constraint, LF movement is blocked

by some interveners such as quantifiers, giving rise to the ungrammaticality of the following representation:

(177) *[. . . X$_i$ . . . [Q . . . [. . . t$_i^{LF}$ . . . I]]]

Beck (1996) argues that if wh-phrases *in situ* move at LF, negative quantifiers block this movement and yield intervention effect as in (178a). By contrast, overt movement of wh-phrases does not yield intervention effect as in (178b).

(178) *a.??Was   glaubt   niemand   wen   Karl   gesehen   hat?
        what   believes   nobody   whom   Karl   seen   has
        'Who does nobody believe that Karl saw?'

       b. Wen   glaubt   niemand   daβ   Karl   gesehen   hat?
        whom   believes   nobody   that   Karl   seen   has
        'Who does nobody believe that Karl saw?'

       (Beck 1996: 3-5)

Beck (1996) suggests that the ungrammaticality of (178a) is because the wh-in-situ *wen* 'whom' is c-commanded by negation *niemand* 'nobody' which prevents the antecedent government between *was* 'what' and the wh-phrase *wen* 'whom' in the embedded Spec of Comp, and hence prevents chain formation. In (178b) the embedded wh-phrase *wen* 'whom' has undergone movement above the negation *niemand* 'nobody', yielding licit structure.

Mathieu (1999) discusses the intervention effect in French (which employs wh-movement vs wh-in-situ strategy) and proposes the following definition:

(179) a. A WH phrase *in situ* (i.e. a variable) in single WH questions cannot remain in the scope of other scopal elements/operators.

       b. *[Op ... [Op ... [variable]]]

Mathieu (1999) suggests that negation elements and operators in A'-specifiers such as the Focus marker 'only' cause intervention effect in *in situ* wh-questions: this effect disappears in wh-questions with overtly moved wh-phrases.

(180) a.*Seulement JEAN   arrive   à   faire   quoi?
        only   Jean   arrives to do   what

      b. Qu$_i$'est-ce que   seulement JEAN   arrive   à   faire t$_i$?
         what   that only   Jean   arrives to do
      'What does only JEAN manage to do?'

                (Mathieu 1999: 447-448)

Mathieu (1999) accounts for the ungrammaticality of the example in (180a) by claiming that wh-in-situ undergoes movement. To satisfy the Principle of Lexical Association[27], *Seulement* 'only' has to be associated with a lexical item 'Jean' in its c-commanding domain. Accordingly, the wh-phrase has to move as in (180b).

Haegeman (2007) discusses argument/adjunct asymmetries with respect to intervention effects. She argues that if a subject is fronted across another fronted argument, the fronted argument will intervene between the argument's base-generated position and the position it moves to, yielding intervention effects. With adjunct fronting, intervention effects disappear. The argument/adjunct asymmetry associated with intervention effects is illustrated by the following examples:

(181)   a. *This is a man who liberty would never grant to us.

        b. John Prescott is the person who in future will be in charge of major
           negotiation with the fire-fighters.

                (Haegeman 2007: 292)

Thus, in (181a), the subject NP 'a man' is fronted across the NP 'liberty', which intervenes between its original position as the object of the verb 'grant', and the position it moves to. In (181b), the subject 'John Prescott' can move across the adjunct 'in future'.

To investigate how intervention effects work in EA, Soltan (2010) offers the following examples:

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[27] Tancredi (1990) proposes the Principle of Lexical Association which states that operators like *only* must be associated with a lexical constituent in its c-command domain (see Section 5.3.1).

(182) a. kull   walad   ištara   ᶜagalah.
           every   boy   buy (3SM.PAST) bike
           'Every boy bought a bike.'

       b. kull   walad   ištara   eeh?
           every   boy   buy (3SM.PAST) what
           'What did every boy buy?'

       c. eeh$_i$ illi   kull   walad   ištaraa-h$_i$?
           what   that   every   boy   buy (3SM.PAST) -it
           'What is it that every boy bought?'

              (Soltan 2010: 14)

Soltan (2010) accounts for the grammaticality of the above examples by claiming (contrary to Wahba 1984) that EA wh-questions exhibit no LF movement rule. I agree with Soltan's argument and offer the following examples:

(183) a. il-walad   ma-'akal-š   eeh?
           the-boy   not-eat (3SM.PAST)-NEG   what
           'What didn't the boy eat?'

       b. eeh$_i$ illi   il-walad   ma-'akal-uh$_i$-š?
           what   that   the-boy   not-eat (3SM.PAST)-it-NEG
           'What is it that the boy didn't eat?'

In (183b) the wh-phrase *eeh* 'what' crosses over the NEG head without giving rise to intervention effect. The examples in (182) and (183) suggest that NEG head and quantifiers are not interveners for licensing wh-in-situ. The [wh] feature can move covertly across these interveners. These examples also show that interveners do not affect wh-extraction. In (183b), the wh-phrase *eeh* 'what' is extracted followed by *illi*, while the resumptive pronoun is cliticised onto the verb and attached to the negative particle. Based on the above discussion, I suggest that the lack of intervention effects supports the claim against LF movement of wh-phrases in EA.

5.11 Conclusion

In this chapter, the important literature on wh-in-situ in some languages was reviewed; two main approaches of wh-in-situ were outlined: LF movement approach (and contra assumptions), and the unselective binding procedure. I discussed the minimalist

assumptions regarding LF movement which is triggered by feature checking. I adopted the minimalist views on wh-in-situ and suggested that wh-phrases *in situ* are licensed via LF movement of formal features to the Spec CP; the [wh] feature moves at LF to check the strong [wh] feature on C against the [wh] feature on the wh-phrase.

I cited some examples which underline the different word orders in EA, and accounted for these variations. I identified the position of subject in terms of the VP-Internal Subject Hypothesis. In this chapter, I investigated the behaviour of argument wh-phrases regarding various constraints on movement; the scope properties of argument wh-phrases and the selection restrictions of some verbs were also examined. I employed the grammaticality of certain structures that reflected island insensitivity to bear out the claim that EA is a wh-in-situ language. I examined the extraction possibilities and offered some descriptive generalisations on wh-extraction.

Resumptive pronouns were examined and offered a minimalist account. Argument wh-questions were claimed not to involve overt movement in their derivation: argument wh-phrases are associated with resumptive pronouns which are inside islands. I agreed with Soltan's (2010) argument that lack of intervention effects within argument wh-questions implies lack of covert movement.

Following this analysis of argument wh-phrases *in situ*, in the next chapter, the wh-fronting strategy will be investigated and the role which *illi* plays in wh-extraction will be closely examined.

Chapter 6: Analysis of fronted argument wh-phrases in EA

6.1 Introduction[1]

In Chapter 5, argument wh-phrases in EA were claimed to be island insensitive; this led to the conclusion that EA can be described as a wh-in-situ language, and hence it should belong to the Chinese-type languages. The problem, however, remains for the cases where argument wh-phrases are optionally fronted. The main aim of the present chapter is to propose a unified account for the fronting of wh-phrases: an account which resolves the linguistic question of apparent optionality[2] excluded under the MP (see Chapter 2).

Argument wh-questions in EA present an interesting case study as they can appear in two syntactic structures other than the wh-in-situ strategy discussed in Chapter 5. The first structure has an initial argument wh-phrase which has to be followed by *illi* and co-indexed with a resumptive pronoun. The second structure involves an initial *illi*, whereas the argument wh-phrase appears in a clause-final position. Although the second structure is common among EA speakers, it has not been approached in previous literature. Therefore, the present chapter aims at accounting for the fronting of argument wh-phrases in these two syntactic structures.

In this chapter, I will claim that movement in EA is triggered by a feature other than the wh-feature; hence, wh-phrases do not occur in the CP projection. The analysis of the two structures of *illi*-questions mentioned above will be proposed in terms of Focus feature and Topic-Focus feature respectively. Wh-phrases in the two cases will be argued to occupy the Spec of FocusP.

In Chapter 5, it was argued that extraction out of different syntactic islands is facilitated by the insertion of *illi* and the cliticisation of resumptive pronouns. In this respect, a detailed account of resumptive pronouns was proposed. In the present chapter, the role of *illi* within relative clauses and wh-questions will be investigated.

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[1] Some examples from Chapter 5 will be repeated here for expository purposes.

[2] French wh-questions are formed by fronting the wh-phrases (as in English), or leaving them *in situ* (as in Chinese). Some proposals (e.g. Mathieu 1999) have viewed the fronting of French wh-phrases as the result of overt wh-movement to the [Spec CP] position. Such proposals give rise to the issue of optionality.

This chapter will be divided as follows: section 2 examines the role of *illi* and offers empirical evidence in support of its classification as a relative pronoun (contrary to some previous assumptions in the literature). Section 3 presents a detailed analysis of EA relative clauses which were assumed (e.g. by Wahba 1984 & Osman 1990) not to be derived by a movement rule. Section 4 reviews some previous analyses of Focus. Section 5 discusses two main types of Foci. Section 6 provides the theoretical framework of the Focus-based analysis of the EA data, followed by an in-depth analysis of *illi*-questions. This section also accounts for argument wh-questions with final wh-phrases by attempting to find out how we can end up having a final subject/object in wh-questions. Section 7 concludes the chapter.

6.2 The role of *illi* in EA and other varieties of Arabic

Since the main thread of the chapter focuses on the analysis of argument wh-questions with *illi* (*illi*-questions), a starting point would be to highlight the role which *illi* plays in EA and in some other varieties of Arabic.

In Palestinian Arabic (PA), Shlonsky (1992) argues that *illi* occurs as the head of the CP which functions as a predicate. He views *illi* as a complementiser similar to *inno*. Following Rizzi's (1990) classification of complementisers, Shlonsky ascribes the features [-Predicate] and [+Predicate] to *inno* and *illi* respectively, and adds that neither of them can occur with null subjects as illustrated below:

(1)   *Saliim   fakkar   inno (pro)   raayHa   'albeet.
        Saliim   think (3SM.PAST)   that (she)   going   the house
        'Saliim thought that she is going home.'

(2)   *Mona   šaafat   l-wlaad   illi (pro)   biᶜrif-hin.
        Mona   see (3SF.PAST)   the-boys   that (he)   know (3SM.PRES)-them
        'Mona saw the boys that he knows.'

        (Shlonsky 1992: 450-452)

A pronominal clitic can be attached only to *inno*, in contrast to *illi*, as indicated by the following examples:

(3)   a. Mona fakkarat   inn-ak/inno   inti   bitruuH   ᶜala-l-masraH.
          Mona think (3SF.PAST)   that-you/that you (M)   go (2SM.PRES)   to-the-theatre
          'Mona thought that you go to the theatre.'

b. Mona   šaafat   l-bint   illi-(*k)/inti   btiᶜrif-ha.
   Mona   see (3SF.PAST)   the-girl that-(you.M)/ (you.M)   know(2SM.PRES)-her
   'Mona saw the girl that you know.'
      (Shlonsky 1992: 452)

Shlonsky (1992) ascribes the properties [+predicational] and [-wh] to *illi* since it heads a non-interrogative CP, and acts as a nominal predicate for an externally base-generated wh-expression. Shlonsky accounts for the fact that Hebrew employs both resumption and gap strategies within its relative clauses by supposing the presence of two complementisers: one selects an A-specifier similar to the Palestinian *illi* (i.e. *še_A*), and the other has its specifier in an A'-position (i.e. *še_A'*). With the former, the presence of a resumptive pronoun is obligatory except in the highest subject position, whereas the latter allows the violation of the Specified Subject Condition (SSC) which bans the movement of a direct object over a specified subject. Shlonsky (1992: 453) concludes that this optionality is due to the fact that Hebrew *še* can be a relative clause complementiser and, like *inno* in Palestinian Arabic, a subordinate complementiser; this is illustrated by the following Hebrew examples:

(4)   a. ha-'is   še-   ra'iti   ('oto)
         the-man   that- (I)   saw   (him)
         'the man that I saw'

      b. ha-'is   še-   xasavt   še-(hu)   melamed 'anglit
         the-man   that- (you.F)   thought   that-(he)   teaches   English
         'the man that you thought teaches English'

      c. ha-'is   še-   xasavt   še- Dani   pagas ('oto)
         the-man   that- (you.F)   thought   that-Dani   met (him)
         'the man that you thought that Dani met'
       (Shlonsky 1992: 452-3)

Al-Momani (2010) analyses *illi* in (J)ordanian (A)rabic as a reduced form of the relative pronouns *allaðii/allati* 'who' (M/F) in MSA. *illi* does not show number, gender, person or case agreement. In JA, *illi* carries the feature [+definite] since its occurrence is restricted to a definite head as shown by the following illicit structure:

(5)　*　šuft　　　　walad　illi　gara　　　　　　l-ktab.
　　　　see (1S.PAST)　boy　that　read (3SM.PAST)　the-book
　　　　'I saw a boy that read the book.'

<div align="center">(Al-Momani 2010: 230)</div>

Al-Momani argues that the definite feature gives *illi* its phonological shape and this is justified by its absence from indefinite head nouns where the feature is no longer available.

After giving a brief idea about the classification of *illi* in PA and JA, I will focus on its role within EA relative clauses, and see whether or not this role can be extended to wh-questions.

Although *illi* has to be employed in the formation of some syntactic structures such as topicalised structures, relative clauses, cleft structures and wh-questions, it has not been subjected to an in-depth examination in the literature. Wahba (1984) and Osman (1990) view *illi* as a complementiser, however they do not offer a clear reference to the syntactic properties which *illi* may or may not share with other complementisers. In the present study, *illi* will be classified as a relative pronoun by emphasising the impossibility of it functioning as a definiteness marker, a question particle, a scope marker or a complementiser.

6.2.1 *illi* as a definiteness marker[3]

Wise (1975: 78) argues that restrictive relative clauses which modify a definite noun must be headed by *illi* as in the following examples:

(6)　　miš-ᶜaarif　　　　　　il-raagil　illi　ištiri　　　　　il-ᶜarabiyya.
　　　　not-know (1SM.PRES)　the-man　that　buy (3SM.PAST)　the-car
　　　　'I don't know the man who bought the car.'

(7)　　feen　　il-muwazzaf　illi　kallimtu　　　　　　imbaariH?
　　　　where　the clerk　　that　speak (1SM/F.PAST)　yesterday
　　　　'Where is the clerk I spoke to yesterday?'

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[3] This section is part of a paper that appeared in Leeds Working Papers in Linguistics (2010).

Wise classifies *illi* as a definiteness marker equivalent to the definite article *il-* 'the' since it is not allowed after an indefinite NP. Thus, she accounts for the following contrast in terms of the occurrence of *illi* with the indefinite NP '*akl* 'food'.

(8)   a. biyaklu   'akl   ma-luu-š   Taᶜm   xaaliS.
            eat (3F/M PLU.PRES)   food   no-have-NEG   taste   (at all)
            'They eat food which has no taste at all.'

        b.* biyaklu   'akl   illi   maluu-š   Taᶜm   xaaliS.
            eat (3F/M PLU.PRES)   food   that   no-have- NEG   taste   (at all)
            'They eat food which has no taste at all.'
                (Wise 1975: 87)

Traditionally, both restrictive and non-restrictive relative clauses have definite nouns: the relative clause either narrows down the scope of the head noun (i.e. restrictive) or just adds more information to that noun (i.e. non-restrictive). The grammar of EA has words such as *um* (F) and *abu* (M) 'lit: who/which has' which some colloquial registers of EA use to define definite nouns. I suggest that these words can also carry out the grammatical function of definiteness markers as in the following examples:

(9)   Mona   itgawwizit   il-raagil   **abu**   ᶜarabiyya   xaDra.
        Mona   marry (3SF.PAST)   the man   (who has)   car   green
        'Mona married the man who has a green car.'

(10)   il-bint   **um**   fustaan   wi   deel-HuSaan   Suut-ha   Hilw   awi.
        the-girl   (who has)   dress   and   (pony tail)   voice-her beautiful   very
        'The girl, who is wearing a dress and has a pony tail, has a very beautiful voice.'

I refer to examples in (9)-(10) as nominalised attributive clauses. In both examples, the definite nouns *il-raagil* 'the man' and *il-bint* 'the girl' are followed by attributive clauses which are not introduced by *illi*; however, definiteness is still marked. Replacing the words *abu* (M) and *um* (F) 'who has' by *illi* in (9) and (10) without changing the complement clauses yields the following illicit structures:

(11)   *Mona   itgawwizit   il-raagil   illi   ᶜarabiyya xaDra.
        Mona   marry (3SF.PAST)   the man   that   car   green
        'Mona married the man who has a green car.'

(12) * il-bint   illi   fustaan   wi   deel -HuSaan   Suut-ha   Hilw   awi.
the-girl   that   dress   and   (pony tail)   voice-her   beautiful   very
'The girl who has a dress and a pony tail has a beautiful voice.'

To form grammatical counterparts for the above examples, the complement clauses should have either verbal or nominal relative clause as in (13) and (14) respectively:

(13) Mona   itgawwizit   il-raagil   illi   ištara   ᶜarabiyya xaDra.
Mona   marry (3SF.PAST)   the man   who   buy(3SM.PAST)   car   green
'Mona married the man who bought a green car.'

(14) il-bint   illi   labsa   fustaan wi   ᶜamla   deel HuSaan.
the-girl   who wear (PARTICIPLE) dress   and   make (PARTICIPLE) (a pony tail)

Suut-ha   Hilw   awi.
voice-her   beautiful   very
'The girl who is wearing a dress and is making pony tail has a very beautiful voice.'

Farghaly (1981: 139) argues that one of the effects that *illi* has on the grammar of EA is the lack of a pronominalisation rule. According to this rule, if the topic and the NP to its left are identical, the rule pronominalises the topic into a proper form of a relative pronoun (*allaðii/allati* in MSA). For Farghaly, this rule does not work in EA since *illi* is an invariant particle. Farghaly (1981: 143) bases his classification for *illi* as a relative particle on two observations: first *illi* does not inflect for gender, number or person; second, *illi* occurs in an initial position within a relative clause, whereby a movement rule is required in order to account for this position.

While Farghaly (1981) suggests that EA needs a movement rule to account for the initial position of *illi*, Wahba (1984) suggests that relative clauses (which are syntactic islands) involve no movement and question formation into them is free (see Chapter 1, Section 1.4.1.2). She accounts for the non-movement analysis of relative clauses headed by *illi* 'that' based on the impossibility of pied-piping in structures like (15b).

(15) a. miin   il-bint   illi   iš-šibaak   wi'iᶜ   ᶜalee-ha?
who   the-girl   that   the-window   fall (3SM.PAST)   on-her
'Who is the girl whom the window fell over her?'

b.*miin   ᶜala   il-bint   illi   iš-šibaak   wi'iᶜ?
who   on   the-girl   that   the-window   fall (3SM.PAST)
'Who is the girl whom the window fell over her?'

If *illi* is taken to be a relative pronoun, then the derivation of relative clauses has to be investigated to ascertain whether or not it involves movement. According to Ross (1967), when a wh-phrase moves to the [Spec CP] position, it pied pipes any constituent in its c-command domain. In the following example, the movement of the wh-phrase 'which' involves pied-piping the NP 'girl'.

(16)   [Which girl]$_i$ have you met t$_i$?

If wh-extraction in (15b) is the result of a wh-movement of the English type, then the movement of the preposition *ᶜala* 'on' would be permitted. However, the ungrammaticality of (15b) supports the unavailability of wh-movement. The non-movement analysis of relative clauses headed by *illi* is supported by the fact that, although relative clauses are syntactic islands, they evince island insensitivity. It is possible to relativise out of an embedded relative clause and a wh-question as in the following two examples respectively:

(17)   a. Mona   'aablit   il-bint$_i$ illi   Ali   šaaf   il-raagil
Mona   meet (3SF.PAST)   the-girl   that   Ali   see (3SM.PAST)   the-man

illi   Darab-ha$_i$
that   hit (3SM.PAST)-her
'Mona met the girl whom Ali saw the man who hit her.'

b. Mona   dafaᶜit   il-filuus$_i$ illi   il-buliis   ᶜirif   miin
Mona   pay (3SF.PAST)   the-money   that   the-police know (3SM.PAST)   who

illi   xad-ha$_i$.
that   take (3SM.PAST)-it
'Mona paid the money which the police knew who took (it).'

Based on the above discussion, relative clauses are claimed not be derived by a wh-movement rule.

6.2.2 *illi* as a question particle

Baker (1970: 206ff) argues that there is a strong connection between word order, question particles and wh-phrases. Accordingly, all VSO languages have initial yes/no particles, while wh-phrases occur in a clause-initial position. SOV languages, on the other hand, have their question particles in a sentence final position. Baker also argues that no language has both sentence final yes/no particles and moved wh-phrases. Modern Standard Arabic (MSA) has two main question particles that mark yes/no questions, namely *'a* and *hal* (see Chapter 1, Section 1.5.1). The question particle *'a* can precede either a nominal or a verbal sentence as shown by the following examples from Badawi et al (2004):

(18) 'a-masruur-un   'anta?
      Q-happy-NOM   you
      'Are you happy?'

(19) 'a-taHaddatht-u   ila   'l-waladi?
      Q-talk (2SM.PAST)   to   the-boy
      'Have you talked to the boy?'

(Badawi et al 2004: 685)

The question particle *hal* can be followed by a VP or an NP. In (20a) it is followed by the VP *katabta* 'you wrote', while in (20b) it is followed by the NP *huwa masrur* 'he is happy':

(20) a. hal   katabta   'l-dars-a?
        Q   write (2SM.PAST)   the-lesson-ACC
        'Did you write the lesson?'

      b. hal   huwa   masruur-un?
        Q   he   happy-NOM
        'Is he happy?'

In EA, the use of the phrase *ya-tara* (lit. 'I wonder') as a peculiar question particle was discussed in Chapter 4, Section 4.4. Unlike *'a* and *hal*, which introduce only MSA yes/no questions, *ya-tara* occurs in both yes/no questions[4] and wh-questions as in (21) and (22) respectively:

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[4] A yes/no question in both EA and MSA can be identified by an intonation morpheme; this type of question is commonly used in dialogues.

(21)   a. ya-tara   Salim   ha-yisaafir   bukra?
             (I wonder) Salim   will-travel (3SM.INFIN)   tomorrow
             'I wonder whether Salim will travel tomorrow.'
             (lit: Will Salim travel tomorrow?)

         b. ya-tara   il-buliis   'abaD   ᶜala il-Haraami?
             (I wonder) the-police arrest (3SM.PAST)   on   the-thief
             'I wonder whether the police arrested the thief.'
             (lit: Did the police arrest the thief?)

(22)   a. ya-tara   il-kitaab   feen?
             (I wonder) the-book   where
             'I wonder where the book is.'
             (lit: where is the book?')

         b. ya-tara   Salim   'akal   eeh?
             (I wonder) Salim   eat (3SM.PAST) what
             'I wonder what Salim ate.'
             (lit: What did Salim eat?)

In (22), the [+wh] feature of the wh-phrases *feen* 'where' and *eeh* 'what' marks the structures as wh-questions, regardless of the presence of the question particle *ya-tara* 'I wonder'. Within a wh-question, the function of the question particle *ya-tara* is more pragmatic than syntactic; it adds an exclamation force to the wh-question. Evidence in support of dealing with *ya-tara* 'I wonder' as a question particle comes from the adjunction possibility of the negative particle *la'a* 'not' to a yes/no question via the co-ordinator element *wala* 'or' as in (23).

(23)   ya-tara   Sami ištara   il-kitaab wala   la'a?
        (I wonder)   Sami buy (3SM.PAST) the-book   or   not
        'I wonder did Sami buy the book or not?'

What is expected is a 'yes' or 'no' answer as in the following two-turn conversation:

SPEAKER A: ya-tara   mumkin 'axrug   il-wa't   wala la'a?
                (I wonder) possible go (1S.PRE) now   or   not
                'I wonder whether it is possible for me to go out now or not.'

SPEAKER B: la'a, istanni   saaᶜa law   samaH-ti.
                no   wait (2SF.IMPER) hour if   please (2SF.PAST)-you
                'No, please wait for an hour.'

Within both yes/no questions and wh-questions, *illi* can be employed as in the following examples:

(24)   a. ya-tara   Salim   *illi*   faaz   bi-l-gayza   ha-ysaafir?
       (I wonder) Salim that   win (3SM.PAST) with-the-prize will-travel (3SM.PRE)
       'I wonder whether Salim who won the prize will travel tomorrow.'

       b. ya-tara   il-buliis   'abaD   ᶜala il-Haraami?
       (I wonder) the-police arrest (3SM.PAST) on the-thief

       illi   sara'   il-beet?
       that   rob (3SM.PAST)   the-house
       'I wonder whether the police arrested the thief who robbed the house.'

(25)   a. ya-tara   il-kitaab   *illi*   kaan   hina   feen?
       (I wonder) the-book   that   was   here   where
       'I wonder where the book that was here is.'

       b. ya-tara   miin   illi   Salim   kallim-uh?
       (I wonder) who   that   Salim   talk (3SM.PAST)-him
       'I wonder whom Salim talked to.'

The above examples show that *illi* can occur with the question particle *ya-tara* where it has the grammatical function of a relative pronoun. In the above examples, *illi* cannot be a question particle since it is not possible to have two question particles within the same interrogative structure as exemplified in (25).

6.2.3 *illi* as a scope-marker

Some languages use wh-expletives to define the scopal positions of their wh-phrases. For example, in German, the wh-expletive *was* 'what' functions as a scope marker, as illustrated by the following example from Sabel (2000).

(26)   [$_{CP1}$ Was meinst du [$_{CP2}$ wen$_i$ [$_{IP}$ Peter t$_i$ die Leute   vorgestellt   hat]]]?
        WH think you.$_{nom}$ who.$_{dat}$ P.$_{nom}$ the people.$_{acc}$ introduced   has
        'To whom do you think Peter has introduced the people?'

        (Sabel 2000: 411)

In Iraqi Arabic, Wahba (1991) argues that *š* is a question particle (QP) which occurs in the matrix COMP (i.e. C in later development of the theory) to mark it as [+wh] as seen below.

(27) š- tsawwarit Mona [Ali raaH weyn]?
QP- think (3SF.PAST) Mona Ali go (3SM.PAST) where
'Where did Mona think Ali went?'

(Wahba 1991: 264)

If *illi* is a scope marker compatible with the German *was* and the Iraqi Arabic *š*, it would be expected to co-occur equally with all types of wh-phrases. However, *illi* is excluded in adjunct wh-questions, while it is optional in subject wh-questions as indicated by (28) and (29) correspondingly. Based on the unavailability of *illi* with all types of wh-phrases, it is plausible to presume that there should be some other element which functions as a scope marker.

(28) *izzayy illi fataHt il-baab?
how that open (2SM.PAST) the-door
'How did you open the door?'

(29) miin (illi) fataH il-baab?
who (that) open (3SM.PAST) the-door
'Who opened the door?'

6.2.4 *illi* as a complementiser

A complementiser is traditionally defined as the word which introduces a clausal complement. Osman (1990: 50) holds the view that *illi* can be classified as an invariant complementiser since it has no morphology and it heads the CP complement of a relative clause. In this section, I will suggest that although *illi* heads the CP, it does not share the other properties of complementisers[5].

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[5] Hirschbühler (1979: 49) proposes that the choice of complementisers in French depends on (in)finiteness of the clause; for example, the complementiser *que* is chosen for finite clauses. He claims that *que* and *qui* are allomorphs of the same morpheme. He argues that when *que* and *qui* are not the complements of prepositions, they act as complementisers which introduce either relative clauses as in (i), or subordinate clauses as in (ii) respectively.

(i) a. la table QUE tu vois est belle.
the table that you see is pretty
'The table that you see is pretty.'
b. la table QUI se trouve dans le coin est belle.
the table that sits in the corner is pretty
'The table that sits in the corner is pretty.'

(ii) a. Je crois QUE Pierre est malade.
I believe that Peter is ill.
'I believe that Peter is ill.'
b. Qui veux-tu QUI vienne?
who do you want to come?
'Who do you want to come?
(Hirschbühler 1979: 93)

In EA, the complementiser *inn* precedes the clausal complements of some verbs. If *illi* has the categorical status of a complementiser, it can introduce an embedded clause. However, I will argue that *illi* and *inn* have different grammatical functions, and will present data that highlight this dichotomy by giving a sequence of *inn* followed by *illi* within an embedded clause. Furthermore, I will introduce some morphological differences between *illi* and *inn* to support the claim against classifying *illi* as a complementiser.

In MSA, the subjunctive complementiser *'an* normally introduces an embedded non-finite clause as in (30), while in English, the complementiser 'that' normally precedes the clausal complement as in (31a).

(30)   yu-riid-u   'an   ya-drus-a.
        want (3SM.PRES)   to   study (3SM.PRES)
        'He wants to study.'

                    (Benmamoun 2000: 21)

(31)   a. I knew that Ali will travel tomorrow.

        b. That Ali will travel tomorrow worries me.

In (31a), the complementiser 'that' appears in an argument clause, while in (31b), it appears in a matrix clause. EA patterns only with the example in (31a) as seen below.

(32)   a. Mona iftikrit   inn   il-wilaad   naamu.
        Mona think (3SF.PAST) that   the-kids   sleep (3F/MPLU.PAST)
        'Mona thought that the kids went to sleep.'

        b.*inn   Ali   ha-yisaafir   bukra   daayi'   Mona.
        that   Ali   will-travel (3SM.PRES)   tomorrow   bother (3SM.PAST) Mona
        'That Ali will travel tomorrow bothers Mona.'

The ungrammaticality of (32b) is due to the occurrence of the complementiser *inn* in the matrix clause. Now, let us consider the following example:

(33)   illi   ᶜirif   Hall   il-fazuura   kisib   filuus.
        that   know (3SM.PAST)   answer   the-puzzle   win (3SM.PAST)   money
        'The one who knows the answer of the puzzle won thirty pounds.'

In (33), *illi* occurs in an argument clause where it behaves as a relative pronoun that introduces the headless relative clause *illi ᶜirif Hal il-fazuura* 'the one who knows the answer to the puzzle'. This relative clause occurs in an argument position by virtue of referring to the subject NP whose pronominal head is null.

In EA, some verbs such as *yaᶜtaqid* 'think' and *yiftikir* 'think' can take clausal complements that can optionally be introduced by *inn*. In the following examples, the complementiser *inn* 'that' introduces the IP-complements of these verbs:

(34)   'actaqid   (inn)   [$_{IP}$ baba   dafaᶜ   il-filuus].
        think(1S.PRES)   (that)   father   pay (3SM.PAST)   the money
        'I think (that) my father paid the money.'

(35)   Mona   iftakarit   (inn)   [$_{IP}$ 'axu-ha   xarag].
        Mona   think (3SF.PAST)   (that)   brother-her   go (3SM.PAST)
        'Mona thought that her brother went out.'

While the complementiser *inn* is optional in the above examples, it is obligatory with other verbs such as *yiᶜraf*[6] 'to know' as demonstrated by the contrast in (36).

(36)   a. ana   ᶜirift   inn   il-Hall   Saᶜb.
          I   know (1S.M/F. PAST)   that   the-answer   hard
          'I knew that the answer was hard.'

        b.*ana ᶜirift   ~~inn~~   il-Hall   Saᶜb.
          I   know (1S.M/F. PAST)   ~~that~~   the-answer   hard
          'I knew that the answer was hard.'

A Further property of the complementiser *inn* is that it takes a pronominal suffix. The cliticised pronoun shows gender and person agreement with only singular subjects as in (37).

(37)   Mona$_i$ sadda'it   **inna-ha$_i$**   faazit   bi-l-gayza.
        Mona   believe (3SF.PAST)   that-she   win (3SF.PAST)   with-the-prize
        'Mona believed that she won the prize'.

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[6] The verb *yiᶜraf* 'to know' can also take a lexical NP complement as its direct object:
   (i)   ana   ᶜirift   il-Hall.
       I   knew   the answer
      'I knew the answer.'

(38) il-banaat_i ^cirifu   **innu-hum_i** faaz-u   bi-l-gayza.
      the-girls know (3FPLU.PAST) that-they (M/F) win (3FPLU.PAST) with-the-prize
      'The girls knew that they won the prize'.

In (38), the pronoun –*hum*, which is cliticised onto the complementiser *inn*, does not show specific gender agreement with the NP *il-banaat* 'the girls'; the pronoun –*hum* is of common gender (e.g. masculine and feminine).

Another important point is that, although *illi* and *inn* are interpreted as C elements, equivalent to the English 'that', they cannot be used interchangeably; for example, using *illi* instead of *inn* yields the following illicit structures:

(39) *Mona ^cirift   illi il-Hall   Sa^cb.
      Mona   know (3SF. PAST) that the-answer hard
      'Mona knew that the answer is hard.'

(40) *'actaqid   illi   baba   dafa^c   il-filuus.
      think (1S.PRES) that father pay (3SM.PAST) the money
      'I think (that) my father paid the money.'

(41) *Mona iftakarit   illi 'axu-ha   xarag.
      Mona   think (3SF.PAST) that brother-her go (3SM.PAST)
      'Mona thought that her brother has gone out.

In the above examples, *illi* cannot replace the complementiser *inn*. What is missing in these examples is a complementiser that can introduce the embedded clauses. It is clear that *illi* cannot carry out the grammatical function of *inn*. In Moroccan Arabic (MA), Benmamoun (2000) classifies *illi* as a complementiser; however, he argues that *illi* cannot be used in contexts similar to the one in (36a) as seen below:

(42) *šeft   illi Omar na^ces.
      see (1S.PAST) that Omar sleeping
      '*I saw that Omar is sleeping.

(Benmamoun 2000: 40)

I argue that the ungrammaticality of the above MA example is sufficient enough to dismiss *illi* as a complementiser that can freely introduce an IP. Dissimilarity between

inn and *illi* appears within argument wh-questions; the complementiser[7] *inn*, in contrast to *illi*, can neither follow the wh-phrase as in (43a) nor precede it as in (43b).

(43) a.*miin inn Mona itgawwizit-uh?
        who that Mona   marry (3SF.PAST)-him
        'Who did Mona marry?'

      b *inn Mona itgawwizit-uh   miin?
        that Mona marry (3SF.PAST)-him who
        'Who did Mona marry?

As illustrated by the above examples, the complementiser *inn* has its own morphological and syntactic properties that differentiate it from *illi*, although both are glossed as 'that'. The following is a further example where the complementiser *inn* 'that' introduces an embedded clause with *illi*:

(44) ana ^cirift   inn [illi Hall   il-fazuura zaki].
      I   know (1S. PAST) that   that answer (3SM.PAST) the-puzzle intelligent
      'I knew that the one who solved the puzzle is intelligent.'

In (44), the embedded clause consists of a subject which is a null pronominal head modified by a headless relative clause, and a predicate which is an adjectival phrase *zaki* 'intelligent'. I follow Ouhalla (1991) in claiming that the C element[8] has the nominal feature [+N]. This feature nominalises the clause due to its occurrence in the top node. In (44), the complementiser *inn* occurs in the top node in the embedded clause structure and this explains the ungrammaticality of the example in (45).

(45) *ana ^cirift   **illi** **inn** Hall   il-fazuura zaki.
      I   know (1S.M/S. PAST) that   that answer (3SM.PAST) the-puzzle intelligent
      'I knew that the one who solved the puzzle is intelligent.'

French has structures like the one in (44) where a relative clause is introduced by a pronominal head *ce* which is distinct from the head of the relative clause. This is illustrated by the following example:

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[7] Haegeman (1994: 382-383) argues that some languages allow their wh-phrases to be followed by an overt complementiser; for example, Dutch; Flemish; Bavarian; and German.

[8] Some languages (e.g. Turkish and Quechua) do not have C elements (see Ouhalla 1991).

(46)   Jean   était   en retard, **ce**   **qui**   était   embarassant.
       Jean   was   late   that   which   was   embarrasing
       'Jean was late, which was embarrassing.'

(Bianchi 2000: 138)

Based on the similarity between the French and the EA examples provided so far, I suggest that the example in (44) can have the structure in (47).

(47)

```
            IP
         /      \
       DP         I
       |        /    \
     anaᵢ      I       CP
              |      /     \
           ʕirift  DP       C'
                   tᵢ      /    \
                         C        IP
                         |      /    \
                        inn   DP      AdjP
                            /    \     |
                          DP      CP  zaki
                                /    \
                              DP      C'
                                    /    \
                                  C        IP
                                  |      /    \
                                illi   DP      I'
                                            /     \
                                           I        VP
                                                    |
                                                    V'
                                                  /    \
                                                 V      NP
                                                 |      |
                                               Hall   il-fazoora
```
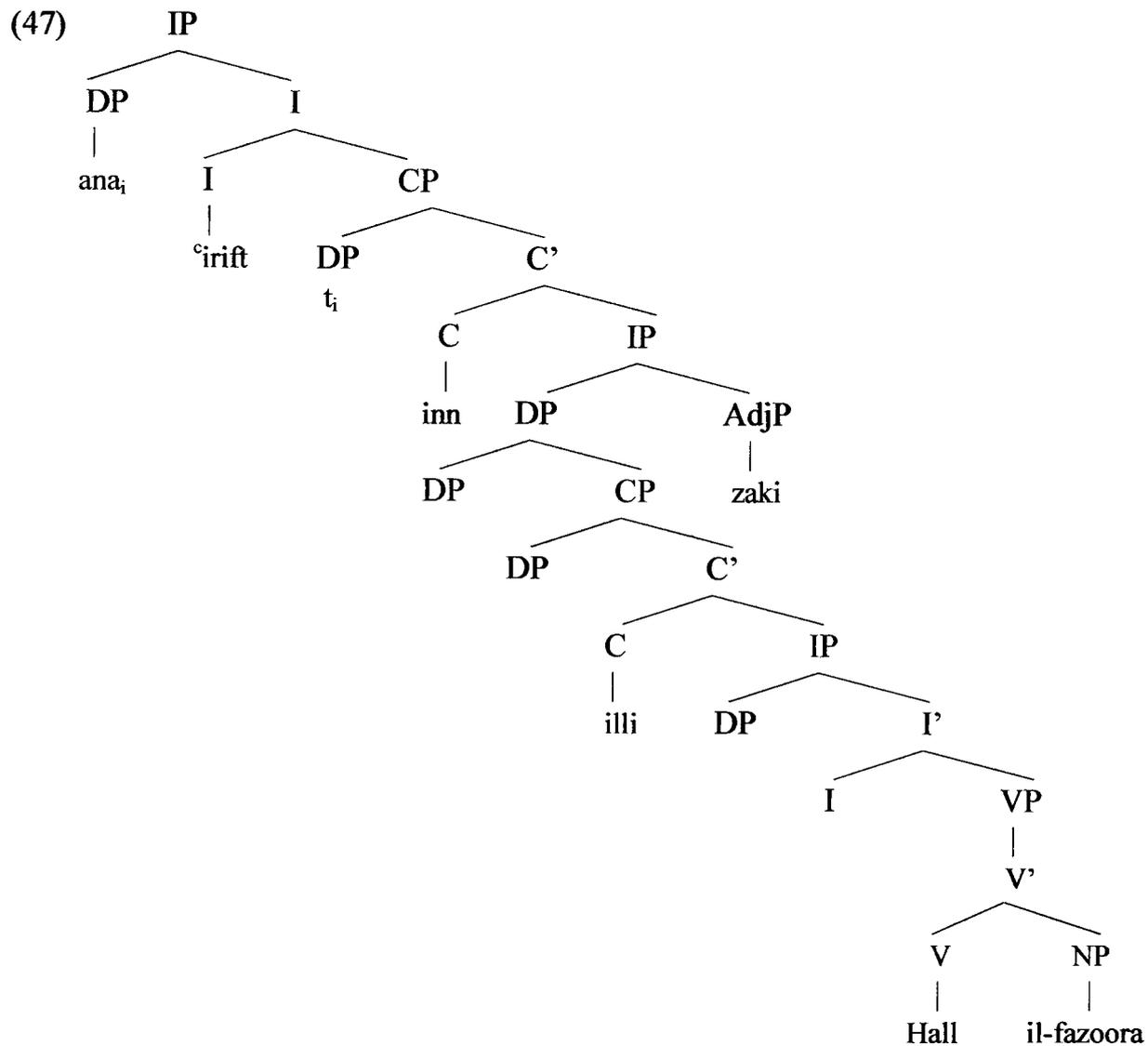
The structure in (47) illustrates that both *inn* and *illi* occupy C. In spite of its position in C, *illi* still behaves as a relative pronoun, contrary to *inn* which occurs in the matrix C as a complementiser. This is in line with the fact that complementisers are functional categories which should be the top elements in the clause structure as suggested by Ouhalla (1991: 199). The representation in (47) emphasises that the matrix C is occupied by the complementiser *inn*, whereas the embedded C hosts *illi*. The specifier of *illi* is a null pronominal head of the relative clause. Both the complementiser *inn* and

the relative pronoun *illi* are in C. In PA, a wh-phrase can be the Spec of a complementiser, whereas in EA, a wh-phrase can be a Spec of *illi*. In the following examples, both *ma* and *illi* are in C and the wh-phrases *šuu* and *eeh* are their specifiers.

(48) a. ma   ᶜamilt-š   šuu   ma   inti   ᶜimilt.
        NEG   do (1S.PAST)-NEG   what   that you   do (2SF.PAST)
        'I didn't do what you did.'

                (Shlonsky 2002: 156)

      b. ma   šuft-š   eeh   illi   inti   ᶜamalte-h.
        NEG   see (1S.PAST)-NEG   what   that you   do (2SF.PAST)
        'I didn't see what you did.'

Further argument against ascribing the categorical status of a complementiser to *illi* comes from the Doubly Filled COMP Filter which was ptoposed in the pre-minimalist area (Chomsky & Lasnik 1977).

(49) Doubly Filled COMP Filter[9]
      When an overt wh-phrase occupies the Spec of some CP, the head of that CP must not dominate an overt complementiser.

(50) miin   illi   fataH   il-baab?
      who   that   open (3SM.PAST) the-door
      'Who opened the door?'

(51) *miin   inn   fataH   il-baab?
      who   that   open (3SM.PAST)   the-door

The ungrammaticality of (51) is accounted for in terms of the rule in (49); the well-formed structure in (50) supports the claim that *illi* is not a complementiser[10]. I will later

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[9] This filter was first proposed by Keyser (1975) and later discussed by Chomsky and Lasnik (1977). The Generalised Doubly Filled Comp Filter is also discussed by Koopman (2000), where lexical material is not allowed to occur either in the specifier position, or in the head of a given X-bar projection.

[10] In English, the overt realisation of the complementiser 'that' within some wh-questions yields ungrammaticality as in the following example from Chomsky (1995: 84):
      (i) *who did you say [cp that [ip *t* left yesterday]]
In the above example, the successive-cyclic movement of the wh-phrase 'who' results in the following structure:
      (ii) *who did you say [cp *t'* that [ip *t* left yesterday]]
In the above example, the complementiser 'that' cannot share the features of *t'*, hence it cannot license the trace *t*. This is what Chomsky (1995) refers to this as the that-trace effect. The only way to form a licit counterpart for the example in (i) is by deleting the overt complementiser as in the following example from Chomsky (1995: 86):
      (iii) who did you say [cp *t'* e [ip *t* left yesterday]]

argue that the structure [wh-phrase+*illi*-clause] occurs in a Focus projection headed by *illi*. Although *illi* heads the CP projection within relative clauses, it does not carry out the same grammatical function as *inn* which is interpreted as a C element equivalent to the English 'that'. The complementiser *inn* differs from other functional categories as it does not allow a fronted wh-phrase into its Spec position. It is only *illi* that can be preceded by a wh-phrase as shown by the ungrammaticality of the structure in (51).

A further property of complementisers which *illi* apparently lacks is that a complementiser (as suggested by Rizzi (1997: 286)), expresses the inflectional specifications of the verbal system. For example, the complementiser 'that' occurs with a tensed verb, contrary to 'for' which is followed by an infinitive. Likewise, the complementiser *che* in Italian distinguishes between different forms of clauses. In EA, *illi* co-occurs equally with IP and NP, as seen below:

(52)   a. miin   illi 'ablit-uh   Mona?
           who   that meet (3SF.PAST)-him Mona
           'Who did Mona meet?'

         b. miin   illi Mona 'uxt-uh?
           who   that Mona sister-his
           'Mona is the sister of whom?'

Looking at the structure where the wh-phrase is followed by a subject NP and *illi*, it becomes clear that the only position which *illi* can occupy is C. Let us consider the following example followed by its representation[11]:

(53)   miin illi kasar   il-vaaza?
       who that break (3SM.PAST) the-vase
       'Who broke the vase?'

Chomsky argues that, in the above example, Spec-Head agreement takes place between *t'* and e: an agreement which gives e the properties that allow it to license the trace *t*, hence eliminating the *that*-trace effect.

In EA, agreement takes place between the wh-phrase and the resumptive pronoun which is cliticised to the complementiser *inn* 'that' as in the following example:
    (i) miin₁ illi inta   'ult   inn-aha₁ xaragit?
         who that you (2SM) say (2SM.PAST) that-she go (3SF.PAST)
         'Who did you say that she left?'
[11] In Chapter 6, the CP projection will be claimed to be a FocusP which has the wh-phrase as its specifier.

(54)

```
                        CP
                  _____|_____
                 DP            C'
               miin_k      ____|____
                          C         IP
                          |      ___|___
                         illi   DP      I'
                                |     __|____
                               t_k   I        VP
                                     |         |
                                  [+past]      V'
                                            ___|___
                                           V       NP
                                           |        |
                                         kasar   il-vaaza
```
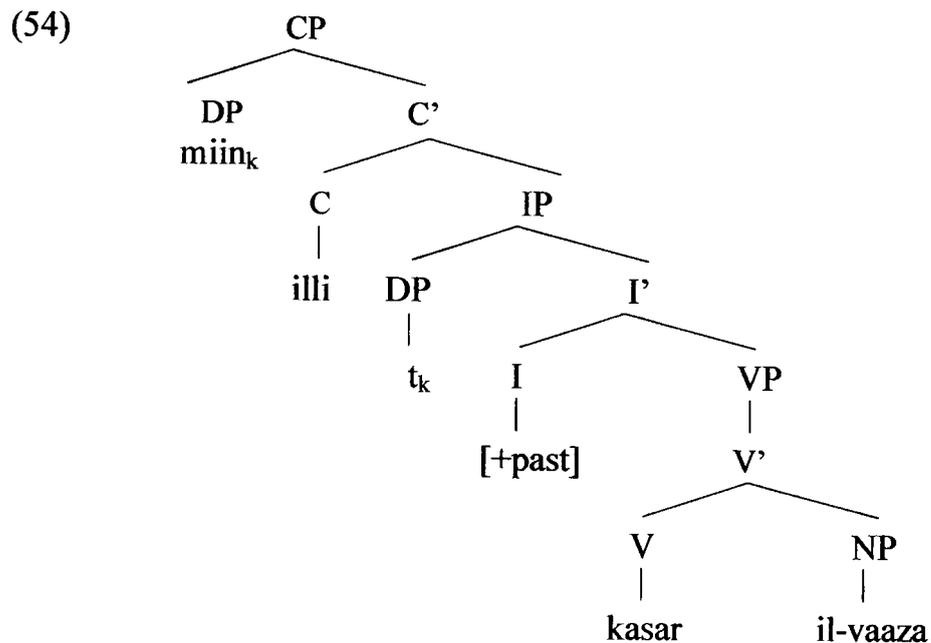
Based on the above representation, I claim that the head C is occupied by the invariant relative pronoun *illi*. Similarly, in French, Suñer (1998) claims that *que* and *qui* occur in C. He argues that C retains overt agreement features which appear only with subject relative gaps, in contrast to direct object gaps. This idea is illustrated by the following examples respectively:

(55)   a. l'homme   qui   [e] adore   Marie
           the man   that.AGR   adores   Marie
           'the man that adores Marie'

        b. l'homme   que Marie   adore   [e]
           'the man   that Marie   adores'

           (Suñer 1998: 350-351)

This idea has also been discussed by Rizzi (1990) who suggests that the Spec-Head agreement has to take place in the domain of C; elements in C^0 (such as *que* and *qui*) have their own inflectional morphology. Within wh-questions, *que* changes to *qui* in order that the morphological Spec-Head agreement takes place. *Qui* is used when the subject (adjacent to C) is extracted as in (56a). When the object or the embedded subject is extracted, *qui* (which Rizzi assumes to comprise *que* and *Agr*) changes to *que* as in (56b).

(56) a. L'homme   que je crois   [t qui   [t viendra]]
      the man   who I   think   that   will come
      'the man who I think will come'

      b. L'homme   que je crois   [t que/*qui Jean connaît t]]
      the man   that I   believe   that   Jean knows
      'the man that I believe that Jean knows'

(Rizzi 1990: 56)

To summarise: in this section, the distributional properties of *illi* were investigated and *illi* was suggested to head the CP projection as a relative pronoun. The fact that wh-extraction in EA has properties essentially identical to relative clauses serves as the starting point in the subsequent investigation of fronted argument wh-questions.

6.3 EA relative clauses

Chomsky (1977) argues that each syntactic structure must be assigned LF representation. Within wh-questions, LF representation should contain an operator (i.e. the moved wh-phrase) that binds a variable (i.e. the null trace copy). Accordingly, the resulting LF representation has a variable bound by a wh-phrase as seen below:

(57) a. Who$_i$ did you see t$_i$?

      b. which x, x a person, you saw x

Chomsky (1995) discusses the operator-variable relation in wh-movement and wh-in-situ languages. In wh-movement languages, elements are assigned features in the Numeration, rather than in the lexicon. When the wh-phrase and its variable are merged in the Numeration, they appear as a single item (Zavitnevich-Beaulac 2002: 69). For the derivation to converge and receive a proper interpretation at LF, the [Spec CP] position has to be occupied by the element that bears the [+wh] feature. In this case, the wh-phrase moves to the specifier position, leaving behind a variable which it binds. The relation between the moved wh-phrase and its variable is what defines the scope of the wh-phrase at LF. In the MP, overt movement has to take place before Spell-Out. LF movement is a more costly operation that takes place after the Spell-Out point; hence it is excluded in the MP.

In wh-in-situ languages, the operator and the variable are not co-indexed in the Numeration. For the wh-phrase and its variable to form a proper chain, the head of the chain has to be higher in the clause. With wh-phrases *in situ*, it is not possible to form the proper chain, so the wh-phrase and its variable are not co-indexed. The [+wh] feature is assigned to a functional head which acts as an operator. When the operator [Op] moves to the specifier position, it binds the variable and a proper chain is formed. In wh-in-situ questions, the variable is the wh-phrase which does not move. In the case of wh-in-situ questions, the operator-variable relation is the relation between the question operator [Op] and the variable (i.e. the *in situ* wh-phrase). The above discussion aims at describing how operator-variable relation works within wh-questions. I will now discuss this relation within relative clauses.

Relative clauses and wh-questions are argued to be derived by a movement operation (Chomsky 1977, 1995). Huang (1982) and Watanabe (1991) hold the view that relative clauses in some wh-in-situ languages such as Chinese and Japanese exhibit similar features to overt movement. This similarity between the two structures (wh-questions and relative clauses) is not language-specific; rather, it is one of the design features of UG. Within the following relative clauses, 'which' and 'Op' move to the [Spec CP] position where they bind the variable *t*:

(58)   the apple [which the boy wants to eat *t*]

(59)   the apple [Op (that) the boy wants to eat *t*]

In the above examples, the NP 'the apple' originates as the direct object of the verb 'eat'. When this NP is relativised, it leaves behind a null trace copy in a manner which resembles the wh-movement of the wh-phrase 'who' in (57).

Relative clauses in EA are mainly divided into restrictive[12], non-restrictive and free relatives. Within a restrictive relative clause, the head has to be definite and has to be

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[12] The grammar of EA exhibits a further form of restrictive relative clause where an indefinite head noun is modified by a VP, while *illi* disappears as in (i).

(i)   ma-la'itš   raagil baaᶜ   ᶜarabiit-uh b-l-siᶜr   dah.
      not-find (1S.PAST)-NEG man sell (3SM.PAST) car-his   with-the-price this
      'I did not find a man who sold his car with this price.'

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followed by *illi*. In the following example the relative clause *illi iš-šahid 'aal-u* 'that the witness said' restricts the reference to the object NP *il-kalaam* 'the speech'.

(64)   il-maHkama   sim^cit   il-kalaam_i   illi   iš-šahid   'aal-u_i.
       the-court   hear (3SF.PAST) the-speech   that   the-witness   say (3SM.PAST)-it
       'The court heard the speech (testimony) that the witness said.'

In a non-restrictive relative clause, the head is also definite and is linked to an intonation break indicated by a comma (Kayne 1994). In the following example, the relative clause intervenes between the subject NP *Yousif Shahiin* and the VP *faaz bi-l-gayza* 'won the prize'.

(65)   il-muxrig_i   Yousif   Shahiin_i   illi   min   ašhar   'aflam-u_i
       the-director   Yousif   Shahiin   who   of   (most famous)   movies-his

       film   il-maSiir   faaz_i   bi-l-gayza.
       a-movie   the-fate   win (3SM.PAST)   with-the-prize
       'The director Yousif Shaheen, one of whose famous movies is The Fate, has won the prize.'

A free relative clause does not normally have an overt head to modify as in (66).

(66)   illi   HaSal   mišš   ha-yi'assar   ^cala-yya.
       that   happen (3SM.PAST)   not   will-affect (3SM.INFIN)   on-me
       'What happened will not affect me.'

The head of the relative clause can also be the first constituent of the genitive as in (67).

(67)   Mona 'aabilit   [_{NP} SaaHib   il-maHall]_i   illi   kallimit-uh_i.
       Mona   meet (3SF.PAST)   owner (3SM) the-shop   that   talk (3SF.PAST)-him
       'Mona met the shop owner whom she talked to.'

Wise (1975) argues that the grammar of EA has a type of relative clause which she refers to as reduced relative clauses. Within this type of relative clause, a head noun is modified by another nominalised relative clause as in the following example:

PA has similar structure which Shlonsky (1992: 451) argues to have a generic referent as seen below:
(ii)   šuft   sabaaya   Mona bti^crifhin.
       see (1S.PAST) girls   Mona know (3SF.PRES)-them
       'I saw girls who Mona knows.'

(68) biyimšu   ᶜala   sikak   [marSufa   b-il   ʻasfalt]
     walk (3MPLU.PROG)   on   roads   paved   with-the   asphalt
     'The walk on roads made with asphalt.'

(Wise 1975: 90)

It is noticeable that *illi* is restricted only to definite relative clauses and this explains its absence in (68) whereby the head of the relative clause is indefinite. The co-occurrence of *illi* with an indefinite head yields the ungrammaticality of the following example:

(69)   *kitaab   illi   Ali   ʻaraa-h   mufiid.
       book   that   Ali   read (3SM.PAST)-it   useful
     '*A book that Ali read is useful.'

Since *illi* is an integral part of definite relative clauses and wh-questions, I will focus on its role within the two syntactic structures.

6.3.1 Definite relative clauses

There is cross-linguistic variation among languages concerning the structure of relative clauses. For example, while English and Spanish use complementisers and relative pronouns, resumptive pronouns occur only in Spanish as in the following examples:

(70)   a. the boy whom Mary met

       b. una cierta señadora que   Luis   LA   llamo
          a   certain   senator   that   Luis   HER   called
          'a certain senator whom/that Luis called'

(Suñer 1998: 337)

In Hebrew, the use of resumptive pronouns is obligatory in oblique object positions and NP-internal positions as in the following examples:

(71)   ha-ʻiš   še-   xašavti   ʻal-*(av)
       the-man   that- (I)   thought   about-(him)
       'the man that I thought about'

(72)   ha-ʿiš   še-   ra'iti ʿet   ʿiš't-*(o)
        the-man   that- (I) saw ACC wife-(his)
        'the man whose wife I saw'

(Shlonsky 1992: 445)

Some varieties of Arabic such as JA, PA and EA use both resumptive pronouns and *illi*, as in the following examples respectively:

(73)   gareet   l-ktaab   illi   ištaraa-h   iT-Talib.
        read (1S.PAST) the-book that   bought (3SM.PAST)-it   the-student
        'I read the book that the boy student bought.'
             (Al-Momani 2010: 231)

(74)   l-bint   illi   šufti   beet-ha.
        the-girl that   see (2SF.PAST)   house-her
        'the girl whose house you saw'

(Shlonsky 1992: 445)

(75)   šuft   il-bint   illi   Ali   rafad-ha[13].
        see (1S.PAST)   the-girl that Ali   fire (3SM.PAST)-her
        'I saw the girl that Ali fired.'

Now I will provide data which investigate the main properties of definite relative clauses as syntactic islands. In (64), the object NP *il-kalaam* 'the speech' is relativised where it is followed by *illi* and is co-indexed with a resumptive pronoun. This example has the same structure as (76) which has been discussed in Chapter 5.

(76)   eeh$_i$ illi   Mona iftakarit   Sami ištara-h$_i$?
        what   that Mona think (3SF.PAST) Sami buy (3SM.PAST)-it
        'What did Mona think that Sami bought?'

In both subject relative clauses and subject wh-questions, resumptive pronouns disappear as in the following examples respectively:

---

[13] This example emphasises the similarity between the structure of relative clauses and *illi*-questions. Recall that in Chapter 5, it was argued that wh-extraction out of different types of islands is possible solely when wh-phrases are followed by *illi* and co-indexed with resumptive pronouns.

(77) il-walad   illi   katab   id-dars   xarag.
     the-boy   that   write (3SM.PAST)   the-lesson   go (3SM.PAST)
     'The boy who wrote the lesson went out.'

(78) miin   illi   katab   id-dars?
     who   that   write (3SM.PAST)   the-lesson
     'Who wrote the lesson?'

In (78), the wh-phrase *miin* 'who' stands in the same place realisationally as the definite head of the relative clause *il-walad* 'the boy'. When the definite head of the relative clause is the first constituent of a genitive structure (as in (79)), a wh-question can be formed within this relative clause as in (80).

(79) kitaab$_i$ Ali   illi   il-Hukuuma   mana^{c}it-uh$_i$
     book   Ali   that   the-government   ban (3SF.PAST)-it
     'Ali's book which the government banned'

(80) kitaab$_i$ miin   illi   il-Hukuma   mana^{c}it-uh$_i$?
     book   who   that   the-government   ban (3SF.PAST)-it
     'Whose book did the government ban?'

Extracting the wh-phrase *miin* 'who' in (81) results in the following example:

(81) miin$_i$ illi   il-Hukuma   mana^{c}it   kitaab.uh$_i$?
     who   that   the-government   ban (3SF.PAST)   book-his
     'Whose book did the government ban?'

The above discussion is meant to reflect the similarity between the structure of relative clauses and wh-questions. In the following examples, *illi* immediately follows the definite head of the relative clause and the extracted wh-phrase which appear in boldface:

(82) a. **il-bint$_i$** illi Mona   firHit ^{c}alašaan   Ali 'aabil-ha$_i$
        the girl that Mona   (became happy)   because   Ali meet (3SM.PAST)-her
        '*the girl whom Mona was happy because Ali met her'

     b. **miin$_i$** illi Mona   firHit ^{c}alašaan   Ali 'aabl-uh$_i$?
        who   that Mona   (became happy)   because   Ali meet (3SM.PAST)-him
        '*Who was Mona happy because Ali met?'

(83) a. **il-bint**ᵢ illi Mona ᶜazamit-haᵢ   hiyya wi Ali ᶜala il-Hafla?
         the-girl that Mona invite (3SF.PAST)-her she   and Ali to the-party
      '*the girl whom Mona invited her and Ali to the party'

      b. **miin**ᵢ illi Mona ᶜazamit-haᵢ   hiyya wi Ali ᶜala il-Hafla?
         who   that Mona invite (3SF.PAST)-her she   and Ali to   the-party
      '*Who did Mona invite her and Ali to the party?'

(84) a. **il-raagil**ᵢ illi Mona rafaDit   fikrit inn Ali yissaᶜid-uhᵢ
         the-man that Mona refuse (3SF.PAST) idea that Ali help (3SM.PRES)-him
      '*the man whom Mona refused the idea that Ali helps him'

      b. **miin**ᵢ illi Mona rafaDit   fikrit inn Ali yisaaᶜid-uhᵢ?
         who   that Mona refuse (3SF.PAST) idea that Ali help(3SM.PRES)-him
      '*Who did Mona refuse the idea that Ali help?'

The examples in (82)-(84) show the possibility of relativising and wh-extracting out of an adjunct island, a co-ordinate structure and a complex NP respectively. The presence of *illi* and the resumptive pronoun (which is co-indexed with the head of the relative clause) are obligatory as deleting those results in the following illicit structures:

(85) *il-bintᵢ illi Mona   firHit   ᶜalašaan Ali 'aabil-haᵢ
       the girl that Mona   (became happy) because Ali meet (3SM.PAST)-her
      '*the girl whom Mona was happy because Ali met'

(86) *il-bintᵢ illi Mona ᶜazamit-haᵢ   hiyya wi Ali ᶜala il-Hafla?
       the-girl that Mona invite (3SF.PAST)-her she   and Ali to the-party
      '*the girl whom Mona invited her and Ali to the party'

(87) *il-raagilᵢ illi Mona rafaDit   fikrit inn Ali yisaaᶜid-uhᵢ
       the-man that Mona refuse (3SF.PAST) idea that Ali help (3SM.PRES)-him
      '*the man whom Mona refused the idea that Ali helps him'

The claim that the use of resumptive pronouns and *illi* facilitates wh-extraction can be extended to relative clauses, where relativising out of islands can also be possible with the presence of resumptive pronouns and *illi*. Wh-extraction and relativisation yield similar syntactic structures. In the following section, some previous analyses of EA relative clauses will be reviewed followed by a minimalist account of relative clauses.

6.3.2 The structure of EA relative clauses

Wahba (1984) claims that relativisation out of embedded questions and wh-islands is possible as seen below.

(88) a. il-bint$_i$ illi   Fariid 'aal   feen$_j$ 'aabil-ha$_i$ e$_j$
        the-girl that Fariid say (3SM.PAST) where   meet (3SM.PAST)-her
        'the girl that Fariid said where he met her'

      b. il-bint$_i$ illi Fariid 'aal   [feen$_j$ [hiyya$_i$ 'aabilit-uh   e$_j$]]
        the-girl that Fariid say (3SM.PAST) where   she   meet (3SM.PAST)-him
        'the girl that Fariid said where he met her'

        (Wahba 1984: 46)

She further suggests that EA relative clauses involve no movement, contrary to topicalised constructions and wh-questions, since they do not allow pied piping as in (89).

(89)   *il-raagil   ma^{c}a   miin Mona raaHit   e il-Qahira.
        the-man   with   whom Mona go(3SF.PAST) e to-Cairo
        'the man with whom Mona went to Cairo'

        (Wahba 1984: 17)

Wahba also supports her claim that relative clauses do not move by presenting some examples that show island insensitivity; in (90), it is possible to relativise into an embedded relative clause which is a typical syntactic island.

(90)   dah il-beet$_j$ illi [$_{IP}$ baaba   yi^{c}raf   [$_{NP}$ il-raagil$_i$
        this the-house   that   father know(3SM.PRES)   the-man

        illi   e$_i$ bana   -ah$_j$]]
        who   build(3SM.PAST) –it
        'This is the house that my father knows the man who built it.'

        (Wahba 1984: 17)

In the above example, the NP *il-beet* 'the house' originates as the direct object of the embedded relative clause. On its way to the relativised position, the NP *il-beet* 'the

house' crosses two bounding nodes[14]: the NP and the IP. Relative clauses are also insensitive to the syntactic islands of embedded wh-questions similar to the one bracketed below.

(91)   dah   il-beet$_i$ illi   baaba   kaan   bi-yis'al
        this   the-house   that   father   be (3SM.PAST)   ask (3SM.PROG)

[miin$_j$ illi   e$_j$ bana   -ah$_i$].
who   that   build(3SM.PAST) –it
'This is the house that my father was asking who built it.'

(Wahba 1984: 18)

Wahba (1984) follows Chomsky's (1977) idea that relativisation is the result of one of the following two operations: a movement operation, or an interpretative rule that takes place at LF. For Wahba, the insensitivity of relative clauses to syntactic islands excludes the movement operation. She claims that the head of the relative clause and the resumptive pronoun are both base-generated (i.e. *in situ*); they cannot get co-indexed at S-structure (i.e. in overt syntax), so they get co-indexed in LF.

As to the question of why resumptive pronouns are obligatory within object relative clauses, it has been argued (e.g. by Shlonsky 1992) that when a relative clause is formed from the direct object position as in (92a), this direct object has to move to the Spec *illi* position. This movement is taken to be a type of A-movement subject to the Specified Subject Condition (SSC), reformulated in Rizzi (1990) as Relativized Minimality[15]. The SSC bans the movement of the direct object over a specified subject as shown by the ungrammaticality of (92b):

(92)   a. il-walad   katab   il-qiSSa.
           the-boy   write (3SM.PAST)   the-story
           'The boy wrote the story.'

        b. *il-qiSSa   il-walad   katab.
           the-story   the-boy   write (3SM.PAST)
           '*That story, the boy wrote.'

---

[14] In the 1980s, NP and CP were taken to be two bounding nodes and crossing them yields a Subjacency violation. This idea was later modified in the MP where movement should take the shortest step for economy considerations.

[15] Rizzi's (1990) Relativized Minimality bans the movement of an element over a Spec CP position which is filled by another element.

To eliminate the SSC violation, a resumptive pronoun is inserted as a Last Resort option. Relative clauses do not allow wh-extraction as in the following example:

(93) a. Ali 'aabil   il-bint illi dafa^{c}it   il-filuus.
         Ali meet (3SM.PAST) the-girl that pay (3SF.PAST) the-money
         'Ali met the girl who paid the money.'

      b.*eeh$_i$ illi Ali 'aabil   il-bint illi dafa^{c}it-ha$_i$?
         what that Ali meet (3SM.PAST) the-girl that pay (3SF.PAST)-it
         '*What$_i$ did Ali meet the girl who paid t$_i$?'

The ungrammaticality of the structure in (93b) underlines a basic difference between relative clauses and Complex NPs that don't block extraction as in (94).

(94) miin$_i$ illi Mona rafaDit   fikrit inn Ali yisaa^{c}id-uh$_i$?
      who that Mona refuse (3SF.PAST) idea that Ali help(3SM.PRES)-him
      '*Who did Mona refuse the idea that Ali helps?'

Like other strong islands (e.g. French relative clauses, as suggested by Shlonsky 2009), EA relative clauses embed wh-in-situ as in the following EA and French examples respectively:

(95) Ali 'aabil   il-bint illi dafa^{c}it   kaam?
      Ali meet (3SM.PAST) the-girl that pay (3SF.PAST) how much
      'How much did the girl whom Ali met pay?'

(96) Vous connaissez des gens qui pourraient héberger combien de personnes?
      you know   people who could   host   how many people

            (Shlonsky 2009: 3)

However, in EA, it is possible to topicalise out of a relative clause and a complex NP as in the following examples respectively:

(97) il-filuus$_i$ Ali 'aabil   il-bint illi dafa^{c}it-ha$_i$.
      the-money Ali meet (3SM.PAST) the-girl that pay (3SF.PAST)-it
      'As for the money, Ali met the girl who paid it.'

(98) il-walad$_i$, Mona rafaDit   fikrit inn Ali yisaa^{c}id-uh$_i$?
      the-boy Mona refuse (3SF.PAST) idea that Ali help (3SM.INFIN)-him
      'As for the boy, Mona refused the idea that Ali helps him.'

In sum, EA relative clauses have the following properties: (1) they can embed wh-in-situ; (2) they block wh-extraction; (3) relativisation out of different syntactic islands such as an adjunct island, a complex NP and a co-ordinate structure is possible; and (4) they allow topicalisation.

6.3.3 A minimalist account of EA relative clauses

In the literature, there are two main analyses that account for relative clauses: the Matching (Adjunction) analysis proposed by Chomsky (1977) and the Raising (complementation) analysis proposed by Kayne (1994).

Chomsky (1977) argues that a relative clause is adjoined to a head which is base-generated outside this relative clause. When an empty operator moves out of the relative clause to the [Spec CP] position, it becomes co-indexed with the head noun. Kayne (1994) refutes the idea that relative clauses are complements of N, or that they are right-adjoined to N or D based on the assumption that right-adjunction is generally banned. Instead, he proposes a head-movement analysis for relative clauses, whereby the head noun (assumed to be base-generated within the relative clause) is raised (sometimes with the relative pronoun) to the [Spec CP] position. For Kayne (1994), the head noun is adjacent to a determiner and is followed by a CP. Thus, the formation of relative clauses involves a raising operation whereby the head (which originates within the relative clause) is raised to an initial position as seen below.

(99)   John bought the [picture of himself [that [Bill saw [e]]]]

                (Kayne 1994: 87)

Kayne (1994) argues that the above relative clause is a complement of D (the). The phrase 'picture of himself' is raised to the Spec CP where it binds the empty category which appears in the object position. Thus, the relative clause will have the following representation:

(100)   [$_{DP}$ D^0 CP]

                (Kayne 1994: 87)

The MP views a relative clause as a predicate, or an open sentence which has a variable position as exemplified in (101).

(101)   the man [$_{CP}$ Op C [$_{IP}$ John met t]]

(Chomsky 1995: 56)

In the above example, the empty operator [Op] occupies the [Spec CP] position whereby it binds its trace t. Relative clauses are formed via the operation *Merge*. First, the relative clause merges with the head noun to form the NP, then the resulting NP merges with the (Det) to form the matrix relative clause which has the following structure:

(102)   [$_{DP}$ Det [$_{NP}$ N [RC]]]

In the MP, there is no more legal status for co-referential index in the lexicon. Co-indexation takes place in the numeration set. The only way for the NP and the (Det) to be co-indexed is via the phi-features agreement which is established when they merge. This analysis poses a problem for relative clauses with empty operators which have no phonetic realisation (this falls outside the scope of this section as our main focus is on the analysis of EA relative clauses with *illi*).

For the analysis of relative clauses in EA, Al-Momani's (2010) proposal will be adopted; however, I will suggest some modifications to the structure he proposes for JA relative clauses. Al-Momani (2010) analyses JA relative clauses in terms of feature checking assumed in the MP. In JA, a relative operator occurs in the [Spec CP] position and binds the resumptive pronoun which is base-generated within the relative clause. In JA, a resumptive pronoun cannot alternate with a gap as in the following examples:

(103)   a. 'akal   iz-zlamih 'is-samakah$_i$ illi ištara-ha$_i$ l-walad.
            eat (3SM.PAST) the-man   the-fish   that buy (3SM.PAST)-it the boy
            'The man ate the fish that the boy bought.'

         b.*'akal   iz-zlamih 'is-samakah illi ištara   l-walad.
            eat (3SM.PAST) the-man   the-fish t   hat buy (3SM.PAST) the boy
            'The man ate the fish that the boy bought.'

(Al-Momani 2010: 233)

Al-Momani argues that the resumpive pronoun is obligatory as case is left unmarked; therefore, the absence of the resumptive pronoun results in the absence of gender and number agreement between the preceding DP and the gap. Co-indexation takes place inside the relative clause when the resumptive pronoun agrees with the preceding NP in gender and number. The occurrence of the resumptive pronoun indicates that no movement is available whereby the relativised site has to be filled. In JA (similar to EA) *illi* is obligatory with definite NPs as in the following examples:

(104) a. šuft   l-bint   illi   garat   l-ktab.
         see (1SM.PAST) the-girl (3SF) that   read (3SF.PAST) the-book
         'I saw the girl that read the book.'

       b.* šuft   binit   illi garat   l-ktab.
         see (1SM.PAST) girl(3SF) that   read (3SF.PAST) the-book
         'I saw a girl that read the book came.'

                    (Al-Momani 2010: 230)

Al-Momani argues that *illi* is invariant since it does not bear the phi-features (i.e. person, number and gender). Agreement takes place between the preceding DP and the following verb; for example, the DP *l-bint* and the verb *garat* 'read' carry third, feminine and singular features. Accordingly, Al-Momani holds the view that *illi* does not carry the features which match the phi-features on the DPs, it does not co-occur with indefinite DPs which still retain their phi-features. Thus, he argues that *illi* matches the definiteness feature [+Def], rather than the phi-features. Furthermore, Al-Momani (2010: 234) suggests that agreement between the preceding DP and the relative clause is compatible with agreement between a noun and its modifier (both have the same (in)definiteness) as in the following examples:

(105) a. l-walad   l-mujtahid   illi bHibb-u-h   mᶜallmu-h.
         the-boy-(NOM)   the-clever (NOM) that love (3SM.PRES)-him teacher-his
         'The clever boy that his teacher likes'

       b. haadha walad   mujtahid   bHibb-u-h   mᶜallmu-h.
         this   boy-(NOM)   clever-(NOM)   love (3SM.PRES)-him teacher-his
         'This is a clever boy that his teacher likes.'

In (105b), both the DP *walad* 'boy' and the following adjective *mujtahid* 'clever' are indefinite. Since *illi* is restricted to definite DPs, it must bear the [+Def] feature; therefore, its occurrence is licensed by the definiteness feature which gives it a phonological shape. The co-occurence of *illi* with indefinite NPs is no longer legitimate since they lack the [+Def] feature which is an un-interpretable feature that needs to be checked. Al-Momani argues that the [+Def] feature on *illi* is checked by the relative Op which carries the following features: [+rel], [phi-features] and [+Def]. *illi* cannot check its [+Def] feature with the preceding DP since in some headless relative clauses the DP is null, so *illi* checks its features against the verb that follows.

Al-Momani (2010) views the movement of the operator as being a morphologically-driven operation, so the [Op] must be triggered to move to the Spec CP. Al-Momani (2010: 234) adopts Suñer's (1998) argument that overt and null operators can carry out the same function when it comes to feature checking. As a consequence, he suggests that the phonologically null [Op], like its overt counterpart, can check its un-interpretable features against the features on C. He proposes the following representation for relative clauses in JA (2010: 235):

(106)

```
                        DP
              ┌──────────┴──────────┐
             DP                     CP
           [+Def]           ┌────────┴────────┐
                           Opᵢ                C'
                          [+Def]        ┌──────┴──────┐
                          [phi]         C             TP
                                       illi          ╱‾╲
                                      [+Def]         RPᵢ
                                      [phi]   resumptive pronoun
```
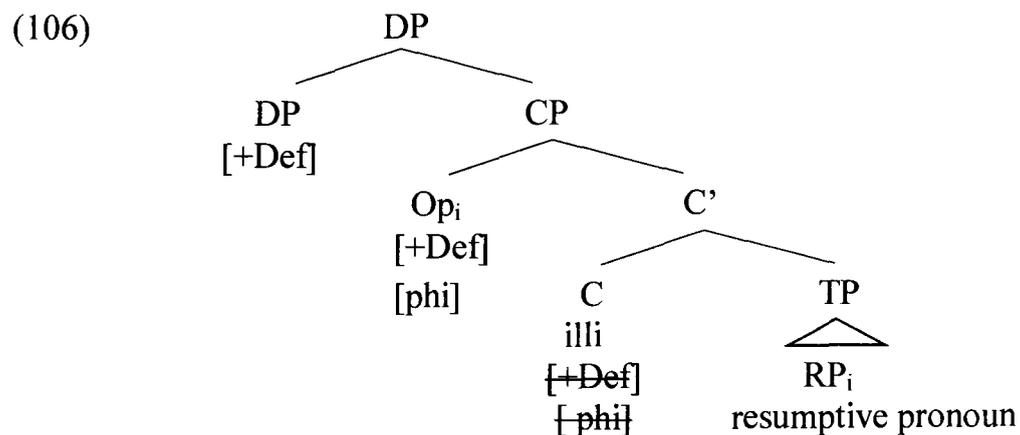
In the above example, the resumptive pronoun (which marks the relativised site) is base-generated within the relative clause; it carries the phi-features which makes it agree with the preceding DP.

In the above representation, the CP is the relative clause, while the [Op] is base-generated in Spec CP; the head C hosts *illi*. The [Op] carries the features that can check the features on *illi*. In the MP, co-indexation takes place in the entire numeration set;

hence, Op and the resumptive pronoun are co-indexed. The morphologically null operator, similar to overt operator, binds the variable (i.e. the resumptive pronoun) and the whole CP is linked to the preceding DP.

Looking at the EA data presented at the outset of this section, I assume that phi-features agreement holds between the head of the relative clause and the resumptive pronoun (which has a phonological representation), whereas *illi* remains an invariant pronoun which does not show inflection.

Extending Al-Momani's analysis to EA relative clauses, I argue that they involve no movement operation. Within a relative clause, an [Op] is base-generated in the Spec CP position where it binds the resumptive pronoun. The [+Def] feature on *illi* is checked against the features on the [Op]. Although Al-Momani suggests that in headless relative clauses, *illi* checks its [+Def] feature against the verb that follows, I argue that his suggestion cannot account for cases where a headless relative clause is followed by a PP as seen below:

(107) il-walad   kasar   illi   fi-l-ᶜilba.
       the-boy   break (3SM.PAST)   that   in-the-box
       'The boy broke what is in the box.'

I argue that *illi* carries a [+nominal] feature in addition to the [+Def] feature. This is expected since *illi* is restricted to definite DPs, rather than adjuncts and verbal elements. In the above example, the Op carries the [+nominal] feature, in addition to the features which Al-Momani argues to exist (i.e. [+Def], [+rel] and [phi-features]). Accordingly, I suggest the following modified structure of relative clauses:

(108)

```
                          DP
                        /    \
                   DP          CP
                  [+Def]      /   \
                          Op_i      C'
                          [+Def]   /   \
                          [phi]   C      TP
                          [+nominal]  illi    /\
                                      |      RP_i
                                  [+Def]   resumptive pronoun
                                  [+nominal]
```
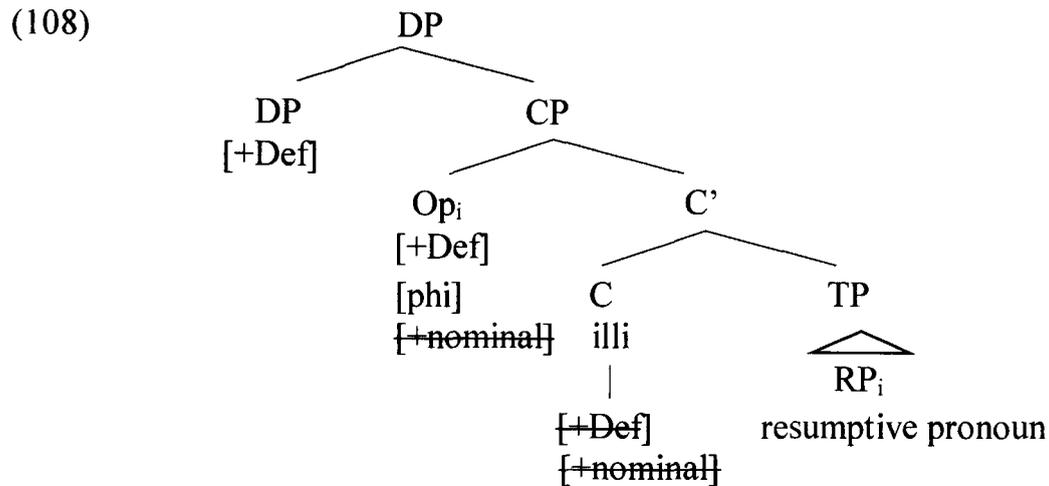
A basic difference I presume to exist between JA and EA is the status of C which is a language-specific parameter. Al-Momani assumes that *illi* in JA is a complementiser, rather than a relative pronoun. He justifies his claim by suggesting that in JA, C is [-nominal], this is why the [Op] cannot be lexicalised to an overt pronominal form. He therefore concludes that there is no overt [Op] in JA, and that *illi* is best described as a complementiser. In this respect, I argue that If C carries the [+nominal] feature, it can host an overt Op as its specifier. In EA, *illi* carries the [+nominal] feature, so the Op can be lexicalised as in the following EA examples:

(109) a. šuft   il-bint_k   di_k   illi   Salim   Darab-ha_k.
           see   the-girl   this (3SF)   that   Salim   hit (3SM.PAST)-her
           'I saw this/that girl that Salim hit her.'

       b. šuft   il-wilaad_k   dool_k   illi   Salim   Darab-hum_k.
          see   the-boys   these (3PLUF)   that   Salim   hit (3SM.PAST)-them
          'I saw these/those boys that Salim hit them.'

In the above examples, the [+nominal] feature on C yields the lexicalisation of the [Op]. The example in (109a) will have the following representation:

(110)

```
                        DP
                   ╱         ╲
              DP              CP
              |           ╱        ╲
         il-bintₖ        Op          C'
          [+Def]         |        ╱      ╲
        [+nominal]      diₖ       C        TP
                       [+Def]    illi     ╱◁╲
                       [phi]      |    Salim Darab-haₖ
                     [+nominal]  [+Def]
                                [+nominal]
```
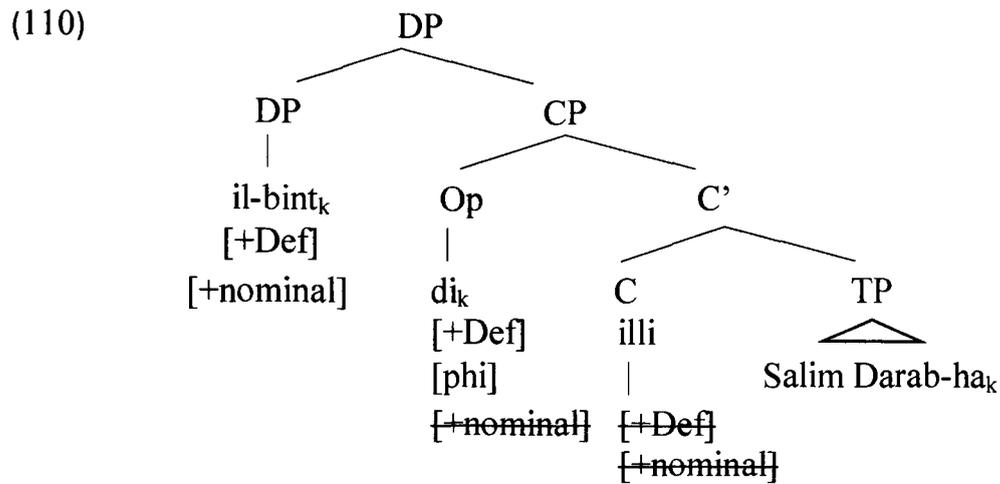
In the above representation, the overt [Op] checks the un-interpretable [+Def] and [+nominal] features on *illi*. Following the argument that both null and overt pronouns can bind the resumptive pronoun, the overt [Op] *di* binds the resumptive pronoun, and the whole CP is linked to the DP *il-bint* 'the girl. This analysis poses a problem for the MP since it assumes optionality of features on [Op]. One way to resolve this problem is to assume that the relative clause in (109) has an emphatic interpretation which the ones in (111) below lack.

(111)   a. šuft   il-bintₖ   illi   Salim   Darab-haₖ.
           see   the-girl   that   Salim   hit (3SM.PAST)-her
           'I saw the girl that Salim hit her.'

        b. šuft   il-wilaadₖ   illi   Salim   Darab-humₖ.
           see   the-boys   that   Salim   hit (3SM.PAST)-them
           'I saw the boys that Salim hit them.'

To account for the insertion of *illi*, let us consider the following relative clause followed by its structure:

(112)   a. il-waladᵢ   illi   Mona   Darabit-uhᵢ
           the-boy   that   Mona   hit (3sf.past)-him
           'The boy that Mona hit'

        b.[DP [Det il [NP [N walad [RC illi Mona Darabit-uh]]]]]

Chomsky (1995: 233) argues that a strong feature motivates two subsequent operations: the first operation introduces the strong feature into the derivation via *Select* or *Merge*. while the second operation involves a quick elimination of this strong feature. Lexical

insertion takes place by the operation *Merge*. Accordingly, in the above example, the IP first merges with *illi* to form the relative clause. The relative clause merges with the head N to form the NP, then the NP merges with the determiner to form the matrix relative clause. Lexical insertion takes place in matrix positions, so if *illi* is inserted at LF, the derivation will crash since LF cannot interpret the phonological features that *illi* bears. Inserting *illi* in PF yields the same result since PF cannot interpret the semantic features of *illi*. Thus, *illi* has to be inserted before Spell-Out for its LF and PF properties to be properly interpreted. This is how *illi* is lexically inserted in PF and LF. Its semantic features will survive in LF, whereas its phonological features will be stripped off by PF. Now *illi* is ready for its strong features to be checked.

Following this detailed analysis of relative clauses and the role *illi* plays within these structures, the second part of the chapter will focus on investigating *illi*-questions and accounting for the fronting of wh-phrases. The *illi*-questions which have final argument wh-phrases will also be discussed.

6.4 Review of Focus analyses

Some arguments have analysed initial wh-phrases as the result of Focus movement, rather than wh-movement; for example, Cinque (1993) for English; É. Kiss (1987), Horvath (1986), Brody (1990a), and Puskas (1992) for Hungarian; Turano (1995) for Albani; Sabel (2000) for Kikuyu and Bahasa Indonesia; Tsimpli (1990) for Greek; Hoh & Chiang (1990) for Chinese, and Nishiguach (1990) for Japanese. .

In Hungarian, Brody (1990a) notes that focalised elements need to undergo movement to a preverbal position. Thus, the ungrammaticality of the following example is due to the occurrence of the focused element in a postverbal position.

(113) *szeretem JANOST
       like-I   J
      'I like JOHN.'
          (Brody 1990: 207)

He argues that the verb can also be focused when it bears a contrastive-identified[16] interpretation as in the following example:

(114) (Nem utalom   hanem) SZERETEM   Janost
      not   hate-I-him but   LIKE-I-HIM   J (ACC)
      (I don't hate John,) I LIKE him.

(Brody 1990: 206)

Brody (1990) proposes the existence of Focus as a functional category which projects into a Focus phrase (FP), so a sentence with a Focus category comprises FP, F' and F: in (114), the verb SZERERTEM appears under F. In Hungarian, FP dominates the sentence with a focused element where movement to FP takes place. He adds that a wh-phrase must obligatorily move to the Spec of Focus, as seen by the following contrast, where the illicit structure in (115b) results from the *in situ* position of the wh-phrase *kit* 'who':

(115) a. KIT   szeretsz?
          WHO (ACC)   like-you
          'Who do you like?'

       b. *Szeretsz   KIT?
          like-you   WHO (ACC)
          'Who do you like?'

(Brody 1990: 209)

Horvath (1995) is a further attempt towards a Focus analysis in Hungarian. What is crucial about her argument is the claim for the existence of strong vs weak [+Focus] feature. She argues that what triggers Focus movement is the need to check the strong Focus feature. This analysis is in line with Chomsky's (1995) minimalist account for wh-movement. Horvath (1995) assumes that in Hungarian, Focus movement takes place in overt syntax whereby the focused constituent obligatorily moves to the Spec Focus position as in (116).

(116) AZ   ÚJSÁGOT   dobtam   el.
      THE   NEWSPAPER-ACC   threw-I   away
      'It's the newspaper that I threw away.'

(Horvath 1995: 31)

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[16] Identified vs non-identified interpretation refers in essence to Focus vs Topic interpretation.

Horvath (1995) assumes that UG has [+Focus] as a syntactic feature. Therefore, she formulates a Focus-parameter for UG and proposes the following two options:

(117) FOCUS-Parameter:

    a. [+FOCUS]: a feature associated freely with any category, deriving the English-type languages, i.e. Focus *in situ*.

    b. the "grammaticalised" version of the [+FOCUS] feature: an intrinsic part of the feature-matrix of a single category, namely, V- meant to derive the Hungarian-type, structurally limited, instantiations of Focus.

        (Horvath 1995: 29)

In Chinese (a wh-in-situ language) Hoh & Chiang (1990) discuss Focus movement and suggest the existence of an overt Focus particle. Their major claim is that wh-phrases undergo Focus movement in overt syntax; this movement is part of a more general Focus movement including contrastive focused quantifiers. They argue that Chinese focused structures (referred to as cleft sentences) are initiated by the morpheme *shi* which can be followed by a wh-phrase as seen below:

(118) shi $shei_k$, Wangwu shuo Xiaoming yao le e_k,
       FOC who   Wangwu say   Xiaoming bite ASP
       'Who was it that Wangwu said Xiaoming bit?'
        (Hoh & Chiang 1990: 51)

In the above example, the wh-phrase *shei* 'who' moves to an A'-position to receive a Focus feature. Hoh & Chiang (1990) propose the following Focus structure:

(119) $[_\alpha$ FOCUS-XP$_i$, $[_\alpha$ . . .e$_i$. . .]]
        (Hoh & Chiang 1990: 51)

In Modern Greek, Tsimpli (1995) reformulates the conditions on Focus movement suggested by Brody (1990), and proposes the following F-Criterion:

(120) a. An F-Operator must be in a Spec-Head agreement with a [+F] X^0.

      b. A [+F] X^0 must be in a Spec-Head agreement with an F-operator.

           (Tsimpli 1995: 188)

Tsimpli (1995) argues that in Modern Greek, Focus movement takes place at LF since a focused constituent remains *in situ*. This idea is illustrated by the following example:

(121)   Dhanisan to   VIVLIO sto   Petro.
        lent-3P the-ACC book   to-the Petro
        'They lent the BOOK to Petro.'

           (Tsimpli 1995: 188)

In Kikuyu, Sabel (2000) argues that what triggers overt wh-movement is the need to check the [+Focus] feature as in the following example:

(122)   N'oo   o-tɛm-'ir'ɛ mo-te ? (FP=Focus particle; PP=pronominal prefix)
        FP-who PP-cut-T   CP-tree
        'Who cut a tree?'

           (Sabel 2000: 429)

Sabel (2000) argues that dealing with the [+wh] feature on a par with the [+Focus] feature entails the existence of similar typologies regarding wh-movement and Focus-movement. This means that languages can be classified according to the type of the [+Focus] feature they possess, and that there is also cross-linguistic variation among languages regarding the position of the [+Focus] feature; for example, English has a weak [+Focus] feature yielding *in situ* Focus elements. Bulgarian has all its focused constituents in clause-initial positions, whereas German, Italian and Somali allow only one initial focused constituent.

6.5 Types of Foci

Cinque (1993) argues that there are two types of information which the articulation of any sentence expresses: presupposition and Focus. While presupposition refers to the old information which has already been introduced into the discourse, Focus is the new information or comment

É. Kiss (1995) classifies Focus in Hungarian into Contrastive[17] Focus and Information Focus. The former refers to a set of entities previously determined, while the latter expresses new information not previously shared in the discourse. Contrastive Focus is able to trigger movement to the Spec of Focus as in (123), whereas within an Information Focus structure, the focused constituent remains *in situ* as in (124).

(123) JANOS lopta el a kabatot   (Contrastive Focus)
       JOHN   stole   the coat
       'It was John who stole the coat.'

(124) Janos el loppot EGY KABATOT   (Information Focus)
       John   stole   a coat
       'John stole a coat.'

É. Kiss (1998) argues that in Hungarian, these two types of Foci[18] occupy two different structural positions, so they cannot be used interchangeably. The element which bears a Contrastive Focus moves to the specifier position of a functional projection where it binds a variable. The type of constituent which can act as a Contrastive Focus is restricted. For example, *also*-phrases and *even*-phrases cannot be Contrastive Focus elements. Contrastive Focus takes scope and involves movement to a specifier position; in addition, it carries out the semantic-communicative role stated below.

(125) The function of identificational focus: An identificational focus represents a subset of the set of contextually or situationally given elements for which the predicate phrase can potentially hold; it is identified as the exhaustive subset of this set for which the predicate phrase actually holds.

(É. Kiss 1998: 245)

With Information Focus, the element bears new information: a type of information which É. Kiss (1998) refers to as non-presupposed information. Since Information

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[17]É. Kiss (1995, 1998) uses the terms Operator Focus and Identificational Focus to refer to Contrastive Focus. In this chapter and in Chapter 7, I will use the term Contrastive Focus.

[18] Kidwai (1999: 215) distinguishes between two further types of Foci: wide (neutral) Focus and narrow (non-neutral) Focus. In her view, the former is marked by ambiguity; it is not possible to decide which constituent bears the Focus of the utterance. For example, in 'Rehman bought a book', any constituent can bear the Focus of the sentence. With narrow (non-neutral) Focus, the hearer is provided with cues to help him/her identify which part of the utterance is focused. For example, when the subject NP *Rehman* is embedded in a sentence as in 'REHMAN bought a book', it denotes that *Rehman* is focused.

Focus conveys new information, it does not affect the structure order; therefore, every sentence can be claimed to have Information Focus. In addition, Information Focus does not take scope and does not involve movement. In English, clefted constituent is argued to bear Contrastive Focus. The following examples represent the two types of Foci whereby the focused elements appear in boldface:

(126)   a. It is to **LONDON** that we have gone.   (Contrastive Focus)
        b. We have gone to **LONDON**.   (Information Focus)

Modern Standard Arabic (MSA), like English, is also argued to exhibit the above mentioned two types of Foci as in the following examples from Ouhalla (1999):

(127)   'allaf-at   Zaynab-u   RIWAAYAT-an.   (Information Focus)
        write (3SF.PAST)   Zaybnab-NOM   novel-ACC
        'Zaynab wrote a NOVEL.'

(128)   RIWAAYAT-an   'allaf-at   Zaynab-u.   (Contrastive Focus)
        novel-ACC   write (3SF.PAST)   Zaybnab-NOM
        'It was a NOVEL that Zaynab wrote.'

(Ouhalla 1999: 337)

While the speaker is expressing new information in (127), the information he/she gives in (128) conflicts with existing information that was previously established. Ouhalla (1999: 338) cites Moutaouakil (1989) who argues for the existence of a strong link between the specification (*'al-taxSiiS* in MSA), which the preposed Focus-phrase bears, and the process of preposing (*'al-Taqdiim* in MSA). This link justifies the classification of MSA as a Focus-movement language (similar to Hungarian) whereby the constituent which bears a Contrastive Focus has to undergo movement to the Focus domain.

6.5.1 Wh-phrases and Focus

In the literature, wh-phrases are argued to inherently bear Focus features. This idea is discussed by Rochemont (1986), Culicover & Rochemont (1983), Horvath (1986) among others. Sabel (2000) takes this idea to be a semantic fact. In his view, the [+Focus] feature is also [+interpretable] since it has semantic effects. Zubizarreta (1998) claims that the Focus of a wh-question is the wh-phrase, based on the definition of

Focus as the non-presupposed part of the sentence. She follows Horvath (1986) and Rochemont (1986) in claiming that wh-phrases are [+Focus] phrases. Accordingly, the fronted wh-phrases in the following examples do not need to bear Nuclear Stress:

(129)   a. (I wonder) what did John réad?

        b. *(I wonder) whát did John read?

            (Zubizarreta 1998: 92)

In the above examples, what bears the Nuclear Stress is the presupposed part of the sentence, rather than the wh-phrase which is inherently focused. To capture the difference between the examples in (126) and (129), Zubizarreta (1998) assumes that in statements, similar to the ones in (126), Focus is licensed prosodically. In (126a), LONDON bears a Contrastive Focus by virtue of meaning that among a set of places present in the discourse, it is only to London that we have gone. In (126b), London is present as new information; however, the example does not predict the existence of a set of places which we chose to go to. In wh-questions like (129), Focus is syntactically licensed. In this respect, Zubizarreta (1998) proposes the following idea:

(130)   A fronted wh-phrase is licensed by virtue of occupying the specifier position of a functional category with the feature [+wh] via the feature checking mechanism.

            (Zubizarreta 1998: 92)

In English multiple wh-questions, the wh-phrase *in situ* bears Nuclear Stress and is licensed prosodically since it does not move for feature checking purposes as seen below:

(131)   I wonder who ate whát?

            (Zubizarreta 1998: 93)

In sum, Zubizarreta (1998) claims that wh-phrases are inherently focused and that Focus is licensed both prosodically and syntactically in English.

In EA, Lassadi (2003) analyses wh-phrases in terms of Focus. She argues that movement is triggered by a Focus feature, so the wh-phrase moves to check this feature in a Focus position. Although I adopt the same approach in the present work, I disagree with Lassadi in the following respects: (1) she argues that wh-phrases cannot be fronted in embedded wh-questions, so she suggests that it is only wh-phrases in main questions that can be focused; (2) Lassadi bases her claim that the *in situ* strategy is always a grammatical option on the idea that EA is an SVO language where verbs, rather than wh-phrases, are preferred to be focused; (3) she argues that some adjunct wh-phrases such as *izzayy* 'how' cannot undergo Focus movement; hence, they always remain *in situ*. In the present study, I will follow a different line of analysis where I will account for the fronting options of wh-phrases (both arguments and adjuncts) in main and embedded questions. In the previous chapters, different word orders which can be identified in EA were discussed. In this respect, I claim that Lassadi's account for the *in situ* strategy based on the preference of focusing verbs, rather than wh-phrases, does not seem sufficient to handle the data collected in Chapter 3, or to justify the wide range of grammatical options available in EA. In Chapter 5, I argued, contrary to Lassadi, that EA has the *in situ* strategy due to the weak [wh] feature on its wh-phrases.

In the following section, Rizzi's (1997) account for the existence of a Focus projection in the left periphery of the clause will be discussed and therefore adopted for the analysis of *illi*-questions in EA.

6.6 A theoretical framework for a Focus-based analysis of *illi*-questions

After reviewing some of the major analyses of Focus, I will now discuss the theoretical framework on which the analysis of *illi*-questions will be based. I will first introduce Rizzi's (1997) analysis of the FocusP, setting the stage for the subsequent Focus analysis of the EA data.

Rizzi (1997) argues that a clause consists of three basic structural layers. The first is a lexical layer which hosts a verb and is responsible for theta assignment. The second is an inflectional layer which hosts a functional head and is responsible for the licensing of case and agreement features. The third is a complementiser layer which hosts an

interrogative phrase, a topic, a relative pronoun or a focalised element. These three layers are VP, IP and CP correspondingly[19].

There have been many attempts to disintegrate each layer into a number of projections. For example, IP projects into (Agr, T, Asp), while VP projects into multiple VP layers. Rizzi's work is an attempt to extend this disintegration policy to the complementiser layer whereby he focuses on the pre-IP positions, or what he refers to as the left periphery of the clause. He proposes a cluster of X-bar projections that shape the complementiser system.

Rizzi (1997) argues that C hosts all moved wh-phrases that appear in this position as a Last Resort. What motivates this movement is the presence of a head that enters into a Spec-Head configuration with the wh-phrase. He argues that the main function of the complementiser is to establish the relation between the propositional content, which the IP expresses, and the higher structure. Accordingly, a complementiser conveys two types of information: one given by the internal structural (inside) and the other is conveyed by the overall structure of the clause (outside). Following Cheng (1997), the complementiser determines the clause type. In other words, for a clause to be typed as a wh-question, C either carries some overt morphological encoding, or licenses the building up of a structure which hosts a suitable operator. In this way, the information facing the outside is expressed. Rizzi argues that the C system which hosts complementisers such as 'that' and 'que' look more nominal since they are similar to both wh-phrases and demonstrative pronouns[20]. For Rizzi, this is the main reason why the C system cannot be derived from the I-system (p. 288). Rizzi (1997: 289) further argues that what distinguishes a clause with a left periphery is some traditional articulation such as the articulation in Topic-Comment (as discussed in Chapter 5), and the articulation in Focus-Comment which has its own presuppositional force. He

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[19]This idea is also discussed in Haegeman (2007: 280), whereby she offers the representation in (ii) for the example in (i):

    (i) [$_{CP}$ that [$_{IP}$ John [$_{I}$ will [$_{VP}$ buy your book]]]]

    (ii) CP > IP > VP

Haegeman also agrees with Rizzi (1997) in referring to the CP layer as the 'left periphery'.

[20] In line with this idea, in Section 6.3.3, I argued that *illi* carries an additional feature which is [+nominal] and that when the relative clause receives specific interpretation, it results in the lexicalisation of the operator into a pronominal form which also carries the [+nominal] feature. This idea also supports the claim that *illi* cannot co-occur with adjunct wh-phrases due to its [+nominal] feature which wh-adjuncts lack.

postulates that in Italian, a Focus construction is formed by preposing a focal element which obtains a special focal stress as in the following example:

(132) IL TUO LIBRO ho letto (non il suo)
       'Your book I read   (not his)'
                    (Rizzi 1997: 293)

The above example is assumed to express a type of Focus which is not meant to convey a new piece of information; rather, it focuses and comments on an idea pre-established in the discourse. This type of Focus is referred to as Contrastive Focus since it presupposes that the addressee believes it is someone else's book that the addresser has read. Thus, in the above example, the addresser attempts to clarify a point, or correct an idea. This type of Focus is represented by the following structure:

(133)   FocP
           /   \
        ZP   Foc'
                /   \
             Foc°   WP

ZP= Focus
WP= Presupposition

                    (Rizzi 1997: 292)

In Italian, Contrastive Focus can also be expressed by *in situ* elements as in the following example:

(134) Ho letto IL TUO LIBRO (, non il suo)
       'I read YOUR BOOK, not his'
                    (Rizzi 1997: 293)

Rizzi (2001) argues that wh-arguments can be extracted if they carry a certain presupposition by referring to specified sets of variables established beforehand in the

discourse[21]. He argues that the Italian wh-question in (135a) presupposes the existence of a set of problems: a presupposition which the wh-question in (135b) lacks.

(135) a. Quanti$_k$ problem   non   sai   come   risolvere   t$_k$?
         'How many   problems   don't you   know   how   to solve
         'How much problems don't you know how to solve?'

      b.*Quanti$_k$ soldi   non   sai   come   guadagnare   t$_k$?
         'How much   money   don't   you know   how   to make
         'How much money don't you know how to make?'
            (Rizzi 2001: 97)

In order to prevent the ungrammaticality of (135b), a part of the interrogative DP (which specifies a certain sum of money) is inserted as in the following example:

(136) Quanti$_k$ dei soldi   che ti   servono non sai   come   guaddagnare t$_k$?
       'How much   of the money that you need   don't you   know how   to make?'
        (Rizzi 2001: 97)

6.6.1 Previous analyses of *illi*-questions

In addition to the occurrence of *illi* within wh-questions and relative clauses, cleft structures like the one in (137a) also employ *illi*. The three constructions look similar as seen below:

(137) a. da[22] Ali   illi   kasar   il-vaaza   miš Salim.   (cleft construction)
        it   Ali   that   break (3SM.PAST) the-vase   not   Salim
        'It is Ali who broke the vase, not Salim.'

      b. Ali   illi   kasar   il-vaaza   xarag.   (relative clause)
        Ali   that   break (3SM.PAST) the-vase   go out (3SM.PAST)
        'Ali who broke the vase went out.'

      c. miin   illi   kasar   il-vaaza?   (*illi*-question)
        who   that   break (3SM.PAST) the-vase
        'Who broke the vase?'

---

[21] Ouhalla (1999: 335) defines Focus constructions as "existential statements or assertions whereby the pre-PRON DP (the Focus-phrase) is the individual obtained by applying a choice function to the post-PRON (free relative) DP interpreted as denoting a set".

[22] In this example, to differentiate between the interpretation of *da* as the expletive 'it' and the demonstrative 'this', the NegP *miš Salim* 'not Salim' is added to imply the former interpretation.

Based on the similarity between the structure of cleft sentences and wh-questions, Cheng (1997) holds the view that wh-fronting in EA resembles a cleft structure (as in (138)). She claims that the only difference between the two structures is that the wh-question lacks both the copula and the subject NP; hence, she refers to the wh-question in (139) as a reduced cleft.

(138)   It is [$_{CP}$ [$_{DP}$ Sharon [$_{CP}$ OP$_i$ that [Marcia likes t$_i$]]

(139)   miin   illi   Mona   šaafit-uh$_i$]]?
        who   that   Mona   see (3SM.PAST)-him
        'Who did Mona see?'

                (Cheng 1997: 53)

Cheng argues that in the above wh-question, the wh-phrase *miin* 'who' acts as the subject of a predicate CP similar to the cleft structure[23] in (138). She claims that a common property of wh-fronting, relative clauses and cleft constructions where *illi* is employed is that they all have a subject-predicate relation.

Postdam (2006), on the other hand, analyses wh-questions in Malagasy as pseudo-cleft structures whereby the initial wh-phrase is treated as a predicate followed by a headless relative clause as in the following example:

(140)   [$_{IP}$ [$_{predicate}$ iza] [$_{DP/headless rel.}$ no Op$_i$ nihomehy t$_i$]]
                who   laugh
        'Who laughed?'   lit. "The one that laughed is who?'

                (Postdam 2006: 2156)

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[23] Ouhalla (1999: 336) notes that a cleft construction has a Focus-phrase, a pronominal copular element (PRON) and a free relative: [F-XP PRON FR]. This structure supports the similarity between *illi*-questions and clefts. Zavitnevich-Beaulac (2002: 110) also argues that in English and French, Contrastive Focus is expressed by forming cleft constructions as in the following examples:
    (i)   It is to the THEATRE I went yesterday (not to the cinema).
    (ii) C'est au THEÂTRE où je suis allé hier (pas au cinema).

Wh-fronting in Cheng's sense involves an initial wh-phrase (as a subject), followed by a predicate CP, whereas Postdam views the initial wh-phrase as a predicate followed by a headless relative clause.

For Palestinian Arabic (PA), Shlonsky (2002) deals with CPs in a structure like (139) as a free relative clause with a null head which is identified with the wh-phrase *miin* 'who'. The CP is the predicate of the null head, rather than the wh-phrase *miin* 'who'. Shlonsky (2002: 154) suggests that the free relative clause headed by *illi* acquires its presuppositional force by virtue of implying a definite description (see Chapter 1, Section 1.4.5.2).

If any of the above mentioned analyses carry over to the EA data, it would be expected that the occurrence of *illi* is obligatory either to establish the subject-predicate relation (as assumed by Cheng 1997) or to link the initial wh-phrase (the predicate) to the following relative clause (as suggested by Postdam 2006). In the following section, I will propose a Focus-based analysis for *illi*-questions and account for the role which *illi* plays within these wh-questions. In addition, the ideas discussed above will also be referred to.

6.6.2 Focus analysis of *illi*-questions

In Chapter 5, Section 5.8, I proposed a detailed analysis of wh-questions without *illi* whereby examples like the one in (141) was argued to have the representation in (142).

(141) miin   ištara   il-kitaab?
      who   buy (3SM.PAST)   the-book
      'Who bought the book?'

(142)

```
                        CP
                   ┌─────┴─────┐
               [Opᵢ]           C'
               +wh        ┌────┴────┐
                          C         IP
                              ┌─────┴─────┐
                             DP           I'
                              │      ┌─────┴─────┐
                           miinᵢ    I           VP
                                                 │
                                                 V'
                                           ┌─────┴─────┐
                                           V           NP
                                           │           │
                                        ištara      il-kitaab
```
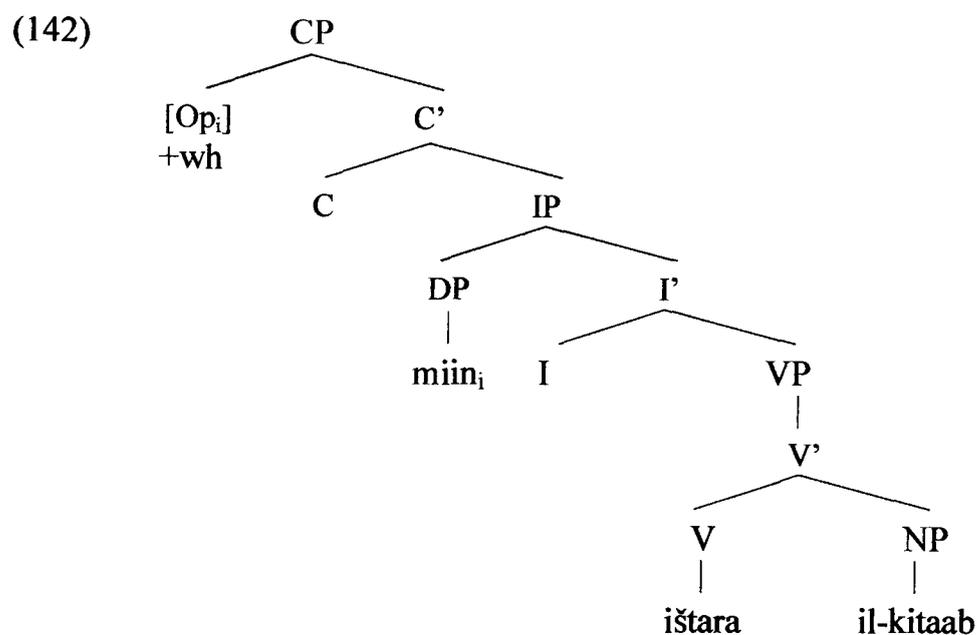
In Chapter 5, a minimalist analysis for wh-in-situ was proposed where it was argued that if a strong feature and a phonologically null element are inserted after Spell-Out, while the category (i.e. the wh-phrase) remains, covert movement is said to take place. In the MP, only formal features can undergo covert movement. When the formal features and the whole category are inserted pre-Spell-Out, overt movement takes place. In EA, if fronted wh-phrases are presumed to move overtly, like their English counterparts, no violation of syntactic islands would be expected. In Chapter 5, many cases of island insensitivity were provided; this led to the conclusion that EA has no wh-movement. Instead, it was claimed that wh-phrases do not need to move to check the strong [+wh] feature in C^0. Rather, they are interpreted *in situ* and licensed by LF movement of the [Op] which bears a strong [+wh] feature; such movement is preferable for the Procrastinate Principle[24]. Fronting the wh-phrase is not a Last Resort procedure since a less costly option is available with the wh-phrase *in situ*. The fact that EA has alternative syntactic structures will be accounted for in terms of a feature other than the [+wh] feature, and hence the following representation is ruled out:

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[24] The Procrastinate principle was first introduced by Chomsky (1993) and restated by Collins (2001: 55) as follows:

(i) Covert movement is less costly than overt movement.

(143)*

```
                        CP
                  ┌──────┴──────┐
                Spec           C'
                  │       ┌─────┴─────┐
                miin      C           IP
                              ┌───────┴───────┐
                                             I'
                                       ┌─────┴─────┐
                                       I          VP
                                                   │
                                                   V'
                                             ┌─────┴─────┐
                                             V          NP
                                             │           │
                                           ištara     il-kitaab
```
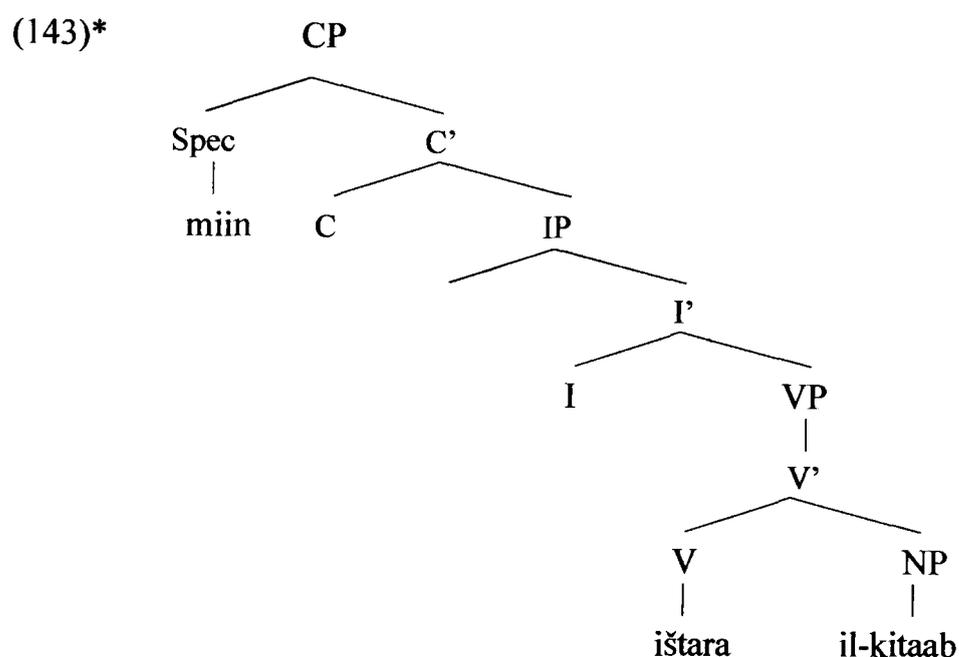
The present section addresses the broader question of why wh-fronting is available in EA: a language which has a wh-in-situ as a basic strategy for question formation. I will provide an analysis for *illi*-questions and will argue that they have a different interpretation from cleft structures[25] and relative clauses. Following the minimalist assumption that the category with the strong feature can project (Chomsky 1995: 234), *illi* will be argued to have a strong Focus feature, and hence it licenses the FocusP and heads it. Thus, I will offer some EA data, positing a Focus projection headed by *illi* which attracts the wh-phrase to its specifier. The Focus analysis (based on Rizzi 1997) aims at resolving the interaction between wh-fronting and wh-in-situ and, at the same time, highlighting the role of *illi* in the formation of this type of wh-question (i.e. *illi*-question).

Following Rizzi's (2001) claim that wh-phrases can be extracted when they have a certain interpretation, I suggest that in the following set of wh-questions, the (a) examples have different semantics from the (b) examples (*illi*-questions):

(144)   a. miin   fataH   il-baab?
           who   open (3SM.PAST) the-door
           'Who opened the door?'

---

[25] Shlonsky (1990: 431) analyses PA *illi*-questions with base-generated resumptive pronouns as clefts or relative clauses where the wh-phrase is the subject of a predicate CP headed by *illi*. The Agr features are restricted to [+predicational] C°.

b. miin illi fataH il-baab?
who that open (3SM.PAST) the-door
'Who opened the door?'

(145) a. Salim ištara eeh?
Salim buy (3SM.PAST) what
'What did Salim buy?'

b. eeh illi Salim ištaraa-h?
what that Salim buy (3SM.PAST)-it
'What did Salim buy?'

The example in (144b) presupposes the existence of a set of persons, only one of whom has opened the door. Likewise, (145b) presupposes the existence of an item or a set of items that the subject NP 'Salim' has bought. The two wh-questions also presuppose that the addresser knows that his/her addressee holds enough information. As a consequence, the presuppositional force[26] of the wh-questions in (144b) and (145b) excludes negative polarity items such as *maHadiš* 'no one' and *wala Haaga* 'nothing' and answers such like 'I don't know' as felicitous answers[27] to these wh-questions as seen below.

(146) SPEAKER A: miin illi fataH il-baab?
who that open (3SM.PAST) the-door
'Who opened the door?'

SPEAKER B. # maHadiš fataH-uh.
no one open(3SM.PAST) -it
'No one opened it.'
or
ma°andii-š fikra.
not-have (1S)-NEG idea
'I have no idea.'

---

[26] To test the presuppositional force of *illi*-questions similar to the one in (145b), I consulted a small number of EA speakers. I found that most of them chose *illi*-question when they feel that something has already been bought and that the addressee knows it. As for the wh-question in (144b), some the informants agreed that they may use *illi*-question when they presuppose that the door has been opened. If they are not sure about the opening of the door and want to know who opened it, they form the following question: *fi Hadd fataH il-baab* 'is there anyone opened the door? (lit: did anyone open the door?').

[27] Soltan (2010:8) presents a detailed discussion of the felicity of negative answers in EA wh-questions. He provides a semantic/pragmatic account for wh-questions: such an account falls outside the scope of the present study as the main focus here is on the syntactic structure of wh-questions. It suffices to link the syntactic structure to the presuppositional force of the *illi*-question without getting into details of the semantics of wh-questions.

(147) SPEAKER A: eeh   illi Salim ištaraa-h?
　　　　　　　　what that Salim buy (3SM.PAST)-it
　　　　　　　　'What did Salim buy?'

　　　　SPEAKER B: #ma-ištaraa-š　　　　　　　Haaga.
　　　　　　　　　not-buy (3SM.PAST)-NEG nothing
　　　　　　　　　'He bought nothing.'
　　　　　　　　　or
　　　　　　　　　ma^{c}raf-š.
　　　　　　　　　not-know (s)-NEG
　　　　　　　　　'I don't know.'

Negative polarity items, on the other hand, can be possible answers for non-*illi*-questions which lack the presuppositional force as seen below.

(148) SPEAKER A: miin　　fataH　　　　　　il-baab?
　　　　　　　　who　　open (3SM.PAST) the-door
　　　　　　　　'Who opened the door?'

　　　　SPEAKER B: maHadiš　　fataH-uh.
　　　　　　　　　no one　　　open(3SM.PAST) -it
　　　　　　　　　'No one opened it.'

It is the presuppositional force of *illi*-questions which motivates Cheng (1997) to assume that these wh-questions should be interpreted as cleft structures[28] (see Section 6.3.5).

In Chapter 5, I discussed the structure of Topic-comment articulation proposed by Rizzi (1997), the structure is repeated below.

---

[28] The cleft interpretation of wh-questions suggests that the English gloss for the wh-question in (144b) should be 'who is the one that opened the door?' and (145b) as 'what is the thing that Salim bought?' However, since the main focus of the study is the syntactic, rather than the semantic analysis of *illi*-questions, I will not follow this method of interpretation in the gloss. The English gloss for these two wh-questions will be 'Who opened the door?' and 'what did Salim buy?' respectively.

(149)　　　TopP
```
            TopP
           /    \
         XP      Top'
                /    \
             Top°     YP
```
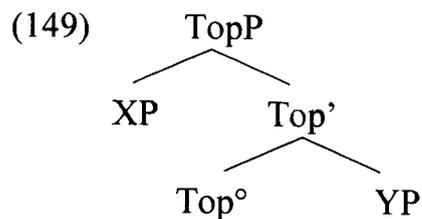
XP = topic
YP = comment

(Rizzi 1997: 291)

Rizzi argues that Top° hosts a higher predication which has a similar function to AgrS within IP, and connects a subject and a predicate. He extends this idea to Foc° as in the following representation:

(150)　FocP
```
          FocP
         /    \
       ZP      Foc'
              /    \
           Foc°     WP
```
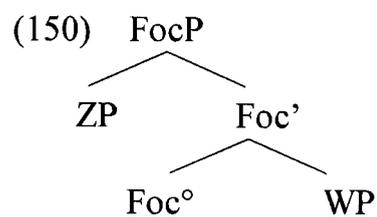
ZP = Focus
WP = Presupposition

(Rizzi 1997: 292)

In Section 6.2, *illi* was argued to be in C where it heads the CP. In *illi*-questions, *illi* licenses the formation of a Focus projection and heads the FocusP. It also carries out the function of the higher predication that connects the subject (i.e. the extracted wh-phrase) and the predicate (i.e. the remainder of *illi*-question). The operator which appears in the C-system (in Rizzi's (1997) sense) is *illi* which occupies the Foc^0 head and acts as a Focus particle. Both the wh-phrase and *illi* are in Spec-Head configuration by virtue of carrying a [+Focus] feature (Chomsky 1995). Rizzi (1990: 52) proposes the following structure for the tensed CP^{29}:

---

[29] Sabel (2000: 432) argues that there is cross-linguistic variation among languages regarding the structure and the function of C^0; for example, in German, the features of the complementiser are carried on C^0, so the wh-phrase moves to the [Spec CP] position. In other languages such as Hungarian, Greek and Spanish, the complementiser is disintegrated into various features where the C^0 functions as a subordinator.

(151) C→ that

      Agr

In the above representation, Agr can stand for any head that bears agreement features. What licenses this Agr is its co-indexation with the element in its Spec position. Rizzi (1990) provides the representations in (153) for the examples in (152).

(152) a. Who do you think left?

      b. Who left?

(153) a. Who do you think [*t* Agr Infl left]

      b. Who Agr [*t* Infl left]

          (Rizzi 1990: 52-53)

When Agr heads the CP, it becomes co-indexed with the element in its Spec. In the above representation (in (153)), Agr is co-indexed with the trace and the wh-phrase as in (153a & b) respectively.

Based on the above discussion, I propose that within *illi*-questions, it is the strong Focus feature which triggers movement to take place before the Spell-Out point; accordingly, the wh-phrase moves to the [Spec Focus] position. Unless this movement takes place, the derivation will crash as the strong [+wh] feature on the wh-phrase remains unchecked. Both *illi* and argument wh-phrases carry [+nominal] features; this is the main reason why adjunct wh-phrases cannot co-occur with *illi*. By occupying the head C, *illi* creates the FocusP projection which is the appropriate checking domain for the wh-phrase in the [Spec Focus] position. Within *illi*-questions, *illi* heads the FocusP complement (similar to the complementiser 'that' in CP). Within the Focus projection (which *illi* heads), the wh-phrase occupies the Spec position by virtue of bearing the [+nominal] and [+Focus] features[30]. For example, the wh-phrase *miin* 'who' in (144b) is not in its canonical position (i.e. Spec IP); it is extracted to the Spec of Focus. Likewise, in (149b), the object wh-phrase *eeh* 'what' is not in the Spec CP position; rather, it

---

[30] Contrary to relative pronouns in MSA, and *que/qui* in French, *illi* does not show phi-feature agreement. The feature it shares with argument wh-phrases is the [+nominal] feature; this explains its absence within adjunct wh-questions. When argument wh-phrases are focused, they are extracted from their *in situ* position to the Spec of Focus, whereby both argument wh-phrases and *illi* bear the [+Focus] features.

occupies the specifier position of the Focus projection headed by *illi*. The example in (144b) will be repeated below, followed by its representation.

(154) miin   illi   fataH   il-baab?
      who   that   open (3SM.PAST)   the-door
      'Who opened the door?'

(155)

```
              FocP
             /    \
         Spec      Foc'
          |       /    \
        miin_i  Foc     IP
          |    |      /    \
         illi DP      I'
               /    \
              I      VP
           [+past]    |
                      V'
                    /    \
                   V      NP
                   |      |
                 fataH  il-baab
```
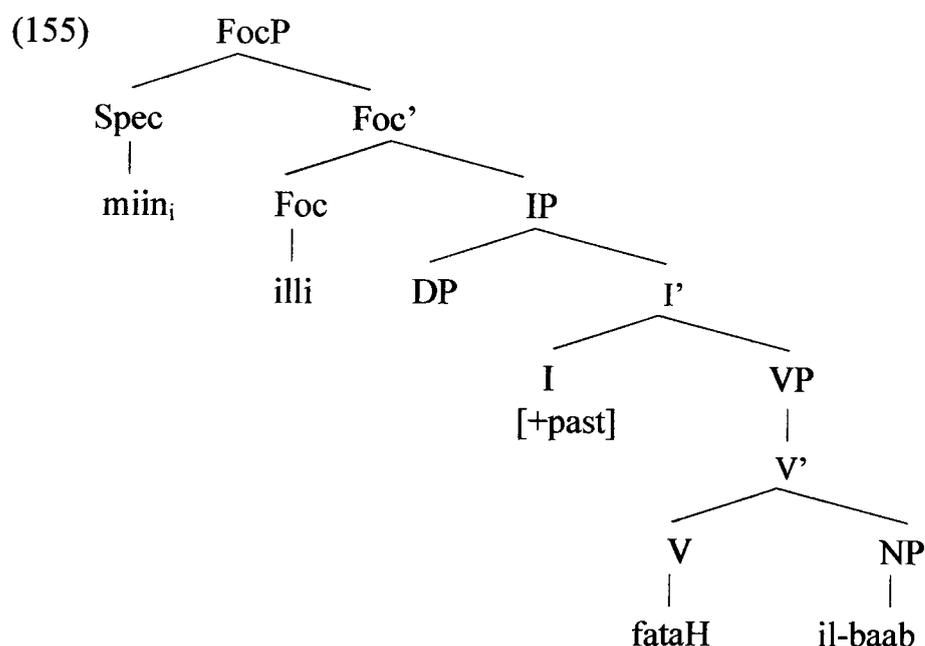
In EA argument wh-questions, the two types of chain formation identified by Rizzi (2001: 92) are available. The first argument chain is formed within subject wh-questions without *illi*; it is formed via the movement to the subject position under the VP-Internal Subject Hypothesis. The second type of chain is formed in *illi*-questions. It is an operator chain which Rizzi (1997) argues to exist in Focus movement constructions. In *illi*-questions, an argument chain is formed with the movement of the argument wh-phrase (both subject and object) to the [Spec FocusP] position. With the insertion of *illi* which carries a strong Focus feature, the wh-phrase moves to the left periphery of the sentence to occupy the Spec of FocusP. Thus, the wh-phrase in the Spec of FocusP is licensed via feature sharing with the head of the projection (Rizzi 2001: 110). Both argument wh-phrases and *illi* carry [+nominal] and [+Focus] features, so *illi* cannot act as a scope-bearing element. Rather, it seems to carry a certain discourse feature which triggers the movement of the wh-phrase *miin* 'who' to its specifier position: a

movement analysis in the MP framework which relies on the Minimal Link Condition proposed by Chomsky (1995):

(156)   Minimal Link Condition[31]

K attracts A only if there is no B, B closer to K than A, such that K attracts B

(Chomsky 1995: 311)

illi which heads the FocusP carries a Focus feature (FF) which needs to be satisfied. The closest feature to the (FF) is the one which the wh-phrase carries, or F' (in Collins's (2001) sense). The feature F' enters into a checking relation with the FF on *illi*. Chomsky (1995) argues that strong features that are visible at PF are illegitimate objects that need to be checked; failure to check these strong features results in the derivation to crash. Focus-movement takes place for the Focus-feature of the wh-phrase *miin* 'who' to be checked against the strong Focus feature of *illi* which heads the FocusP projection, so the wh-phrase is raised to the [Spec FocusP] position.

The Focus analysis proposed for *illi*-questions shares some aspects with the wh-movement of the English type. For example, both types of movement are triggered by two distinct features: the [+Focus] feature and the [+wh] feature respectively. In both types of movement, wh-phrases act as operators leaving behind variables (i.e. *t* and the resumptive pronoun in the following examples) that define the scope of the moved wh-phrases.

(157)   a.   Who$_i$ did you see t_i?

b. miin$_i$ illi   inta   šuft-uh$_i$?
   who   that   you (2SM)   see (2SM.PAST)-him
   'Who did you see?'

---

[31] Chomsky (1995: 280) describes movement as a Last Resort operation. Any step in the derivation is legitimate solely if it saves the derivation from crashing by facilitating its convergence. Accordingly, Last Resort is defined as follows:
-   Last Resort
    Move F raises F to target K only if F enters into a checking relation with a sublabel of K.
If the head carries a feature F, this feature needs to be checked in order for the movement operation to take place. Chomsky (1995: 297) later proposes the operation Attarct F where he incorporates Last Resort with the Minimal Link Condition and offers the following definition:
-   Attract F
    K attracts F if F is the closest feature that can enter into a checking relation with a sublabel of K

As for the insertion of *illi*, in Section 6.3.3, I proposed that *illi* has a phonological feature, rather than a semantic content of its own. This phonological feature (as suggested by Chomsky (1995: 232)) allows *illi* to be overtly selected. The optional selectional of functional categories which occupy the C^0 in the numeration is in line with the minimalist assumptions.

It is evident that the roles which *illi* play in relative clauses and wh-questions are compatible. In the latter, the wh-phrases appear in lieu of the head of the relative clause which is followed by *illi*; hence, *illi*-questions are syntactically similar to restrictive relative clauses[32]. In restrictive relative clauses, *illi* restricts the reference of the head, whereas in wh-questions, it is a Focus particle[33] which licenses the Focus projection and heads its Foc^0.

A final note about the Focus analysis of wh-questions in EA is that it is possible to adjoin a Topic to a FocP, as discussed in Rizzi (1997) for the Italian data. It is possible to have a sequence of a Topic followed by a focalised *illi*-question. In Chapter 5, I discussed the possibility of forming a wh-question within a topicalised structure, whereby the wh-phrase can either remain *in situ* as in (158), or undergo Focus movement as in (159).

(158) il-qiSSa   katab-ha   miin?
       the-story   write (3SM.PAST)-it who
       'The story, who wrote it?'

(159) il-qiSSa   miin illi katab-ha?
       the-story   who   that write (3SM.PAST)-it
       'The story, who wrote it?'

I propose the following structure for the example in (159):

---

[32] Based on this similarity, Osman (1990) refers to EA *illi*-questions as relativised wh-questions.

[33] In Italian, as discussed by Rizzi (1997), the Focus particle which occupies the Foc^0 head is null, whereas in Gungbe, the Foc^0 head is occupied by focus particles like *wè*.

(160)

```
                    TopP
                   /    \
                 XP      Top'
              il-qiSSa_k  /  \
                        Top°   FocP
                              /    \
                           Spec     Foc'
                          miin_i   /    \
                                 Foc      IP
                                 illi    /  \
                                       DP     I'
                                       t_i   /  \
                                            I    VP
                                                 |
                                                 V'
                                                /  \
                                               V    NP
                                               |    |
                                             katab  ha_k
```
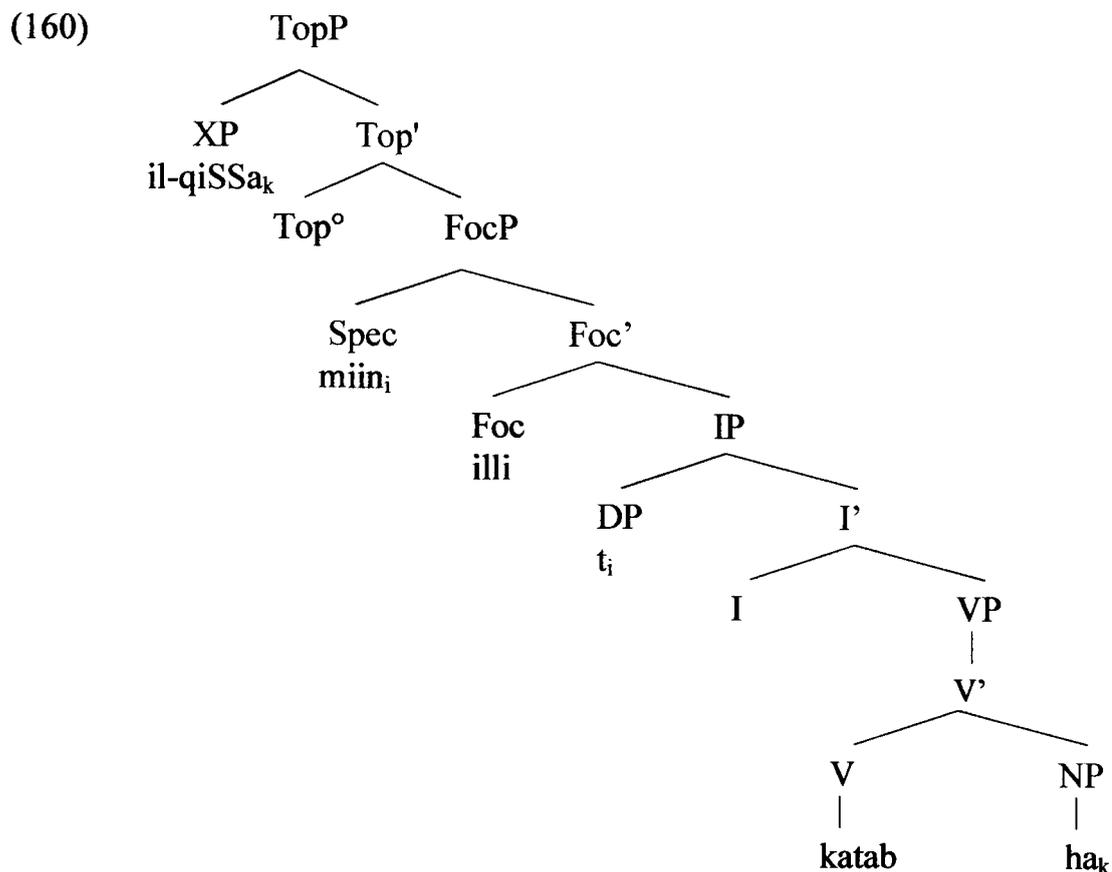
In sum, wh-questions with *illi* are analysed in terms of Focus. *illi*, which occurs as the head of the Focus projection, introduces a strong Focus feature in this projection. This Focus feature on the head attracts the wh-phrase to the specifier position of the Foc^0 occupied by *illi*. In the above representation, the wh-phrase is base-generated in the position occupied by the resumptive pronoun. The wh-phrase moves to the Spec of FocusP to have the Focus feature checked with *illi*. What triggers this movement is feature attraction (in the sense of Chomsky 1995 and Rizzi 2001).

6.6.3 Analysis of final argument wh-phrases: Against optionality

The experimental study carried out in Chapter 3 revealed that the wh-questions with final subject wh-phrase *miin* 'who' (without *illi*), in contrast to the object wh-phrase *eeh* 'what', were judged ungrammatical by almost all the informants. This falls naturally from the unavailability of the VSO word order in matrix clauses as seen below:

(161) a. *bana   Mohammed   il-beet.
           build (3SM.PAST)   Mohammed   the-house
           'Mohammed built the house.'

In this section, I will investigate a further possible structure which involves a clause-final wh-phrase[34]. This structure (which looks like a pseudo-cleft sentence) will also be analysed in terms of Focus. Thus, the main task now is to investigate argument wh-questions like the one in (162a).

(162) a. illi   Mona   ištarat-uh   eeh?
          that   Mona   buy (3SF.PAST)-it   what
       'What did Mona buy?'

       b.eeh   illi   Mona   ištarat-uh?
         what   that   Mona   buy (3SF.PAST)-it
       'What did Mona buy?'

In the previous section, it was argued that negative polarity items cannot be proper answers to the wh-question in (162b) due to its presuppositional force. Extending this argument to the structure in (162a), the above two *illi*-questions are said to be presuppositionally equivalent. Consider the two-turn conversation below.

(163) SPEAKER A: illi   Mona   ištarat-uh   eeh?
                   that   Mona   buy (3SF.PAST)-it   what
                   'What did Mona buy?'

       SPEAKER B: # ištarat   wala Haaga.
                    buy (3SF.PAST)   nothing
                    'He bought nothing.

There are two possibilities to account for the final position of the argument wh-phrase in (162a): either the wh-phrase *eeh* 'what' has moved to a clause-final position, or the *illi*-clause is preposed. I will adopt the latter suggestion and offer a minimalist account for it.

Dealing with Focus movement on a par with wh-movement, the minimalist assumption that the [+wh] feature has to be fixed can be extended to the [+Focus] feature which

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[34] Lewkowicz (1978: 554) discusses some examples in MSA that have the subject in final position as seen below:
       (i)   'al-waladu mariiDatun 'ummuhu.
                 the-boy   sick   mother-his
                 'The boy-his mother is sick.'
Lewkowicz argues that the above example has a topic NP *alwalaadu* 'the boy' followed by a comment clause; I will refer back to this idea in Chapter 7.

triggers movement in *illi*-questions. Therefore, it is not plausible to assume optionality of features where the difference between the above two examples is reduced to [+/- Focus] feature strength. The wh-questions in (162a) and (162b) are similar to pseudo-cleft and cleft structures respectively (as suggested by Cheng 1997). Akmajian (1970) provides the pseudo-cleft structure in (164a) which looks like the wh-question with final argument wh-phrase. Similar structures are also discussed in Schachter (1973) who argues that the English pseudo-cleft sentence in (164b) is an instance of a Focus construction:

(164)   a. The one who Nixon chose was *Agnew*.

           (Akmajian 1970: 149)

      b. What this country needs is a good five-cent cigar.

           (Schachter 1973: 20)

Thus, the above discussion aims at highlighting the similarity between wh-questions with final arguments and pseudo-cleft structures. The position of the wh-phrase will be examined following the brief review of Rizzi's (1997) notes on the structure of the C-system in Italian.

Rizzi (1997: 294) argues that the C-system identifies the type of the clause or, in Chomsky's (1995) system, the specification of Force which is the type of information conveyed by the higher structure. Finiteness is an IP-related property expressed by the C-system. When the Topic-Focus system is activated, they are located (or sandwiched in Rizzi's sense) between Force and Finiteness. Accordingly, the C-system can be represented by the following structures from Rizzi (1997: 294-313):

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

b.   ForceP

```
              ForceP
             /      \
          spec      Force'
                   /      \
               Force      TopP
                         /    \
                      spec    Top'
                             /    \
                          Top     FocP
                                 /    \
                              spec    Foc'
                                     /    \
                                  Foc     TopP
                                         /    \
                                      spec    TopP'
                                             /     \
                                          ToP      FinP
                                                  /    \
                                               Fin     IP
```
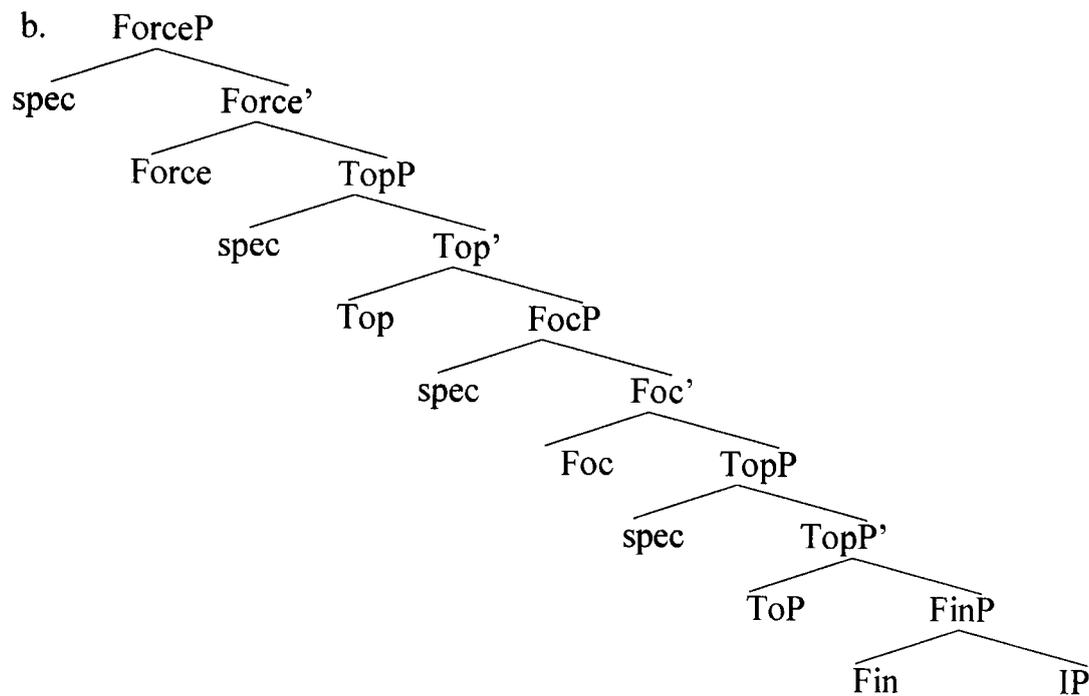
The above structure explains some descriptive generalisations drawn from the Italian data. For example, in Italian main wh-questions, wh-phrases must follow the topics as indicated by the contrast in the following examples:

(166) a. Il premio Nobel, a chi lo daranno?

        'The Nobel prize, to whom will they give it?'

      b. * A chi, il premio Nobel, lo daranno?
         'To whom, the Nobel prize, will they give it?'

           (Rizzi 1997: 296)

To account for this contrast, Rizzi notes that in (166a), the relative operator occupies the highest specifier position (i.e. the Spec of Force), while the wh-phrase is in a lower position with Topic/Focus field. In Italian, a focal constituent can co-occur with one or more topics where the latter either precedes or follows the former as in (167), while a wh-phrase can be preceded by a topic as in (168).

(167) A Gianni, QUESTO, domani, gli dovrete dire
       'To Gianni, THIS, tomorrow, you should tell him'

(168)   A Gianni, che cosa gli hai detto?
        'To Gianni, what did you tell him?'

                    (Rizzi 1997: 300)

The Italian data illustrate that the structure [Topic Focus] is not language-specific; in

EA, a TopicP can precede a FocusP³⁵ as in the following examples:

(169)   Il premio Nobel, a chi lo daranno?
        'The Nobel prize, to whom will they give it?'

(170)   illi   Mona   ištarat-uh   eeh?
        that   Mona   buy (3SF.PAST)-it   what
        'What did Mona buy?'

To account for the EA wh-question in (170), I claim that it has the subject-predicate

interpretation. The whole FocP *illi Mona ištarat-uh* 'that Mona bought it' is topicalised

as the subject of predication, while the wh-phrase *eeh* 'what' remains in the lower

position within the Focus field, and is still in the [Spec Focus] position. In this respect, I

assume Denham's (1997: 153) claim that when an item has its features checked in a

functional projection, it becomes frozen in place, so I argue that the wh-phrase in (170)

---

³⁵ One way to distinguish a TopicP from a FocusP is to presume that only the former can be preceded by
a complementiser such as *inn* 'that', as in the following examples whereby the topicalised and focused
constituents appear in boldface:
(i)   Mona 'aalit   inn   **il-kitaab** Ali 'araa-h.
            Mona say (3SF.PAST) that   the book Ali read (3SM.PAST)-it
            'As for the book, Mona said that Ali read it.'
(ii)   a.* Mona 'aalit   inn   **eeh** illi Ali 'araa-h.
            Mona say (3SF.PAST) that   what that Ali   read (3SM.PAST)-it
            'Mona said what Ali read.'
        b.* Mona 'aalit   inn   **izzayy** 'araa   Ali il-kitaab.
            Mona say (3SF.PAST) that   how   read (3SM.PAST) Ali the-book
            'Mona said how Ali read the book.'
The ungrammaticality of the examples in (ii) suggests that focused constituents cannot appear after a
complementiser, in contrast to a topicalised constituent. The claim that Focus projection exists over and
above the CP Projection is discussed by many linguists (e.g. Brody 1990, Tsimpli 1995 and Ouhalla
1999). Thus, the structure in (ii) is ruled out since the Focus projection is lower than the CP. EA is similar
to both MSA and Hungarian as they all have their focused constituents in sentence-initial positions.
However, it is solely in EA that the specified Focus projection hosts wh-phrases. The following MSA
examples are from Ouhalla (1999:338):
(i)   RIWAYATA-AN 'allaf-at   Zaynab-u   (laa-QASIIDAT-AN).
        Novel-ACC   write (3SF.PAST) Zaynab-NOM   not poem-ACC.
(ii)   LAYLAA ᶜašiqa   Qays-u   laa Zaynaba.
        Laylaa   love (3SM.PAST) Qays-NOM not   Zaynab-ACC.
        'It was LAYLAA that Qays loved (not Zaynab).

does not undergo any further movement. The movement of the *illi*-clause, which is part of the FocusP, to the left periphery of the wh-question is not an instance of free adjunction since it bears a topic feature licensed by the Spec-Head agreement with the wh-phrase in the [Spec Focus] position. Topicalising this part of the FocP (the *illi*-clause) is compatible with the structure proposed by Rizzi in (166), so the wh-question in (170) will have the following structure:

(171)   [$_{ForceP}$ [$_{Force}$ [$_{TopP}$ [$_{Top}$ [$_{Top0}$ illi Mona ištarat-uh]$_i$ [$_{FocP}$ [$_{Foc0}$ eeh [$_{FocP}$ t$_i$]]]]]]]

In sum, the two forms of *illi*-questions which have been discussed so far are repeated below.

(172)   a. miin   illi   fataH   il-baab?
           who   that open (3SM.PAST) the-door
           'Who opened the door?'

        b. illi   fataH   il-baab   miin?
           that   open (3SM.PAST) the-door who
           'Who opened the door?'

Though the above subject wh-questions seem to be identical as they share the same numeration, they do not have the same interpretation. In (172b), part of the FocP (the *illi*-clause) is left dislocated to the Topic projection to receive the subject-predicate interpretation. I claim that the wh-question of the structure [wh-phrase...*illi*-clause] in (172a) has a focused wh-phrase which predicates on a non-overt subject modified by a relative clause (*illi*-clause). Due to the shift of emphasis and interest on the part of the speaker from the focused element (i.e. the predicate) to the *illi*-clause (i.e. the subject of the predicate), the *illi*-clause is topicalised to receive the tonic stress, and hence the wh-question in (172b) is formed. Based on this proposal, I conclude that the two structures of *illi*-questions presented in (172) share the same numeration, yet have different interpretations.

The above two structures can also be compared for economy of derivation (Chomsky 1995). After the insertion of *illi*, the Focus projection is created where the wh-phrase

has undergone movement to the Spec of Focus. To form the structure in (172b), more steps are taken as the string *illi fataH il-baab* 'that opened the door' is topicalised to precede the FocP. The formation of the subject wh-question in (172b) has gone through three stages; each stage produces a possible structure as seen below.

(173) miin   fataH   il-baab?
       who   open (3SM.PAST) the-door
       'Who opened the door?'

(174) miin   illi   fataH   il-baab?
       who   that   open (3SM.PAST) the-door
       'Who opened the door?'

(175) illi   fataH   il-baab   miin?
       that   open (3SM.PAST) the-door who
       'Who opened the door?'

The question now is which of the above examples satisfy the Shortest Derivation Requirement[36] defined below.

(176) Minimize the number of operations necessary for convergence

       (Collins 2001: 52)

The most economical derivation wins, or in Collin's (2001) sense, the zero derivation with no operation wins. The Economy Principle set forth by the MP necessitates that the number of steps in a derivation should be kept to the minimum; therefore, optionality[37]

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[36] Chomsky and Lasnik (1993: 456) proposed the Minimize Chain Links which necessitate that when every form-chain operation proceeds, each link of a chain must take the shortest steps. The idea of the shortest movement is in line with Rizzi's (1990) Relativized Minimality illustrated by the following examples from Zushi (2001: 13).
(i) a.*John$_i$ seems that it is likely t$_i$ to win.
     b.*Have$_i$ they could t$_i$ left?
     c.*How$_i$ do you wonder which problem$_k$ to solve t$_i$ t$_k$?
In the above examples, the moved elements did not make the shortest steps, the positions where they can move to are already filled by other constituents: (ia) represents a super-raising where 'John' moves to the matrix subject position crossing the intermediate subject trace; (ib) violates the Head-movement Constraint as the result of the movement of 'have' which crosses the head position filled by 'could'; (ic) violates the wh-island since the wh-phrase 'how' crosses the wh-phrase 'which problem' in the lower [Spec CP] position. The moved elements in the above examples did not take the shortest steps and the positions where they moved to have already been filled. Chomsky (1995: 89) states that the Minimality Condition is an element of locality according to which government is blocked by certain barriers and an intermediate category.

[37] In this chapter, the issue of optionality in EA is resolved by proposing a Focus-based analysis. However, in other languages, Focus cannot explain it. For example, Denham (2000) accounts for

is excluded under economy conditions. The only exception is the special cases of equally economical alternative derivations (Chomsky 1995: 335). Apparently what wins in the above set of wh-questions is the wh-in-situ strategy in (173) whereby the wh-phrase *miin* 'who' is interpreted and assigns scope in its canonical position (i.e. Spec IP). The structure in (173) is well-formed with the wh-phrase *in situ*, so the grammar of EA does not need to exhibit a wh-movement rule. Other syntactic structures available in EA are derived by certain distinct features (e.g. [Topic] feature and [Focus] feature).

A final note about the Focus-based account of *illi*-questions is that such an analysis seems to be compatible with the Cleft analysis proposed by Cheng (1997). The reason for this claim is that in the literature, both cleft structures (which are similar to *illi*-questions) and pseudo cleft structures (which are similar to final argument *illi*-questions) are analysed as focalised constituents (which appear in italics), by virtue of bearing heavy[38] stress (Akmajian 1970). Accordingly, the examples in (177) are compatible with the wh-questions in (178).

(177) a. It was *Agnew* who Nixon chose.   (cleft)

   b. The one who Nixon chose was *Agnew*. (pseudo-cleft)

   (Akmajian 1970: 149)

(178) a. *miin*   illi   katab   film   il-maSiir?
       who   that write (3SM.PAST) film   the-fate
       'Who wrote the film *The Fate*?'

   b. illi   katab   film   il-maSiir   *miin*?
      that   write (3SM.PAST) film   the-fate   who
      'Who wrote the film *The Fate*?'

Akmajian (1970: 150) proposes the Cleft-Extraposition Rule where he presumes that when the initial clause of the pseudo-cleft structure in (177b) is extraposed to the end of the sentence, it yields a cleft structure like (177a). Thus, he suggests that cleft sentences

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optionality in Babine –Witsuwit'en by assuming that there is an optional selection of C from the lexicon. If C and its wh-feature are selected, the wh-feature, accompanied by the wh-phrase, raise for wh-feature checking in C. If C is not selected, wh-phrases remain *in situ* (see Section 2.4.2.2).

[38] Heavy stress can be distinguished from tonic stress by suggesting that the former is placed on non-initial focalised elements as in (177), whereas the element which moves to a clause-initial position (such as the initial wh-phrase *miin* 'who' in (178a), or the initial *illi*-clause in (178b), bears tonic stress.

are derived from pseudo cleft structures. Recall that the opposite view was held at the outset of this section where wh-questions with final argument wh-phrases (which look like pseudo cleft structures) have been argued to be derived from cleft-like *illi*-questions.

To sum up, in this section I examined a further possibility for forming argument wh-questions in EA whereby the argument wh-phrase appears in a clause-final position. The *illi*-clause, which presents old information known to the addresser and the addressee (i.e. Contrastive Focus) is topicalised, followed by the focused wh-phrase. In EA, it is possible to have a sequence of a Topic followed by a focalised wh-phrase; Italian seems to exhibit similar structures as discussed in Rizzi (1997).

6.6.4 Argument wh-questions with full pronouns

Some languages such as Chinese, Hebrew, Palestinian Arabic (PA) and EA can sometimes host pronouns in their wh-questions. This phenomenon is controversial and has received different accounts. For example, Hoh & Chiang (1990) note that in Chinese, the role of the pronoun *shi* is determined by the context in which it appears. As a consequence, they analyse it as a copula within unfocused structures, and a Focus marker within (non)-interrogative constructions. Eid (1983) deals with pronouns in EA as copula, while this analysis is rejected by Doron (1983) (in Hebrew) and Shlonsky (2002) in PA. These accounts will be reviewed briefly here.

In Chinese, Hoh & Chiang (1990) argue that *shi* can act either as a copula within unfocused structures, or a Focus marker within (non)-interrogative structures. This idea is illustrated by the following examples respectively:

(179) Zhangsan   shi Mali   de   xiansheng
       Zhangsan   COP Mary   POSS   husband
       'Zhangsan is Mary's husband.'

(180) a. shi   Zhangsan$_k$, Wangwu   shuo Xiaoming   yao   le e$_k$,
         FOC   Zhangsan   Wangwu   say   Xiaoming   bite ASP
         'It was Zhangsan that Wangwu said Xiaoming bit.

b. shi   shei$_k$,   Wangwu   shuo   Xiaoming   yao   le   e$_k$,
FOC   who   Wangwu   say   Xiaoming   bite   ASP
'Who was it that Wangwu said Xiaoming bit?'

(Hoh & Chiang 1990: 51- 52)

Hoh & Chiang analyse *shi* in Chinese as one of the constituents that can exceptionally undergo movement from an A'-position to another A'-position. Accordingly, in the above examples, *shi* has moved from INFL to COMP to define the scope of the focused elements by occupying various A'-positions.

In Hebrew, Doron (1983) deals with pronouns as reflecting the Agr features in Infl as in (181). She argues against dealing with these pronouns as copula since they have no past or future forms.

(181)   a. ma   še   dekart   katav (hu)   hoxaxa   le-kiyumo.
          what   that   Descartes   wrote   he   proof [FEM]   to-his existence
          'What Descartes wrote is a proof of his existence.'

          b. ma   še   dekart   katav (hi)   hoxaxa   le-kiyumo.
          what   that   Descartes   wrote   she   proof [FEM]   to-his existence
          'What Descartes wrote is a proof of his existence.'

(Doron 1983: 89)

Shlonsky (2002) agrees with Doron's (1983) proposal and treats the pronoun *hi* in Hebrew and PA as the phonetic realisation of AgrS^0. He investigates the occurrence of this pronoun in two structures: the identificational (equative sentence) as in (182) and *illi*-questions as in (183).

(182)   Daniela   hi   ha-madrixa   šel-i.
         Daniela   PRON (3SF)   the-advisor   of-me
         'Daniela is my advisor.'

(183)   a. miin$_i$ (hi)   illi   l-'asad   'akal-ha$_i$ mbaariH?
         who   PRON (3SF)   that   the-lion   ate-her   yesterday
         'Who did the lion eat yesterday?'

b. miin$_i$ (hi)   illi e$_i$ akalt   l-'asad   'mbaariH?
who   PRON (3SF) that   ate   the-lion yesterday
'Who ate the lion yesterday?'

(Shlonsky 2002: 153-155)

Within the identificational sentence that has two referential expressions, the pronoun is obligatory, in contrast to *illi*-questions where it can be optionally inserted.

In EA, Edwards (2006) argues that a pronoun has the following properties: it retains the form of a subject pronoun; it shows restricted agreement; it carries out the role of a copula; and it is employed only in equative sentences:

(184)   il-walad   huwwa   il-mas'uul
the-boy   he   the-responsible
'the boy is the one responsible.'

(Edwards 2006: 60)

Edwards suggests that in the above equative sentence, the DP *il-walad* 'the boy' is left dislocated in a Topic position, while *huwwa il-mas'uul* 'he responsible' is a predicate which has the resumptive pronoun co-indexed with the DP. The pronoun *huwwa* 'he' occupies the Spec vP position to obtain the Nominative case and the theta-role of subjects.

In EA, pronouns[39] (which appear in boldface) can occur in both wh-questions and yes/no questions. Let us consider the following examples:

(185)   a. **huwwa** miin   xarag?   (argument wh-questions)
he   who   go (3SM. PAST)
'Who went out?'

b. **hiyya**   miin   xaragit?
she   who   go (3SF. PAST)
'Who went out?'

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[39] During the experimental study carried out in Chapter 3, it was reported that some informants suggested wh-questions with the pronoun *huwwa* as grammatical counterparts for the structures they judged to be ungrammatical (see examples (6b) and (8a) in Chapter 3, Section 3.7.1).

c. **humma**   miin   xaragu?
they(F/M)   who   go (3PLUM/F. PAST)
'Who went out?'

(186)   a. **huwwa**   miin   illi   xarag?   (*illi*-questions)
he   who   that   go (3SM.PAST)
'Who went out?'

b. **hiyya**   miin   illi   xaragit?
she   who   that   go (3SF.PAST)
'Who went out?

c. **humma**   miin   illi   xaragu?
they (F/M)   who   that   go (3PLUM/F. PAST)
'Who went out?'

(187)   a. **huwwa**   illi   xarag   miin? (final argument *illi*-questions)
he   that   go (3SM.PAST)   who
'Who went out?'

b. **hiyya**   illi   xaragit   miin?
she   that   go (3SF.PAST)   who
'Who went out?'

c. **humma**   illi   xaragu   miin?
they (F/M)   that   go (3PLUM/F. PAST)   who
'Who went out?'

(188)   a. **huwwa**   inta   farHaan?   (yes/no questions)
he   you (2SM)   happy
'Are you happy?'

b. **huwwa**   ana   ha-saafir   bukra?
he   I (1SF/M)   will-travel   tomorrow
'Am I going to travel tomorrow?'

As illustrated by the above examples, the pronoun may not show person and gender agreement with the AgrS⁰ category on the VP within yes/no questions; the pronoun *huwwa* 'he' can be used with either feminine or masculine subjects as in (188b). In this example, there are two subject pronouns: *huwwa* 'he' and *ana* 'I'. The two pronouns do not agree in person and may not agree in gender. It is worth noting here that within the yes/no questions in (188), the pronoun *huwwa* 'he' can be absent as illustrated by the following licit structures:

(189) a. inta   farHaan?   (yes/no questions)
          you (2SM)   happy
          'Are you happy?'

       b. ana   ha-saafir   bukra?
          I (1SF/M)   will-travel   tomorrow
          'Am I going to travel tomorrow?

The following are further descriptive generalisations about the occurrence of pronouns like *huwwa* 'he' within wh-questions and yes/no questions: first, the pronoun *huwwa* 'he' can occur within either matrix wh-questions with wide-scope wh-phrases, or embedded wh-questions with narrow scope wh-phrases.

(190) a. huwwa miin   illi Ali   'abil-uh?
          he   who that Ali   meet (3SM.PAST)-him
          'Who did Ali meet?'

       b. huwwa Ali   ᶜaayiz   yiᶜraf   miin
          he   Ali   want (3SM.PRES) know (3SM.PRES) who

          illi   Mona   'aablit-uh?
          that Mona   meet (3SF.PAST)-him
          'Does Ali want to know whom Mona met?'
          '*Ali wants to know whom Mona met.'

Second, the pronoun, along with the intonation morpheme, marks the structure as a yes/no question; however, if the pronoun is deleted, the structure can still be interpreted as a yes/no question by virtue of retaining the intonation morpheme as in the following examples:

(191) a. huwwa   ᶜaayiz   yikallim   Ali. (falling intonation)
          he   want (3SM.PRES) talk 3SM.PRES) Ali
          'He wants to talk to Ali.'

       b. (huwwa) ᶜaayiz   yikallim   Ali? (rising intonation)
          he   want (3SM.PRES) talk 3SM.PRES) Ali
          'Does he want to talk to Ali?'

(192) ᶜaayiz   yikallim   Ali?   (rising intonation with no pronoun)
       want (3SM.PRES) talk (3SM.PRES) Ali
       'Does he want to talk to Ali?'

The yes/no question in (191b) is licensed both morphologically, via the use of *huwwa* 'he' as a yes/no question particle, and prosodically, by means of rising intonation.

Where the pronoun disappears in (192), the rising intonation is what marks the structure as a yes/no question.

To account for the occurrence of pronouns within EA (non)interrogative structures, Eid (1983) analyses them as copula defined as the verb which links the subject to the predicate it announces. She argues that for a pronoun to act as a copula, it must carry out the grammatical function of a verb, and link the subject to the predicate. Investigating the behaviour of pronouns within negative structures, Eid claims that sentences with pronouns are negated similarly to sentences with full verbs as seen below.

(193) Ali ma-naam-š.
       Ali NEG-sleep (3SM.PAST)-NEG
       'Ali did not sleep.'

(194) il-mudarris   ma-huwwa-š   laTiif.
       the teacher   NEG-he- NEG   nice
       'The teacher is not nice.'

                (Eid 1983: 199-200)

In (193), the verb *naam* 'slept' is negated by the cliticisation of the two negative particles: the prefix *ma* and the suffix *š*. The pronoun *huwwa* 'he' in (194) has a similar morphological property. Eid (1983) argues that since the pronoun *huwwa* 'he' carries out the grammatical function of a verb, which is to separate the subject from the predicate, the pronoun is a copula. This idea is illustrated by the following relative clause:

(195) il-raagil illi šatam   huwwa il-mudarris.
       the-man who insulted-(he) he   the-teacher
       'The man who insulted is the teacher.'
                (Eid 1983: 205)

In (195), the pronoun *huwwa* 'he' separates the subject NP *il-raagil* 'the man' from the predicate NP *il-mudarris* 'the teacher', so *huwwa* 'he' carries out the grammatical function of the verb, and hence it can be analysed as a copula.

Osman (1990: 224) treats pronouns like *huwwa* 'he' as an obligatory yes/no question marker and assumes that its sole role within wh-questions is for emphasis. She argues that such pronouns are absent at PF and they are deleted at LF, similar to expletives in English.

Wahba (1984) analyses pronouns such as *huwwa* 'he' and *hiyya* 'she' in wh-questions as Question Particles (QPs) which carry out the following two grammatical functions that cannot coincide: (1) they define the scope of wh-phrases *in situ*; and (2) they act as yes/no question markers. Wahba's idea is clarified by the following examples:

(196) a. hiyya Mona ^{c}irfit   [miin illi e$_i$ Darab   Ali]]?
        QP   Mona know (3SM.PAST) who   that   hit (3SM.PAST) Ali
        'Did Mona know who hit Ali?'

     b. [(huwwa)   miin$_i$ illi e$_i$ Darab   Ali]]?
        (QP)   who   that   hit (3SM.PAST) Ali
        'Who hit Ali?'
            (Wahba 1984: 122)

Wahba argues that the wh-phrase *miin* 'who' in (196a) has narrow scope resulting in a yes/no question reading marked by the QP *hiyya*. In (196b), the wh-phrase has wide scope resulting in a direct question reading, and this explains why the QP is optional here. In the following example, the QP is a yes/no question marker.

(197) hiyya   Mona   xaragit?
      (QP)   Mona   leave (3SF.PAST)
      'Did Mona leave?'
           (Wahba 1984: 120)

Wahba's analysis of *huwwa* raises two problems: first, she argues that the pronoun is a yes/no question marker, leaving aside the fact that this pronoun is optional within yes/no questions whose scope is mainly defined by an intonation morpheme (a yes/no question is usually accompanied by a rising intonation). Let us consider the following examples:

(198) a. Ali   rigi^c   wala lissa?
          Ali   come back (3SM.PAST) or   (not yet)
          'Has Ali come back yet?'

      b. huwwa Ali   rigi^c   wala lissa?
          he   Ali   come back (3SM.PAST) or   (not yet)
          'Has Ali come back yet?'

As indicated by the example in (198a), the pronoun *huwwa* can be absent in yes/no questions. The second point which is highlighted in Soltan (2010) is that the occurrence of the pronouns is not solely restricted to wh-in-situ, as argued by Wahba (1984). Pronouns can also appear within extracted wh-questions. The idea is illustrated by the following examples from Soltan (2010).

(199) huwwa   miin   illi   inta   šuft-u-h   imbaariH?
       Q (3SM) who COMP you   see (2SM.PAST)-him   yesterday
       'Who is it that you saw yesterday?'

        (Soltan 2010: 4)

Soltan (2010) argues against Wahba's analysis as he calls for a unified account for the occurrence of these pronouns in EA wh-questions. He holds the view that Q-*huwwa* has its own morpho-syntactic properties that make it distinct from the copula *huwwa*. If the subject of the copula is the second or the first person, the copula *huwwa* cannot be employed, whereas the Q-*huwwa* can freely be used with all subjects within wh-questions; for Soltan, this idea is illustrated by the following contrast:

(200) huwwa   'inta   šuft   miin imbaariH?
       Q (3SM)   you see (2SM.PAST) who yesterday
       'Who did you see yesterday?'

(201) *anaa//inta   huwwa   SaaHib   il- ^cimaarah.
       I/You(SG)   COP (3SM) owner   the-building
       'I am/You are the owner of the building.'

        (Soltan 2010: 4-5)

Soltan (2010) treats *huwwa* as a question particle that types the clause as [+interrogative] and at the same time exhibits properties distinct from the copula *huwwa*. He argues that this Q-particle occurs in the left periphery of the clause as an overt realisation of an operator Op that carries the [+wh] and the phi-features.

After reviewing the relevant literature on the use of a full pronoun in EA, I suggest. based on the different syntactic realisations of a pronoun such as *huwwa*, that it is a question particle which occurs in yes/no and wh-questions. To account for its occurrence, I argue that *huwwa* 'he' is used pragmatically to carry out a discourse function via referring to the role an item plays in the discourse (as suggested by Stenström (1994: 20)). This discourse function of an item depends mainly on its position in the turn as explained by the following extract from Stenström (1994: 21):

(202) A: NOW# . what was I going to DO# . seize a CIGARLETTE#

A: GOSH# what is he NOW#

Stenström argues that at the beginning of the turn, NOW is a discourse marker which introduces a new topic and has a separate tone unit. When NOW occurs within the turn, it carries out its syntactic function as a time adjunct. Likewise, the pronoun *huwwa* 'he', at the beginning of a yes/no question or a wh-question, is taken to be a discourse marker which introduces a question (although it does not have a separate tone unit). The whole structure initiated by *huwwa* has a rising intonation specified for questions. When *huwwa* is placed within the turn, it retains its syntactic function as a subject pronoun. This idea explains the ungrammaticality of the following example where *huwwa* is glossed as a question particle [Q] and placed within the turn:

(203) * Ali ᶜaayiz   yiᶜraf   huwwa miin illi Mona 'ablit-uh. ⇑
Ali want (3SM.PRES) know (3SM.PRES) Q   who that M. meet (3SF.PAST)-him
'Ali wants to know whom Mona met.'

The ungrammaticality of the above example is due to the use of *huwwa* 'he' as a question particle and the rising intonation indicated by the rising arrow. I suggest that in the above example, *huwwa* cannot be a wh-particle as the sentence includes an embedded wh-question and the whole structure has to be marked by a falling intonation[40] specified for declaratives. In this example, *huwwa* is argued to be a subject pronoun within the turn. Hence, I argue that the ungrammaticality of the above example

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[40] Falling and rising intonations are represented by arrows.

can be avoided if *huwwa* functions as a subject pronoun within a declarative structure marked by a falling intonation as seen below.

(204) Ali ᶜaayiz   yiᶜraf   huwwa miin illi Mona 'ablit-uh. ⇓
      Ali want (3SM.PRES) know (3SM.PRES) he who that M. meet (3SF.PAST)-him
      'Ali wants to know whom Mona met.'

Thus, I propose that if *huwwa* is to act as a wh-particle, it has to meet the following requirements: (1) to be associated with wh-phrases in main questions, in contrast to embedded questions; (2) to occur in a clause-initial position; and (3) to mark the structure with rising intonation. Referring back to the example in (190b), I accounted for its ungrammaticality in terms of the occurrence of *huwwa* as a wh-particle associated with the embedded wh-question; the example is repeated below.

(205)*huwwa Ali ᶜaayiz   yiᶜraf   miin illi Mona 'ablit-uh.   ⇓
      he A. want (3SM.PRES) know (3SM.PRES) who that Mona meet (3SF.PAST)-him
      'Ali wants to know whom Mona met.'

The only possible way to fix the ungrammaticality of the above example is to ascribe to *huwwa* the function of a discourse marker placed at the beginning of the turn introducing a yes/no question, so the example would have the following interpretation:

(206) huwwa Ali ᶜaayiz   yiᶜraf   miin illi Mona 'ablit-uh? ⇑
      [+Q] Ali want (3SM.PRES) know (3SM.PRES) who that Mona meet (3SF.PAST)-him
      'Does Ali want to know whom Mona met?'

To sum up, the above discussion aimed at analysing *huwwa* as a question-particle that signals the beginning of a wh-question or a yes/no question. If *huwwa* does not introduce a yes/no or a wh-question, or if it occurs in a non-interrogative structure, *huwwa* carries out the grammatical function of a subject pronoun within a structure which is marked by a falling intonation. When *huwwa* is accompanied by rising intonation, it functions as a discourse marker, or a question particle [Q] which introduces a wh-question or a yes/no question.

Let us now consider the following two-turn conversation where *huwwa* introduces wh-questions and yes/no questions (a question-particle glossed Q), and occurs inside the turn as a subject pronoun (*he* in the gloss).

(207) SPEAKER A: huwwa miin illi kaan biyitiSil? ⇑
              Q   who that was calling
              'Who was calling?'

      SPEAKER B: Ali.   ⇓

      SPEAKER A: wi huwwa Ali kaan ᶜaayiz eeh? ⇑
              and Q   Ali was want what
              'And what did Ali want?'

      SPEAKER B: kaan biyis'al ᶜan   il-igaar.   ⇓
              was asking about the-rent
              'He was asking about the rent?'

      SPEAKER A: huwwa dah wa't dafᶜ il-igaar? ⇑
              Q   that time paying the-rent
              'Is that the time for paying the rent?'

      SPEAKER : aywa huwwa 'aal kida.   ⇓
              yes   he   said so.
              'Yes, he said so.'

The above conversation emphasises Fraser's (1990: 383) claim that discourse markers "signal a sequential relationship between the current basic message and the previous discourse" accounts for the use of *huwwa* in wh-questions and yes/no questions.

As for the initial position which the pronoun *huwwa* 'he' occupies in *illi*-questions, I adopt Rizzi's (1997, 2004) structure of the left periphery of the clause. I argue that *huwwa* 'he' heads a new projection [Force P] which Rizzi (2004: 235) defines as "the head expressing the clausal type, the kind of information which must be readily accessible to external selector". In line with Cheng (1997), Force is crucial for typing the clause as a declarative or a wh-question. Accordingly, there are two techniques in which Force is determined in a language: the first one involves a head C specified for either declarative structures or wh-questions and bears overt morphological encoding; the other technique allows the structure to have an operator of the kind required for clause typing. In some languages, which Rizzi assumes to be a rare case, the two techniques are employed (p.285). In this respect, EA is argued to be one of the languages which employ both techniques. For example, in *illi*-questions, the Focus projection is licensed by *illi* and attracts a [+wh]-phrase to its Spec. Then the resulting structure hosts *huwwa* as an operator of the same kind (*huwwa* bears a [+wh] feature as

assumed by Soltan (2010) and a [+nominal] feature). The pronoun signals that the wh-question aims at specifying a person or an item from a set previously determined in the discourse. Thus, the pronoun is a [+Focus] particle which precedes the focused *illi*-question and morphologically marks[41]it. Based on this proposal, the wh-question in (208a) will have the representation in (208b).

(208) a. huwwa   miin   illi   Ali   'abl-uh?
            he   who   that   Ali   meet (3SM.PAST)-him
        'Who did Ali meet?'
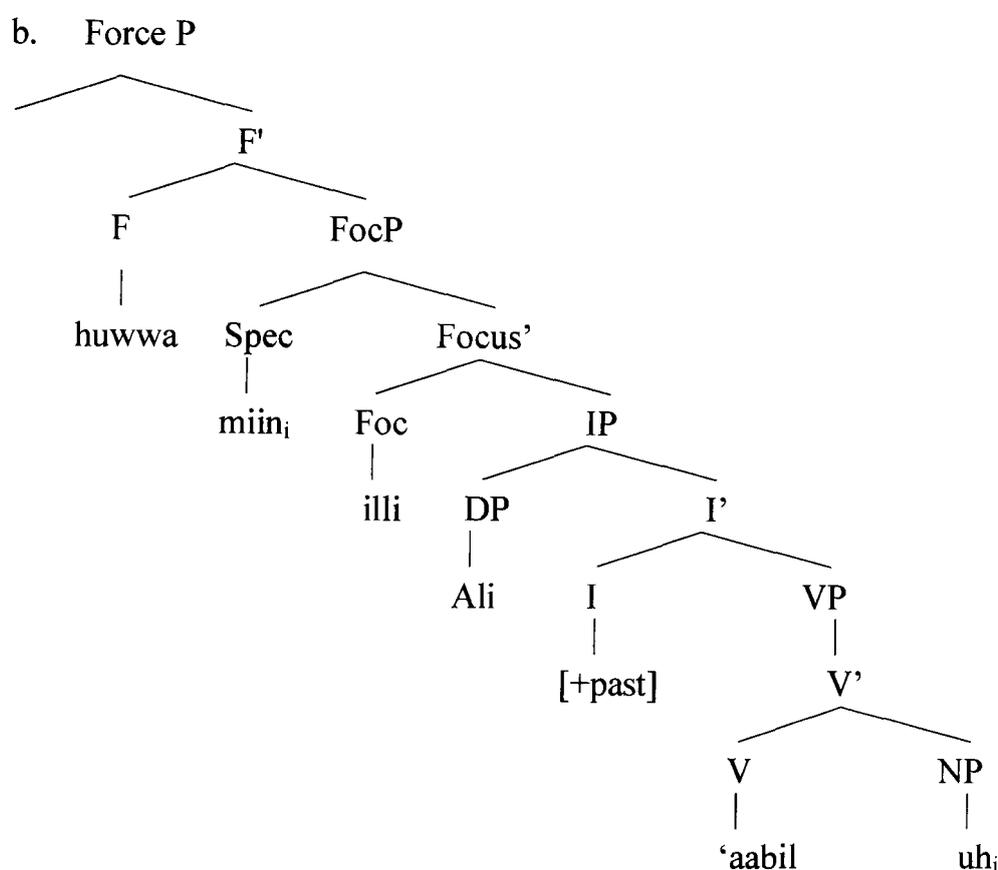
   b.   Force P

So far, Rizzi's (1997) idea that the C system projects into ForceP, TopicP and FocusP was adopted to account for *illi*-questions in EA. The projection which the complementiser heads to type the clause is referred to as ForceP. Recall that at the outset of this chapter, a distinction between *inn* and *illi* was made where the former was analysed as a complementiser which defines a declarative sentence. This explains why it cannot be followed by wh-phrases, in contrast to *illi*. It was also argued that both *illi* and

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[41] In Russian, Zavitnevich-Beaulac (2002:110) observes that a Contrastive Focus particle is attached to the focused element in order to morphologically mark it, as in the following example:
   (i) KHLEB-TO ya zabyl kupit.
        bread FocP I forgot to-buy
        'It is bread that I forgot to buy.'

the complementiser *inn* occupy the head C. To support the existence of the projection ForceP in EA, the italicised *inn*-clause in (209a) is argued to have the structure in (209b):

(209) a. il-mudiir ^cirif   *inn il-taqriir, wala-waaHid ʻaraa-h.*
          the-manager know (3SM.PAST) that the-report no-one   read (3SM.PAST)-it
          'The manager knew that no one read the report.'

b. Force P

6.6.5 Full pronouns in co-ordinate structures: Copy Spell-Out

A final note about the pronoun *huwwa* is that it is obligatory for extracting out of a co-ordinate structure as discussed in Chapter 5, Section 5.6.4. Osman (1990) observes that within a conjoined structure, a pronoun can occur preceded by a pronominal clitic attached to the verb. The clitic and the pronoun show agreement in gender and number features as in the following example:

(210) Ali šaaf-uh$_i$ huwwa$_i$ wi Ahmed   f-i-l-maTaar.
          Ali see (3SM.PAST)-him he   and Ahmed   in-the-airport
          'Ali saw him and Ahmed in the airport.'

(211) *miin Ali šaaf   t wi Ahmed   f-i-l-maTaar?
          who Ali see (3SM.PAST)   and Ahmed   in-the-airport
          '*Who did he see and Ali at the airport?'

If any constituent of the co-ordinate structure is to be extracted, the full pronoun has to be inserted as in the following example:

(212) miin illi Ali šaaf-uh huwwa wi Ahmed f-i-l-maTaar?
who that Ali see (3SM.PAST)-him he and Ahmed in-the-airport
'*Who is the one that you saw him and Ahmed at the airport?'

(Osman 1990: 159-160)

Osman (1990) accounts for the ungrammaticality of the example in (211) in terms of a violation of a syntactic island formed by the co-ordinate structure. However, the question of why overt pronouns such as *huwwa* 'he' occur in the course of derivation is not addressed; thus, this section is an attempt towards an answer to this question.

In English and EA, no element of a co-ordinate structure can be null as in the following examples respectively:

(213) a. What did you and your dad see?

b.*What₁ did you see t₁ and your dad?

(214) a. Mona wi 'uxtaha ᶜamalu eeh?
Mona and sister-her do (3SM/F.PLU.PAST) what
'What did Mona and her sister do?'

b.*Mona₁ ᶜamalit eeh t₁ wi 'uxtaha?
Mona do (3SF.PAST) what and sister-her
'What did Mona and her sister do?'

c. Mona₁ ᶜamalit eeh hiyya₁ wi 'uxtaha?
Mona do (3SF.PAST) what she and sister-her
'What did Mona and her sister do?'

It is notable that in (214c), the first conjunct 'Mona' moves to the Spec IP position, leaving behind a copy of it (a pronoun) that shows phi-features agreement with the moved conjunct. Returning to the wh-question in (212), it is argued that when the pronoun *huwwa* (which is the first conjunct of the co-ordinate structure) is extracted, it yields the following illicit structure:

(215) * miin_i illi Ali šaaf-uh_i t_i wi Ahmed f-i-l-maTaar?
       who   that Ali see (3SM.PAST)-him and Ahmed in-the-airport
       '*Who is the one that you saw him and Ahmed at the airport?'

Different theories account for the above illicit structure; for example, the Principles and Parameters framework excludes it as the trace is neither antecedent-governed[42], nor head-governed due to the existence of the resumptive pronoun which is cliticised to the verb *šaaf* 'saw'. Relativized Minimality (Rizzi 1990) also rules this example out due to the unavailability of the binding relation, or the lack of referential indexation, between the variable and the wh-phrase. The MP accounts for such illicit structures in terms of the assumption that the wh-phrase *miin* 'who' binds the closest variable, which is the resumptive pronoun, not the trace *t*. To account for the grammaticality of the example in (212), in contrast to the one in (215), the analysis of the resumptive pronoun as a non-pronominal copy of the moved element is extended to the pronoun *huwwa* within co-ordinate structure (see Chapter 5).

By definition, a trace is phonetically null (i.e. unrealised) as it inherits all the properties of the constituents with which it is co-indexed. In recent development of the theory, traces are viewed as unpronounced copies of moved constituents (Haegeman 2007). The trace and the moved element form a chain. Chomsky (1995: 228) proposes the Inclusiveness Condition which suggests that a structure formed by a computation comprises the elements present in the lexical items chosen for the numeration N. In the MP, no new objects are added in the course of derivation. What is allowed is a re-arrangement of the lexical items. Accordingly, the MP excludes indices and traces which suggest creating new objects.

Bošković & Nunes (2007) hold the view that the copy theory conforms to Chomsky's Inclusiveness Condition. They argue that the copy theory achieves harmony with the MP via replacing traces by copies. Hence, the grammar is simplified by dealing with copies as lexical items or complex objects built from these lexical items, while no new items are added: an idea which is in line with the basic assumptions of the MP.

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[42]Chomsky (1995:79) refers to head-government and antecedent-government as categories of proper government. He argues that for a chain to be properly formed, the following conditions on government have to be met.
   (i) γ is a barrier dominating β
   (ii) γ intervenes between α and β

Bošković & Nunes (2007) argue that there is cross-linguistic variation regarding which part of the chain that is realised. Most languages have the highest part of the chain phonetically realised (as in English), whereas other languages have the lower copy Spelled-Out. In some languages, which EA is argued to be one of them, the multiple copies are pronounced. The example in (212) is repeated below.

(216) miin illi Ali šaaf-uh$_i$ huwwa$_i$ wi Ahmed f-i-l-maTaar?
who that Ali see (3SM.PAST)-him he and Ahmed in-the-airport
'*Who is the one that Ali saw him and Ahmed at the airport?'

Based on the above discussion, I claim that in (216), the chain is formed between the moved element (i.e. the wh-phrase *miin* 'who') and two copies: one is Spelled-Out as a resumptive pronoun (as suggested in Chapter 5), the other is Spelled-Out as a full pronoun. The two copies share the properties of the moved element with which they are co-indexed. In the case of extraction out of a co-ordinate structure, the resumptive pronoun and the full pronoun are Last Resort options which enhance conditions on derivation and representation.

In (216), the movement of the wh-phrase leaves behind a copy which is Spelled-Out as a full pronoun to satisfy the Co-ordinate Structure Constraint which bans extracting an element out of it, and the requirement that no element within the co-ordinate structure is null in EA.

The question now is why the two copies of the wh-phrase are not identical? To answer this question, I assume Koppen's (2007) proposal that copies of movement are place holders of the moved wh-phrase. Koppen (2007: 343) refers to this idea as reduced copy theory whereby he argues that only the feature specification of the moved item is Spelled-Out. So, he concludes that the Spelled-Out copies can be distinct from (or not identical to) the moved element. He views the proposal that only part of the moved element is copied to be a more economical operation. When this wh-phrase moves, the only information which needs to be copied is the information which links the moved wh-phrase (i.e. the head of the chain) to the copies it leaves behind (p. 342). When the wh-phrase moves, its feature bundle is copied, and hence the copy is generated. In EA, the argument wh-phrase carries the [+nominal] feature; when it moves, this feature is copied as the pronoun *huwwa* 'he' which was argued earlier to bear the [+nominal]

feature. The feature specification of the argument wh-phrase is Spelled-Out as a pronoun which shows phi-features agreement with the moved wh-phrase.

The idea is that a copy of the moved element is left behind inside the co-ordinate structure and is Spelled-Out as a full pronoun which is needed to satisfy the economy principles can be simplified by the following representation:
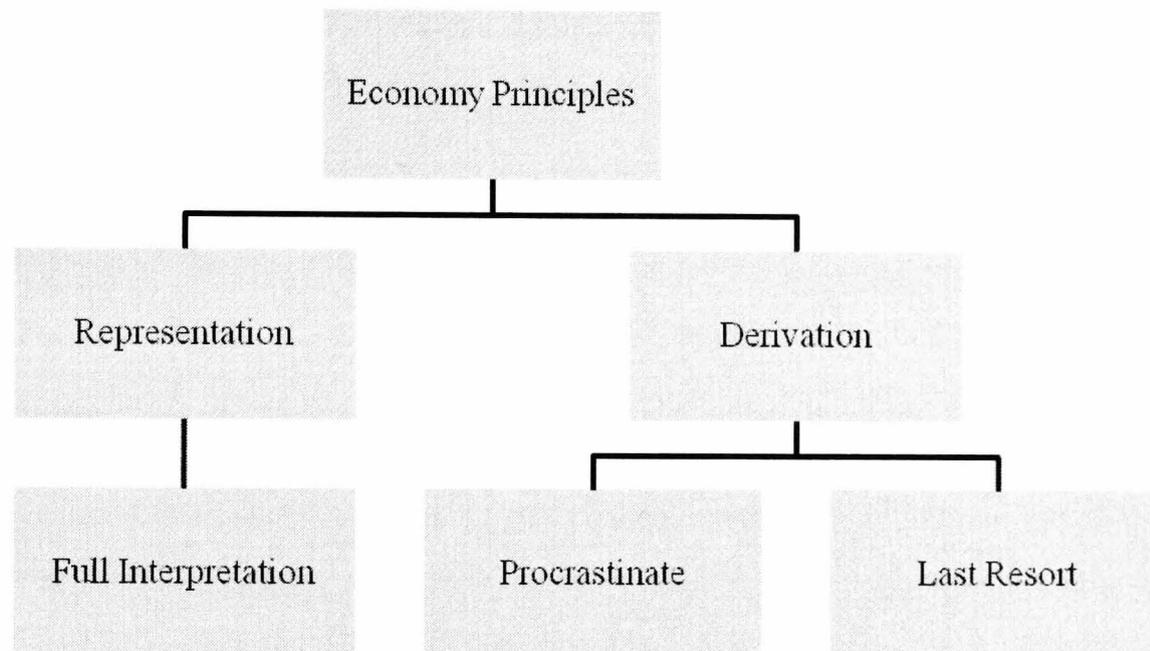
Chomsky (1995: 200) argues that economy principles must apply to representations and derivations. With representations, the economy principles are embodied in the principle of Full Interpretation which necessitates that for a derivation to be fully interpreted, it should converge at LF and PF. If the derivation does not receive proper interpretation, it crashes as in (217) where the trace is not Spelled-Out as a full pronoun.

(217) * miin$_i$ illi   Ali   šaaf-uh$_i$ t$_i$ wi   Ahmed   f-i-l-maTaar?
        who   that   Ali   see (3SM.PAST)-him   and   Ahmed   in-the-airport
        '*Who is the one that Ali saw him and Ahmed at the airport?'

As for economy of derivations, two operations are needed: Procrastinate and Last Resort. According to the Last Resort principle, if a necessary step is not taken, the derivation does not converge and is doomed to crash. The Spell-Out of the trace takes place as a 'Last Resort' option to save the structure from crashing. In this respect the

obligatory occurrence of the pronoun *huwwa* helps to improve conditions on derivation and representation. Within EA, multiple traces left behind as the result of extracting out of a co-ordinate structure have to be phonetically realised in order to produce a convergent derivation.

To conclude, this section looked at the role of overt pronouns within wh-questions where it was argued that these pronouns are question-particles. The pronouns also play a crucial role in wh-extraction out of co-ordinate structures; they are the Spelled-Out copies of the moved wh-phrases which enhance conditions on derivation and representation.

6.7 Conclusion

In the present chapter, I argued that the Focus projection which hosts extracted wh-phrases is different from the complementiser projection (i.e. CP) which hosts the complementiser *inn* 'that'. I analysed the structure of relative clauses and employed some minimalist assumptions to account for them. I discussed the role of *illi* within relative clauses and wh-questions. In this chapter, I argued that the grammar of EA has an independent projection (FocusP) for *illi*-questions where argument wh-phrases are the specifiers. Other *illi*-questions with final arguments were analysed. I suggested that *illi*-questions are instances of [Topic...Focus...] structures. I also reviewed some theories of Focus and gave examples of some languages whose wh-questions are analysed in terms of Focus.

In Chapter 5, I discussed some syntactic properties of extracted wh-questions (*illi*-questions) where argument wh-phrases showed violation of some syntactic islands. In the present chapter, I proposed a Focus analysis for *illi*-questions where argument wh-phrases were argued to carry Contrastive Focus which triggers their movement to the Spec of FocusP. The proposal that focused elements are liable to violate island constraints is not a language-specific parameter; focused constituents in some languages such as Japanese are also insensitive to syntactic island, as discussed by Nishigauchi[43]

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[43] Nishigauchi (1990: 10) argues that within some Japanese wh-questions, the QP *ka* forms a wh-island by heading the complement clause of some wh-phrases as in the following example:

(i) Tanaka-kun-wa [dare-ga   nani-o   tabe-ta -ka] oboe-te-i-masu-ka?
     Tanaka-TOP   who-NOM what-ACC eat-PAST QP remember is   QP
     'Does Tanaka know who ate what?'

(1990). The Focus constituent, which is formed by the wh-phrase in Spec FocP, is licensed by the insertion of *illi* which creates a structural specified Focus position for the moved wh-phrase. Table 1 sum up the syntactic distribution of *illi* within different syntactic structures.

Table1. The distribution of *illi* in EA

The structure	Obligatory	Optional
Wh-questions Fronted subject wh-phrases		X
In-situ subject wh-phrases	X	
Fronted object wh-phrases	X	
In-situ object wh-phrases		X
Relative Clauses Subject Relatives	X	
Direct Object Relatives	X	
Indirect Object Relatives	X	
Object of PP Relatives	X	
Topicalisation out of embedded wh-questions Fronted subject wh-phrases		X
In-situ subject wh-phrases		None
Fronted object wh-phrases		X
In-situ object wh-phrases		X

Wh-questions which shared the same numeration were compared in terms of economy of derivation. They were argued not to show genuine optionality as each structure was derived by a distinct feature. The chapter concluded with analysing a further possible wh-question where overt pronouns such as *huwwa* 'he' and *hiyya* 'she' initiate *illi*-questions. It was proposed that these pronouns head a new projection which is, in Rizzi's (1997) sense, looking at the outside of the structure; this projection is [Force P]. I distinguished between syntactic Focus marking for *illi*-questions (which takes place via the formation of the Focus projection) and optional morphological Focus marking (which takes place via the use of [+Focus] particles such as *huwwa*). The following table shows the distribution of *huwwa* in some syntactic structures:

If the wh-phrase *dare-ga* 'who' is focused, it obtains wide scope and cross over the wh-island as seen below:
    (ii) Tanaka-kun-wa [DARE-ga nani-o tabe-ta-ka] oboe-te-i-masu-ka?
        For which x, x a person, does Tanaka know what x ate.

Table2. The distribution of *huwwa* in some syntactic structures

The structure	Position	Function
Non-interrogative sentences	Initial	S/O[44] Pronoun
	Non-initial	S/O Pronoun
Wh-questions	Initial	question-particle
	Non-initial	S/O Pronoun
Yes/no questions	Initial	question-particle
	Non-initial	S/O Pronoun

To conclude, wh-in-situ and wh-extraction in EA are licensed differently; the former is licensed via LF movement of an operator which carries the [wh] feature to the Spec CP due to the weak [+wh] feature on wh-phrases. The latter is Focus-licensed by a functional Focus head. The two strategies of question formation do not demonstrate genuine optionality as each strategy generates derivations that carry certain presuppositions; hence they are interpretatively very dissimilar.

So far, Chapters 5 and 6 focused on analysing argument wh-phrases in both *in situ* and fronted positions. In the following chapter, I will consider the other type of wh-phrase (i.e. adjunct wh-phrases) and will account for the way in which they behave in both fronted and *in situ* options.

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[44] S/O pronoun stands for a subject or object pronoun.

Chapter 7: Analysis of Adjunct wh-questions in EA

7.1 Introduction

In Chapters 5 and 6, two strategies for forming argument wh-questions were examined: one with a wh-in-situ as in (1), and the other with an argument wh-phrase extracted to an initial position and obligatorily followed by *illi* as in (2).

(1)   Salim   'ara   eeh?
        Salim   read (3SM.PAST)   what
        'What did Salim read?'

(2)   eeh   illi   Salim   'aara-ah?
        what   that   Salim   read (3SM.PAST)-it
        'What did Salim read?'

A third possibility was also discussed which involved topicalising the *illi*-clause as in (3).

(3)   illi   Salim 'aara-ah   eeh?
        that   Salim read (3SM.PAST)-it   what
        'What did Salim read?'

In Chapter 6, a Contrastive Focus movement analysis was proposed for *illi*-questions and Rizzi's (1997) structure of the left periphery was adopted. In the present chapter, I will discuss the other type of wh-phrase, namely wh-adjuncts exemplified below.

(4)   a. fataHt   il-baab   izzayy?
           open (2SM.PAST)   the-door   how
           'How did you open the door?

          b. izzayy fataHt   il-baab?
           how   open (2SM.PAST)   the-door
           'How did you open the door?

(5)   a. Ali   xarag   leeh?
           Ali   go (3SM.PAST)   why
          'Why did Ali go out?'

          b. leeh   xarag   Ali?
           why   go (3SM.PAST)   Ali
          'Why did Ali go out?'

(6)   a. in-natiiga   ha-tiTla^c   imta?
           the-result   will-appear (3SF.INFIN)   when
           'When will the result be announced?'

     b. imta   ha-tiTla^c   in-natiiga?
        when   will-appear (3SF.INFIN)   the-result
        'When will the result be announced?'

(7)   a. Ali   la'a   il-kitaab   feen?
          Ali   find (3SM.PAST)   the-book   where
          'Where did Ali find the book?'

     b. feen   la'a   Ali   il-kitaab?
        where find (3SM.PAST) Ali   the-book
        'Where did Ali find the book?'

As illustrated by the examples in (4)-(7), wh-adjuncts seem to be more problematic since they give rise to the apparent optionality which the present study refutes. In the (a) examples, wh-adjuncts appear *in situ*, while in the (b) examples they are fronted. The above data raise the following questions:

- How do wh-adjuncts behave regarding syntactic islands and extraction?
- How can apparent optionality be accounted for?
- How can the fronted and the *in situ* wh-adjuncts alternate without the insertion of elements such as *illi* and the resumptive pronoun?

In the present chapter, I will claim that movement of wh-adjuncts is triggered by a Contrastive Focus feature: the type of feature suggested in Chapter 6 to attract argument wh-phrases. I will postulate that the fronting of wh-adjuncts is the result of a movement operation which will be dealt with on a par with wh-movement (the two movement operations are instances of operator-movement as suggested by Tsimpli (1995). In addition, I will claim that a fronted wh-adjunct acts as an operator which undergoes Focus movement to the Spec of Focus, leaving behind a variable which defines its scope. As for *in situ* wh-adjuncts, I will extend the analysis proposed for *in situ* argument wh-phrases to them.

The chapter is divided as follows: section 2 offers some descriptive generalisations on adjunct wh-questions; section 3 reviews some previous analyses of the fronting of wh-adjuncts; section 4 investigates the behaviour of wh-adjuncts with respect to the

standard constraints on movement; section 5 discusses how *in situ* wh-adjuncts are interpreted and assign scope; section 6 provides a Focus-based analysis for fronted wh-adjuncts; section 7 investigates the structure of the Focus projection within adjunct wh-questions; section 8 discusses the phenomenon of scrambling which occurs within some adjunct wh-questions, and accounts for some wh-questions having the consecutive structure [TopicP FocusP]; and finally section 9 sums up and concludes the chapter.

7.2 Some descriptive generalisations on adjunct wh-questions

The first observation drawn from the examples in (4)-(7) is subject-verb inversion. The examples in (7) are repeated below for expository purposes.

(8) a. Ali la'a   il-kitaab   feen?
         Ali find (3SM.PAST) the-book   where
         'Where did Ali find the book?'

     b. feen la'a   Ali   il-kitaab?
        where find (3SM.PAST) Ali   the-book
        'Where did Ali find the book?'

Subject-verb inversion is observed in other languages such as English and Hungarian. In English, Rizzi (1990) argues that subject-verb inversion takes place when the adjunct wh-phrase is moved as in (9).

(9)   How did he come *t*?

                 (Rizzi 1990: 46)

The adjunct trace has to be properly governed by the verb, so subject-verb inversion takes place to allow head-government. The EA data presented in (4)-(7) show that the fronting of the adjunct wh-phrases is accompanied by subject-verb inversion. I argue, along the lines suggested for Modern Greek by Tsimpli (1995), that when a wh-phrase is focused, the F morpheme which is compatible with the Q morpheme attracts the verb to the F position resulting in subject-verb inversion. Thus, the result is a structure similar to the Modern Greek example in (10a). In Berber, the F morpheme has an overt realisation, and it has to be affixed to a proper head. When the subject and the verb invert, the F morpheme becomes affixed to the verb as in (10b).

(10) a. Pjon idhe i Maria? (Modern Greek)
      whom see (3S.PAST) the-NOM Maria
      'Who did Maria see?'

  b. MOHAND ay-zri-gh. (Berber)
      Mohand FM-saw-I
      'I saw MOHAND.'

(Tsimpli 1995: 187-199)

The second observation drawn from the EA data is that wh-adjuncts, in contrast to wh-arguments, can neither co-occur with *illi* nor become co-indexed with resumptive pronouns. This poses a challenge for the present analysis because if fronted wh-adjuncts are claimed to move to the Spec of Focus, it is crucial to investigate how the Focus projection is licensed, and what element heads it. Recall that in Chapter 6 *illi* was argued to head the FocusP. In Jordanian Arabic, as discussed in Chapter 6, Section 6.2, Al-Momani (2010) ascribes the feature [+definite] to *illi* based on the idea that its occurrence is restricted to nominal heads. Shlonsky (1992), on the other hand, argues that *illi* bears [+predicational] features. In EA, the impossibility of *illi*-insertion or the cliticisation of resumptive pronouns within adjunct wh-questions is one of the results of the experimental study carried out in Chapter 3; the EA informants judged the structures where *illi* co-occurs with the adjunct wh-phrases to be ungrammatical; some of these structures are repeated below:

(11) a. *feen illi šaari^c is-sawra ?
          where that street Al-Sawra
          'Where is Al-Sawra street?'

  b. * leeh illi ^camal il-Hadsa?
          why that did the-accident
          'Why did he make the accident?'

  c. *izzayy illi raaH il-mustašfa?
          how that go (3SM.PAST) the-hospital
          'How did he go to the hospital?'

  d.* imta illi il-Hadsa HaSalit?
          when that the-accident took place
          'When did the accident take place?'

Regarding the impossibility of establishing a co-referential relation between *illi* and wh-adjuncts in EA, Cheng (1997: 63) argues that "the absence of *illi* in adjunct wh-fronting remains a mystery", while Wahba (1984) left this issue unaddressed. In this regard, I propose that *illi* co-occurs with arguments in A-positions by virtue of bearing a cluster of the following features: [+nominal], [+predicational] and [+definite]. Thus, *illi* has to be co-indexed with elements in A-positions (i.e. argument NPs) as illustrated by the following examples:

(12)   a. il-walad$_i$ [$_{CP}$ illi   Mona   Darabit-uh]$_i$ [+nominal]
             the-boy   that   Mona   hit (3SF.PAST)-him
             'the boy whom Mona hit'

        b. miin$_i$ [$_{CP}$ illi   Mona   Darabit-uh]$_i$ [+predicational]
             who   that   Mona   hit (3SF.PAST)-him
             'Who did Mona hit?'

        c. *walad$_i$ [$_{CP}$ illi   Mona   Darabit-uh]$_i$ [-definite]
             boy   that   Mona   hit (3SF.PAST)-him
             'a boy whom Mona hit'

In (12a), *illi* is associated with a nominal head; it links a preceding head (i.e. the NP *il-walad* 'the boy') to a following predicate (i.e. the IP *Mona Darabit-uh* 'Mona hit him'). In (12b), *illi* heads a CP which is the predicate of the subject wh-phrase *miin* 'who'. In (12a & b), Spec-Head agreement which necessitates that the head shares the same features with its maximal projection and agrees with its specifier is established (as suggested by Chomsky (1995: 80)). The ungrammaticality of (12c) is due to the co-indexation of *illi* with an indefinite NP. Since adjunct phrases are A'-elements, they cannot be co-indexed with *illi* as in the following illicit structure:

(13)   *il-walad$_i$ [$_{CP}$ illi   Mona   Darabit-uh   [$_{PP}$ b-l-^{c}aSaaya]$_i$]
             the-boy   that   Mona   hit (3SF.PAST)-him   with-the-stick
             'the boy whom Mona hit with the stick'

In the above example, the prepositional phrase *b-l-^{c}aSaya* 'with the stick' does not predicate on the subject NP *il-walad* 'the boy'. It conveys information about the manner of the action expressed by the verb *Darabit* 'hit'; hence, it cannot be co-indexed with a nominal head.

I will now present an interesting example where an adjunct wh-phrase can be followed by *illi*, but is not co-indexed with it. In an example like (14), the adjunct wh-phrase *feen* 'where' can be followed by a nominal head.

(14) feen   il-kitaab?
     where   the-book
     'Where is the book?'

If the NP *il-kitaab* is modified by a relative clause, the result will be the wh-question in (15a). When the head of this restrictive relative clause is deleted (the symbol Ø appears in lieu of the non overt head of the relative clause), the resultant structure has a wh-adjunct *feen* 'where' followed by a headless relative clause as in (15b).

(15)   a.feen   il-kitaab$_i$ illi   Mona   ištarat-uh$_i$?
         where   the-book   that   Mona   buy (3SF.PAST)-it
         'Where is the book that Mona bought?'

       b. feen   Ø$_i$ illi   Mona   ištarat-uh$_i$?
          where   that   Mona   buy (3SF.PAST)-it
          'Where is the thing that Mona bought?'

This is one possibility of having a structure which comprises an adjunct wh-phrase followed by *illi*; below is a further example:

(16)   imta   Ø$_i$ illi   itmanneet-uh$_i$ yitHa'a?
        when   that   wish (1S.PAST)-it   come true
        'When will (my wishes) that I dreamed of come true?'

In (15b) and (16), *illi* is associated with nominal heads which are non overt. Based on this argument, I conclude that wh-adjuncts are non-nominal elements that cannot co-occur with *illi*. In (15b) and (16), although *illi* follows adjunct wh-phrases, it is still not co-indexed with them.

Further observation about wh-adjuncts in EA is that they show the *that*-trace effect under certain conditions. In English, the overt complementiser 'that' in subject wh-questions, in contrast to object, wh-questions, gives rise to *that*-trace effect as in (17).

(17)   a.*Who did you say [$_{CP}$ that [$_{IP}$ t left yesterday]]

b. Who did you say [cp t' *e* [ip t left yesterday]]

(Chomsky 1995: 86)

Chomsky assumes that the null complementiser in (17b) allows the wh-phrase *who* to move across the lower [Spec CP] position. The null complementiser represented by *e* is assumed to agree with *t'* and this agreement results in the features of *e* to pass on to *t'* which can now license the trace *t*. The feature sharing cannot take place with the position of the complementiser filled with *that*, giving rise to *that*-trace effect[1]. In the following object wh-question, the object trace is properly head-governed by the verb since nothing intervenes between the verb and the object trace.

(18)   Who$_i$ did you say t$_i$ that Jane met?

In the following adjunct wh-questions, *that*-trace effects disappear:

(19)   a. How did you think (that) John fixed the car?

b. [cp how$_i$ did [ip you think [cp t'$_i$ that [ip John fixed the car t$_i$]]]]

c. [cp how$_i$ did [ip you think [cp t'$_i$ e [ip John fixed the car t$_i$]]]]

(Ouhalla 1999: 268)

Chomsky (1995) argues that in (19), the complementiser 'that', which is semantically empty, does not affect the interpretation. When the complementiser is eliminated in LF component, the adjunct trace can be head-governed by the verb. Thus, adjunct traces are head-governed at LF in a manner similar to the head governing of argument traces.

EA wh-adjuncts, contrary to their English counterparts, give rise to the *that*-trace effect under certain conditions. In the following example, although the adjunct trace is head-governed by the verb, the occurrence of the complementiser *inn* 'that' in the embedded

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[1] Rochemont & Culicover (1990) account for the subject/object asymmetry evident in the *that*-trace effect in terms of the fact that objects are always lexically governed, hence the grammaticality of the example in (i). They further suggest that the only way for English subjects to satisfy the ECP is via antecedent government which is blocked by the occurrence of the complementiser 'that' in (ii).

(i)   Who do you think *t* left?

(ii)   *Who do you think that *t* left?

(Rochemont & Culicover 1990:11)

Spec CP blocks the extraction of the wh-phrase *izzayy* 'how', hence the ungrammaticality of the structure.

(20) *izzayy$_i$ ^{c}irfit   Mona   inn Ali   ha-ysaafir   t$_i$?
      how know (3SF.PAST) Mona   that Ali   will-travel (3SM.INFIN)
      'How$_i$ did Mona know that Ali will travel t$_i$?'

If the wh-adjunct in the above example is associated with the main verb ^{c}*irfit* 'knew', it can be extracted crossing over the embedded Spec CP position occupied by *inn* 'that' as in (21).

(21) izzayy$_i$ ^{c}irfit   Mona t$_i$ inn   Ali   ha-ysaafir t$_i$?
      how know (3SF.PAST) Mona   that Ali   will-travel (3SM.INFIN)
      'How$_i$ did Mona know t$_i$ that Ali will travel t$_i$?'

Thus, the contrast between the examples in (20) and (21) imply that wh-adjuncts do not give rise to the *that*-trace effect when associated with main verbs, rather than embedded verbs.

A final note about wh-adjuncts in EA (which is a non-language specific property of wh-adjuncts) is that they cannot remain *in situ* within a wh-island in both matrix and embedded questions. The following examples illustrate that *in situ* wh-adjuncts yield ungrammaticality.

(22) * Who fainted when you behaved how?

          (Reinhart 1998:31)

(23) *Ali ^{c}irif   miin illi fataH   il-baab   izzayy.
      Ali know (3SM.PAST) who that open (3SM.PAST) the-door how
      '*Ali knew who opened the door how.'

Summarizing, in this section, I described adjunct wh-questions and offered the following generalisations: (1) wh-adjuncts show apparent optionality as they can either get fronted or remain *in situ*; (2) in adjunct wh-questions, subject-verb inversion takes place; (3) wh-adjuncts cannot be co-indexed with *illi*; (4) wh-adjuncts do not give rise to the *that*-trace effect when associated with matrix verbs; and (5) wh-adjuncts cannot remain *in situ* within a wh-island.

7.3 Previous accounts of wh-adjuncts in EA[2]

In the previous section, I claimed that when adjunct wh-phrases are associated with embedded verbs, they cannot be extracted over the complementiser *inn* 'that'. Wahba (1984) discusses similar ungrammatical examples which show the ban against extraction out of embedded tensed clauses as seen below.

(24) *imta   iftakarit   Mona [e$_i$ inn baba xarag   e$_i$]]]?
      when   think (3SF.PAST) Mona   that father leave (3SM.PAST)
      'When did Mona think that father left?'

      (Wahba 1984: 27)

To account for the ungrammaticality of the structure in (24), Wahba (1984) proposes the Tense Locality Requirement whereby she presumes that a wh-adjunct cannot be extracted out of embedded tensed clauses. She argues that wh-phrases in EA undergo movement at LF which is similar to movement in syntax. In the above ungrammatical structure, tense blocks LF movement of the wh-phrase to the appropriate Comp (C in later development of the theory).

Osman (1990) investigates adjunct wh-questions and refers to them as non-nominal wh-questions. She suggests that this type of wh-question obeys the various constraints on movement such as the Complex NP Constraint and the Co-ordinate Structure Constraint (these constraints will be discussed in the following section). She concludes that non-nominal wh-questions are derived by the operation Move alpha. For expository purposes, one of the ungrammatical structures which Osman discusses is presented below.

(25) a. *feen$_i$ sadda'   [Ali [Hikaayit [inn   Mona raaHit t$_i$]]]]]]
         where believe (3SM.PAST) Ali   story   that   Mona go (3SF.PAST)
      '*Where did Ali believe the story that Mona went?'

      (Osman 1990: 149)

---

[2]The basic assumptions of the works cited here are presented in Chapter 1.

Cheng (1997) analyses the fronting of the wh-adjuncts in EA as the result of a topicalisation process, while wh-arguments are base-generated as subjects of cleft structures. In her view, since *illi* and the resumptive pronouns are not part of topicalised constructions, they cannot co-occur with the fronted wh-adjuncts. Cheng (1997) argues that adjuncts cannot be clefts because in the following structure, it is not possible to establish a co-indexation relation between the clefted constituent and the empty operator in the predicate sentence: an option which is available only for argument wh-phrases.

(26) $[_{CP}$ XP$_i$ $[_{CP}$ Op$_i$ COMP $[_{IP}...t_i]]$

                     (Cheng 1997: 62)

To summarise: Wahba (1984) argues that fronted wh-adjuncts in EA undergo movement at LF which is similar to movement in syntax. Osman (1990) holds the view that they are derived by the operation of Move alpha. Cheng (1997) claims that fronted wh-adjuncts are the result of a topicalisation process. In the following section, I will investigate how wh-adjuncts behave with respect to various constraints on movement, and will see which of these constraints the fronted wh-adjuncts are subject to.

7.4 Wh-adjuncts and the constraints on movement

Rizzi (2001: 96) argues that "it is a general property of adjuncts that they are immune to extractability, whether from wh-island or other types of syntactic island". In this section, I will examine how EA wh-adjuncts behave with respect to the Subjacency Condition[3] and the constraints subsumed under it. Recall that in Chapter 5, argument wh-questions were argued to show island violations by virtue of having some elements such as *illi* and the resumptive pronouns, and this led to the conclusion that they involve no wh-movement in their derivation. Now, let us start with the following adjunct wh-questions:

(27)   *leeh$_i$ sa'alit   Mona miin illi   xarag   t$_i$?
         why   ask (3SF.PAST) Mona who that go (3SM.PAST)
         '*Why$_i$ did Mona ask [who went out t$_i$]?'

---

[3] Chomsky (1977) argues that for the Subjacency Condition to be satisfied, no phrase can move from the position Y to X or from X to Y as in (i):
(i)   ...X...$[_\alpha$ ... $[_\beta...Y...]$ ... $]$ ... X ..., where α and β are cyclic nodes

(28) *imta_i ᶜirfit   Mona fikrit inn Ali ha-ysaafir   MaSr t_i?
      when know (3SF.PAST) Mona idea that Ali will-travel (3SM.INFIN) Cairo
      '*When_i did Mona know [the idea that Ali will travel to Cairo t_i]?'

(29) *leeh_i xaragit   Mona baᶜdama il-mudiir   rafad-ha   t_i?
      why go (3SF.PAST) Mona after   the manager fire (3SM.PAST)-her
      '*Why_i did Mona go out [after the manager fired her t_i]?'

In (27), the Wh-Island Constraint is violated as the wh-phrase *miin* 'who' occupies the embedded Spec CP position. The wh-phrase *miin* 'who' blocks the movement of the wh-adjunct *leeh* 'why' to the matrix Spec CP (later in the chapter, I will claim that the fronted wh-adjunct occurs in a FocusP, rather than a CP). The wh-question in (28) asks when Ali will travel to Cairo, not when Mona knew the idea that Ali will travel to Cairo. The ungrammaticality of this example is due to the violation of the Complex NP Constraint which bans wh-extraction out of a complex NP. In this example, the wh-adjunct trace is not head-governed; it is not antecedent-governed either, due to the occurrence of the complementiser *inn* in the lower [Spec CP] position (as illustrated earlier, the *that*-trace effect appears when the wh-adjunct is associated with embedded verbs). The example in (29) violates the Adjunct-Island Constraint by extracting out of the adjunct island headed by the adverbial *baᶜdama* 'after'. In this example, the movement of the wh-adjunct *leeh* 'why' across the embedded Spec CP position is blocked by the adjunct phrase *baᶜdama* 'after'.

If the wh-adjuncts in (27)-(29) are claimed to have moved from their base-generated positions to A'-positions (i.e. the matrix Spec CP), this movement also violates Relativized Minimality (Rizzi 1990) which bans the movement of an element over a Spec CP position already filled by another element. In these examples, the movement of the wh-adjuncts crosses the embedded Spec CPs which are occupied by the wh-phrase *miin* 'who, the complementiser *inn* 'that' and the adjunct *baᶜdama* 'after' respectively. On the other hand, Relativized Minimality views the ungrammaticality of these examples as being the direct result of the impossibility of establishing a referential index, or a government relation between the fronted wh-adjuncts and their variables due to the intervening heads. In Relativized Minimality, the long distance between the variable and its operator results in the variable not being properly governed.

Thus, the ungrammaticality of adjunct wh-extraction can be justified in terms of the standard constraints on movement and Relativized Minimality. In the MP, more economical derivations always win; the most economical derivations involve the shortest steps. This would in turn satisfy the economy condition on derivations. Thus, the wh-adjuncts in the above illicit structures need to be co-indexed with the matrix clause as in the following licit wh-questions:

(30) imta$_i$ ^{c}irfit   Mona t$_i$ fikrit inn Ali ha-ysaafir   MaSr?
      when know (3SF.PAST) Mona   idea that Ali will-travel (3SM.PRES) Cairo
      'When did Mona know the idea that Ali will travel to Cairo?'

(31) feen$_i$ ^{c}irfit   Mona t$_i$ fikrit inn Ali ha-ysaafir   ba^{c}d šahr?
      where know (3SF.PAST) M.   idea that A. will-travel (3SM.PRES) after month
      'Where did Mona know the idea that Ali will travel after a month?'

(32) leeh$_i$ xaragit   Mona t$_i$ ba^{c}dama il-mudiir   rafad-ha?
      why go (3SF.PAST) Mona   after   the manager fire (3SM.PAST)-her
      'Why did Mona go out after the manager fired her?

Chomsky (1995) argues that an XP which is not a complement of a head H, or a specifier of the complement of H, is a barrier for government as in the following example:

(33) *I wonder how$_i$ [John met someone [$_{XP}$ who [fixed the car t_i]]]]

            (Chomsky 1995: 79)

In the MP, antecedent-government is a condition on the formation of a proper chain. Head-government and antecedent-government are categories of proper government; therefore, for a chain to be properly formed, the following conditions have to be met:

α governs β if there is no γ that protects β from government by α. γ protects β if:

(34) a. γ is a barrier dominating β

      b. γ intervenes between α and β

            (Chomsky 1995: 79)

Following these minimalist assumptions, I propose that in (30)-(32), although the subject NP 'Mona' is there, the traces are antecedent-governed by the verb and the chains are properly formed. One way to account for this view is to suggest that the wh-adjuncts have first moved from their *in situ* position whereby the traces were head-governed by the verb forming proper chains. The following step involved subject-verb inversion, and hence there is no barrier for government.

The MP accounts for the following contrast in terms of economy considerations:

(35)   a. izzayy$_i$ [^{c}irif   Ali t$_i$ miin illi fataH   il-baab]?
           how   know (3SM.PAST) Ali   who   that open (3SM.PAST) the-door
           'How$_i$ did Ali know t$_i$ who opened the door?'

       b.* izzayy$_i$ ^{c}irif   Ali [miin illi fataH   il-baab t$_i$]?
           how   know (3SM.PAST) Ali   who   that open (3SM.PAST) the-door
           'How$_i$ did Ali know who opened the door t$_i$?'

       c. Ali ^{c}irif   miin illi fataH   il-baab izzayy?
           Ali know (3SM.PAST) who   that open (3SM.PAST) the-door how
           'How did Ali know who opened the door?'

The wh-adjunct *izzayy* 'how' in (35b) cannot move to the Spec CP position due to the occurrence of the wh-phrase *miin* 'who' in the embedded Spec CP. Within the embedded wh-question (which is the complement of the verb ^{c}*irif* 'knew'), the wh-adjunct has to remain *in situ* whereby it assigns embedded scope. If the wh-adjunct has wide scope over the whole structure, it can move to the Spec CP position; however, this movement is less economical as it does not meet the minimalist condition on movement which favours the Shortest Move. Accordingly, the structure whereby the wh-adjunct is interpreted and assign wide scope in its *in situ* position is more preferable as in (35c). Having investigated the behaviour of wh-adjuncts with respect to the standard constraints on movement and the economy considerations called for by the MP, it can be concluded that wh-adjuncts, in contrast to wh-arguments, are island sensitive.

In Chapter 2, the way optionality contradicts the basic assumptions of the MP regarding the nature of wh-movement was outlined. In the MP, movement to the Spec CP position must be a Last Resort operation which saves the structure from crashing at PF and LF.

Assuming optionality suggests that wh-movement to the Spec CP position is not the only economical option since it can be replaced by a more economical derivation involving wh-in-situ. Wh-movement is consequently no longer optimal. Since the present study focuses mainly on cases that show apparent optionality, I will first examine the wh-in-situ strategy, and then the fronting of the wh-adjuncts will be accounted for.

7.5 The *in situ* wh-adjuncts

In this section, I will sum up the minimalist assumptions adopted in Chapter 5 for the analysis of argument wh-phrases *in situ*. Then, I adopt these assumptions for the analysis to adjunct wh-phrases *in situ*.

Under the realm of the MP, *Move* is defined as a morphologically-driven operation triggered by the need to check features. The operation *Move* is accompanied by two operations: substitution and adjunction. Overt movement involves the movement of formal features (FF) and the pied-piping of the whole category, or what is referred to as generalised pied-piping (Chomsky 1995: 262). Thus, when a [+wh] feature is raised to be checked, it pied-pipes the wh-phrase to its specifier position, and substitution is said to take place. Adjunction is represented by I to C raising as in 'Will you leave tomorrow?'

In wh-movement languages, the interrogative C carries a strong [+wh] feature. If the wh-feature is overtly raised alone, the result is a structure that crashes at PF. Therefore, overt raising which involves pied-piping of the whole wh-phrase is an economical option. To put it differently, for a derivation to converge at PF, overt movement which involves carrying the whole category has to take place. Chomsky (1995: 265) refers to the whole category as 'excess baggage' that needs to be carried along if it has phonetic output. The question now is that if overt movement is triggered by the need to check features, what makes it necessary for the whole category, rather than only features to move? The MP answers this question by assuming that if features move overtly, it yields structures that do not meet the Principle of Full Interpretation (FI) as they would crash at PF.

With covert movement, only functional categories (operators) which carry formal features (FF) can move. Since the PF condition is insignificant at LF, only formal features are allowed to move at LF. Thus, LF movement of [Op] satisfies the Procrastinate Principle; however, if the movement of the formal features yields a structure that crashes at PF, the Procrastinate Principle prefers overt movement to take place instead. Let us consider the following example followed by its structure:

(36)   a. I wonder why Jane left.

      b. I wonder [CP why$_i$ [C' c [IP Jane left t$_i$]]]

In the above examples, the verb 'wonder' subcategorises for [+wh] C: in (36b), the wh-adjunct 'why' has moved to check its [+wh] feature against C. If the [+wh] feature is moved and the whole category (i.e. the wh-phrase) is left *in situ*, the result will be the following illicit structure which crashes at PF:

(37)   *I wonder Jane left why?

In order to avoid the ungrammaticality of (37) and derive a structure that converges at PF (as in (36b)), overt movement is preferred to the [Op] movement. If, on the other hand, the [Op] movement yields a structure that converges at PF, overt movement (which involves the pied-piping of the whole category) is no longer needed. The MP generally excludes LF movement of wh-in-situ since this movement is more costly, the only exception being LF movement of [Ops] which bear formal features; this is the minimalist assumption that was adopted in the analysis of the wh-questions *in situ* within EA.

In Chapter 5, wh-arguments are presumed to carry weak [+wh] features which ban their movement to the [Spec CP] position. I extend this minimalist account to adjunct wh-phrases *in situ*, and propose that an adjunct wh-question *in situ* involves LF movement of an operator [Op] to the Spec CP position where the wh-phrase *in situ* is licensed and assigned scope.
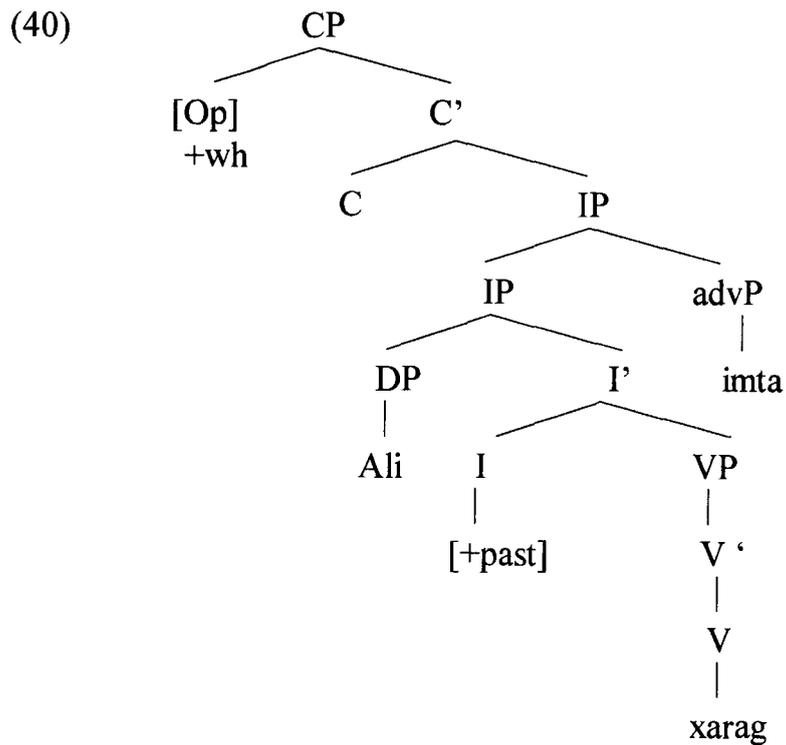
Like argument wh-phrases, adjunct wh-phrases carry weak [wh] features. Thus, the [wh] feature is raised at LF without pied-piping the whole category. The MP views raising without pied-piping as more economical if it yields a convergent derivation, but

it is meaningless if it yields a derivation that does not converge and crashes at PF. Based on the idea that all wh-phrases in EA can remain *in situ* and that the wh-in-situ strategy (which yields convergent derivations) is the most economical option in the MP, EA is argued to be a wh-in-situ language where wh-movement does not take place. The (a) examples in (4)-(7) show that all adjunct wh-phrases in EA can be left *in situ*; these examples are repeated below.

(38)   a. fataHt   il-baab   **izzayy**?
          open (2SM.PAST)   the-door   how
          'How did you open the door?

       b. Ali xarag   **leeh**?
          Ali go (3SM.PAST)   why
          'Why did Ali go out?'

       c. in-natiiga   ha-tiTla^c **imta**?
          the-result   will-appear (3SF.INFIN)   when
          'When will the result be announced?'

       d. Ali   la'a   il-kitaab   **feen**?
          Ali   find (3SM.PAST)   the-book   where
          'When did Ali find the book?'

To sum up, an adjunct wh-phrase has a weak [+wh] feature that prevents it from being attracted to C^0 which has a strong [+wh] feature. For checking purposes, the [Op] which carries a [+wh] feature that matches the feature on the *in situ* wh-adjunct moves at LF to Spec CP. Then its feature enters into a checking relation with the [+wh] feature of the wh-phrase *in situ*, yielding a derivation which converges at PF (as in (38)). Thus, adjuncts wh-in-situ questions are licensed and assigned scope in their base-generated. Accordingly, the wh-question in (39) will have the representation in (40):

(39)   Ali   xarag   imta?
          Ali   go (3SM.PAST)   when
          'When did Ali go out?'

(40)

```
                      CP
                   /      \
              [Op]         C'
              +wh        /     \
                        C        IP
                              /      \
                            IP        advP
                          /    \        |
                        DP      I'      imta
                        |      /   \
                        Ali   I      VP
                        |     |      |
                        [+past]      V '
                                     |
                                     V
                                     |
                                    xarag
```

At the outset of this chapter, some examples which illustrated that wh-adjuncts can either remain *in situ*, or is fronted were presented. In this section, I accounted for the wh-in-situ strategy by adopting the minimalist assumptions regarding the licensing of wh-in-situ. The next task is to account for the cases where wh-adjuncts overtly move. If two derivations are proved not to alternate, genuine optionality can be ruled out. Thus, I will argue against optionality by providing evidence that the *in situ* and the fronting strategies yield two syntactically different derivations that have two semantically different interpretations.

7.6 A Focus-based analysis of wh-adjuncts

This section aims at extending the Focus-based analysis proposed for argument wh-questions to the other type of wh-phrase, namely wh-adjuncts. In Chapter 6, Section 6.5, the classification of Foci into Information Focus and Contrastive Focus (É. Kiss 1995, 1998) was discussed; below is a brief note on the types of Foci distinguished in Chapter 6.

While Information Focus introduces new information (e.g. non-presupposed information) which is not known from previous discourse, and does not induce movement, Contrastive Focus conveys information previously shared in the discourse, and involves movement of the focused element into the specifier of a Focus projection

(FP). The head of the projection bears strong features. The element which bears Contrastive Focus assigns scope over the complement of the head of the projection. In Chapter 6, English and Hungarian examples which represent the two types of Foci were cited; some of these examples are repeated below.

(41)   a. It is to **LONDON** that we have gone.   (Contrastive Focus)

        b. We have gone to **LONDON**.   (Information Focus)

(42)   a. Tegnap este **MARINAK** mutattam   be   Petert. (Contrastive Focus)
            last   night Mary.DAT   introduced.I PERF Peter.ACC
            'It was **to Mary** that I introduced Peter last night.'

        b. Tegnap este be mutattam Petert **MARINAK**.   (Information Focus)
            'Last night I introduced Peter **to Mary**.'

                    (É. Kiss 1998: 247)

É. Kiss (1998) argues against assigning the same semantic structures to the two types of Foci represented by the Hungarian examples in (42). She holds the view that each type has its own structural position; in (42a), the focused preverbal NP *MARINAK* 'Mary' bears Contrastive Focus by virtue of meaning that 'among a set of persons present in the discourse, it was only Mary whom I introduced Peter to last night'. In (42b), the particle *be* and the postverbal focused NP *MARINAK* 'Mary' bear a pitch accent. In (42b), although Mary is presented as new (non-presupposed) information, the sentence does not imply the existence of a set of persons 'among whom I chose Mary to introduce Peter to last night'. For the examples in (42a), É. Kiss (1998) offers the following interpretation: "at the current point of discussion, the set of persons for whom it holds that I introduced Peter to them yesterday is under discussion, and it is stated that, among these persons, it holds for Mary that I introduced Peter to her yesterday".

In Chapter 6, movement of argument wh-phrases within *illi*-questions was claimed to be triggered by a Contrastive Focus feature. *illi*-questions were argued to have their own presuppositional force by virtue of having *illi* which bears [+nominal], [+definite] and [+predicational] features. É. Kiss's (1998) view that the Contrastive Focus in English is realised on cleft constructions, along with Cheng's (1997) proposal that EA *illi*-questions are instances of cleft constructions, supports our claim that movement in *illi*-

questions is triggered by a Contrastive Focus feature. The following are examples of a cleft construction and an *illi*-question which are both marked by Contrastive Focus:

(43)   a. It is to **London** that we have gone?

        b. **eeh**   illi   Mona   ištarat-uh?
           what   that   Mona   buy (3SF.PAST)-it
           'What did Mona buy?'[4]

I argued that the wh-phrase in (43b) bears a Contrastive Focus feature by virtue of supposing the existence of a set of items present in the discourse; Mona bought one of these items. Now, let us turn to the following adjunct wh-questions:

(44)   imta   safrit   Mona?
        when   travel (3SF.PAST) Mona
        'When did Mona travel?'

(45)   feen   la'a   Ali   il-kitaab?
        where find (3SM.PAST)   Ali   the-book
        'Where did Ali find the book?'

In order to ascertain whether or not the above examples, contrary to their *in situ* counterparts, have a presuppositional force, the following two-turn conversation will be considered:

(46)   SPEAKER A. a. Mona feen?
                     Mona where
                     'Where is Mona?'

        SPEAKER B. b. xaragit   maᶜa 'iSHab-ha.
                     go (3SF.PAST) with   friends-her
                     'She went out with her friends.'

        SPEAKER A. c. miin illi xaragit   maᶜah-um?
                     who that go (3SF.PAST)   with-them
                     'Who did she go out with?'

        SPEAKER B. d. Maha wi Farida.
                     'Maha and Farida.'

---

[4] I will not follow the cleft interpretation in the gloss of *ili*-question as stated in Chapter 6, n 25.

SPEAKER A. e. wi   imta   ha-tirga^c?
           and when will-return (3SF.PRES)
           'And when will she be back?'

SPEAKER B. f. Hawaali is-saa^{c}a sitta aw gaayiz tit'axar   šiwaya.
           about   clock six or maybe (become late) bit
           'At about six, or she may be a bit late.'

To account for the above conversation, I propose that when speaker A was seeking new information and he was not sure that his/her addressee holds the exact information about 'Mona', the wh-in-situ strategy is employed (as in a). Then, the answer provided by speaker B presupposes that he/she holds enough information which speaker A seeks (as in b). Consequently, speaker A forms a further question (as in c) by using an *illi*-question. The background part holds for the fact that speaker B has enough information from which speaker A wants to know the persons with whom Mona went out. The *illi*-question presupposes[5] the existence of a set of persons present in the discourse; Mona went out with some of them. The wh-question with the moved wh-adjunct in (e) presupposes the existence of a certain time at which Mona will be back: a time which speaker A presupposes that speaker B seems to know. Like the wh-question in (c), the Contrastive Focus marks the adjunct wh-question in (e).

The above two-turn conversation attempts to emphasise the semantic and the syntactic differences between the moved and the *in situ* wh-adjuncts repeated below:

(47)   a. imta safrit   Mona?
         when travel (3SF.PAST) Mona
         'When did Mona travel?

---

[5] To test the claim about the presuppositional force of fronted adjunct wh-phrases, I consulted a group of ten EA native speakers. I gave them the context (the conversation in (46)). Each wh-question was formed by using the in-situ and the fronted strategy. I asked them to decide which one they would choose if they presuppose that their addressee has the required information. I found that six out of ten chose to use the *in situ* strategy when they think that their addressee may not hold enough information, or may not be able to provide the answer. Some of the six informants commented that if they feel that their addressee holds the required information, they would seek an immediate answer, and would not bother giving a long wh-question (i.e. an *in situ* wh-question). So, they prefer to start their question with the wh-phrase to urge the addressee provides an immediate answer. Others also added that they view the *in situ* strategy as a way to precede the wh-phrase with a brief note about what they are going to ask about, so they expect 'I don't know' as a possible answer. Four informants who were presented with the two strategies accepted them both.

b. Mona safrit   imta?
  Mona travel (3SF.PAST) when
  'When did Mona travel?'

I postulate that the above examples are two different derivations which exhibit two different interpretations; in (47a), the wh-adjunct *imta* 'when' has moved to the Spec of Focus P whereby it is interpreted and assigns scope. This movement is triggered by a Contrastive Focus feature. Furthermore, the example presupposes the existence of a set of information on the part of the addressee, only the information about the time is picked up. This type of wh-question is claimed to be employed when the speaker presupposes that his/her addressee knows the answer.

In (47b), the wh-in-situ strategy is employed whereby the wh-adjunct is interpreted and assigns scope in its base-generated position. Following basic assumptions in the literature (e.g. Rochemont 1986; Culicover & Rochemont 1983; Horvath 1986; Sabel 2000 and Kidwai 1999), I assume that wh-expressions in EA are inherently focused, they bear Information Focus: a type of Focus which does not induce movement as suggested by É. Kiss (1998) among others. This explains why all wh-phrases in EA can remain *in situ*. The wh-question in (47b) presupposes that the addresser is seeking new information, and at the same time, he/she is not sure whether his/her addressee has the answer.

To summarise: when forming a wh-question with a fronted wh-adjunct (Contrastive Focus), the speaker presupposes that the addressee holds a set of information, from which only one piece of information is being sought. With wh-in-situ, this presupposition is absent and the speaker is seeking to know new information which the addressee may not hold. Accordingly, a negative answer to fronted adjunct wh-questions is not possible as seen below:

(48) SPEAKER A: imta safrit   Mona?
       when travel (3SF.PAST) Mona
       'When did Mona travel?

    SPEAKER B.#ma-ᶜandii-š   fikra.
       not-have (1SF/M. PRES)-NEG   idea
       'I have no idea.'

Based on the clear syntactic and semantic dividing lines between Information Focus and Contrastive Focus (as suggested by É. Kiss 1998), it is plausible to propose that wh-phrases in EA inherently bear Information Focus feature yielding wh-in-situ, when the wh-phrases are enriched with strong [+Contrastive Focus] feature, they move. In line with Rizzi's (1997) claim that an [F] has to be fixed, I do not adopt optionality of features, nor do I presume that when a wh-phrase bears a weak [F] feature, it remain *in situ*, while it is extracted when it has a strong [F] feature since this idea contradicts the MP. Instead, I claim that all wh-phrases *in situ* bear weak [+wh] features and strong Information Focus features; the two features do not induce movement. When the wh-phrase *in situ* bears an extra feature, or is enriched with a Contrastive Focus feature, movement takes place. Recall that in Chapter 6, *illi* was argued to head the FocusP; the question now is what licenses the Focus projection in adjunct wh-questions which do not host *illi*? A possible answer to this question is suggested in the subsequent section.

7.7 The structure of FocusP in adjunct wh-questions

Having proposed a Focus-based analysis for all wh-expressions, the task now is to investigate the structure of the Focus projection within adjunct wh-questions, and see how it is formed, and what licenses it.

In Modern Greek, Tsimpli (1995) argues that the head of the FocusP, or what she refers to as F, has an abstract realisation, while in Berber, it is occupied by an overt Focus morpheme [FM] as seen below.

(49)   a. Su-ipa   oti   IEFTA edhosa sti   Maria.
          you-told-1s that   money gave-1s to-the-acc Maria
          'I told you that I gave MONEY to Maria.'

         b. MOHAND   ay-zri-gh.
          Mohand   FM-saw-I
          'I saw MOHAND.'

             (Tsimpli 1995: 187)

To support her idea that preposed Focus phrase occupies Spec FocusP, Tsimpli formulates the following criterion which is argued to be equivalent to the Wh-Criterion that regulates the constraints on wh-movement; the F-Criterion is stated below.

(50)   The F-Criterion
        A [+F] X must be in Spec-Head agreement with an F-Operator.

(Tsimpli 1995: 187)

According to Tsimpli, the Focus head [F] is specified for the Focus feature; hence, fronted Focus phrase occupies Spec of FocusP. As the focused element has to be in Spec-Head agreement with the head of the Focus projection [F], it has to move to the Spec of FocusP. The scope properties of the focused element are defined via its movement to the Spec of FocusP.

Along the lines of Tsimpli's (1995) analysis, I suggest that when adjunct wh-phrases in EA are focused, they have to undergo movement to the Spec of FocusP as seen below.
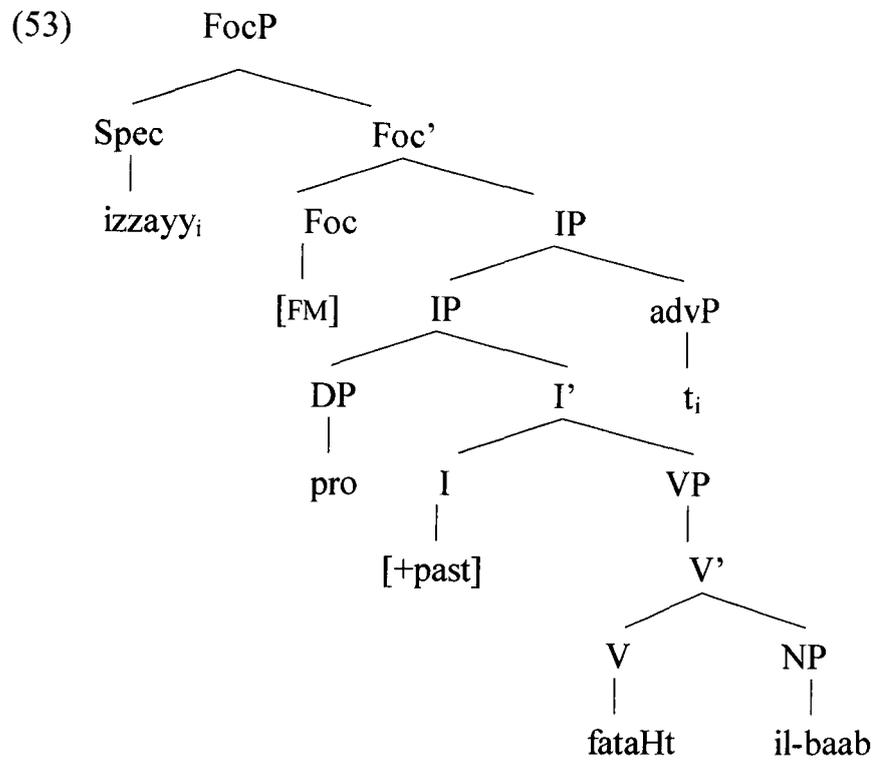
(51)   izzayy   fataHt   il-baab?
        how   open (2SM.PAST)   the-door
        'How did you open the door?'

Dealing with Focus-movement on a par with wh-movement, the minimalist view that wh-movement is triggered by feature checking necessity can be extended to adjunct wh-questions. In Chapter 6, it was suggested that Focus movement within *illi*-questions is triggered by feature checking necessity; this proposal will also be assumed here for the analysis of fronted wh-adjuncts. Recall that in Berber, the Focus marker [FM] (which Tsimpli refers to as a Focus morpheme) is affixed to the verb. In the case of EA adjunct wh-questions, the Focus projection is licensed by an abstract Focus morpheme [FM] which heads the FocusP. The [+Focus] feature is realised on this abstract [FM]. As assumed by Chomsky (1995: 234), the category with the strong feature can project. Thus, within adjunct wh-questions, the Focus morpheme [FM] licenses the formation of the FocusP and heads the projection. Both the wh-adjunct and the [FM] are in Spec-Head configuration by virtue of carrying the same [+Focus] features.

Within adjunct wh-questions, the wh-phrase which bears a strong Focus feature has to move to the Spec FocusP before the Spell-Out for feature checking necessity. If the wh-adjunct does not move, its uninterpretable feature remains unchecked, and hence the derivation will crash. The FocusP (which the [FM] heads) is the appropriate checking

domain for the focused wh-phrase. Based on this argument, the wh-question in (52) will have the representation in (53).

(52) izzayy   fataHt   il-baab?
      how   open (2SM.PAST)   the-door
      'How did you open the door?'

(53)   FocP
          /   \
        Spec   Foc'
         | /   \
      izzayy$_i$ Foc   IP
              | /   \
            [FM]   IP   advP
                  / \ |
                DP   I'   t$_i$
                | /   \
               pro I   VP
                    | |
                [+past]   V'
                         /   \
                        V   NP
                        | |
                     fataHt il-baab

7.8 Wh-adjuncts and internal scrambling

7.8.1 Preposing, long-distance movement, and scrambling

It is a UG property of adjunct phrases that they can freely be preposed as illustrated by the following examples from EA and English:

(54) a. ba^{c}d   šahr   ha-'aabil   il-mudarris   .
         after   a month   will-meet (1S.PRES)   the-teacher
         'After a month, I will meet the teacher.'

      b. ha-'aabil   il-mudarris   ba^{c}d   šahr.   .
         will-meet (1S.PRES)   the-teacher   after   a month
         'After a month, I will meet the teacher.'

(55) a. Because of what he said, I refused to help him.

b. I refused to help him because of what he said.

Lasnik & Saito (1984: 261) argue that an adjunct wh-phrase can undergo successive-cyclic movement, so they suggest that in the following representation, the wh-adjunct 'why' first adjoins to the lower S (IP in subsequent development of the theory); on its way to the matrix C position, the wh-adjunct 'why' adjoins to the higher S (i.e. the matrix IP):

(56)
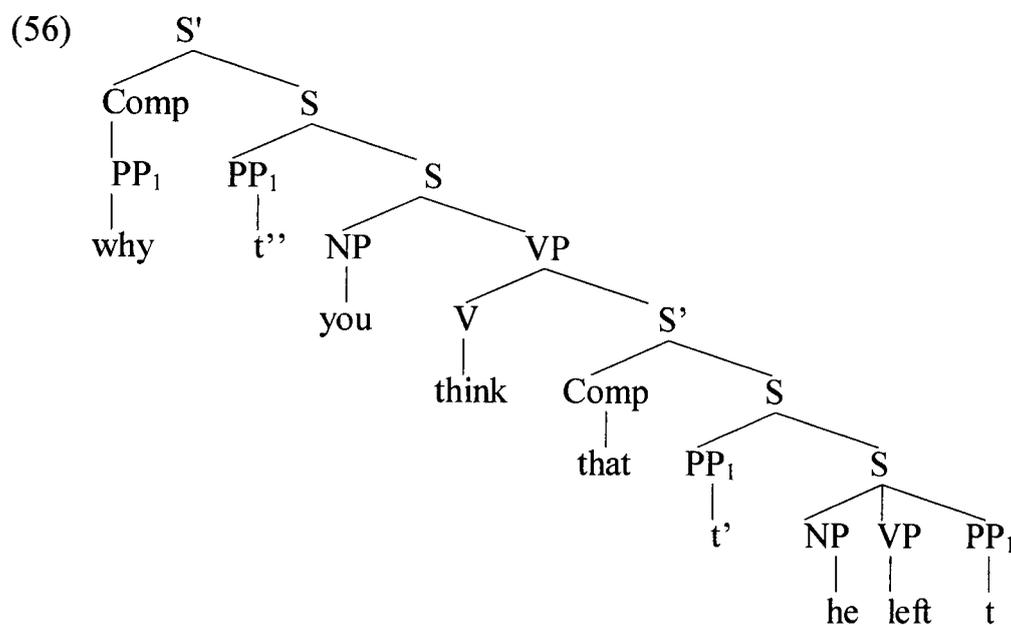
Saito (1985) argues that long-distance movement in Japanese is more restricted than clause-internal scrambling as in the following examples:

(57)　a. Marry-ga [s' John-ga　riyuu-mo　　naku　　sono
　　　　　　-NOM　-NOM　　reason-even　without　that

　　　setu-o　　　　sinzite　　iru to]　omotto iru　(koto)
　　　theory –ACC　believe　　COMP　　think　　　fact
　　　'Mary thinks that John believes in that theory without any reason'

　　b.* riyuu-mo　　nakuᵢ　　Marry-ga [S' John-ga　　tᵢ sono setu-o
　　　　reason-even　without　　-NOM　　　-NOM　　　that theory- ACC

　　　sinzite　iru to]　　omotto iru　(koto)
　　　believe　COMP　　think　　　fact

　　　(Saito 1985: 175)

Saito (1985) views the ungrammaticality of the example in (57b) as the result of the long-distance movement of the adjunct phrase *riyuu-mo naku* 'without any reason'. Clause-internal scrambling of wh-adjuncts is more grammatical as in the following example:

(58)　Marry-wa [s' Bill-ga　　naze　kubi-ni natta　　to]　omotte iru no
　　　　　 –TOP　　　-NOM　why　was-fired　　COMP　think
　　　　'Why₁ does Mary think that Bill was fired t₁?'

(Saito 1985: 175)

Based on structures similar to the one in (58), Saito holds the view that adverbials are subject to clause-internal scrambling, rather than long-distance movement. The same idea may hold true for EA wh-adjuncts; they show clause-internal scrambling which is more acceptable than long-distance movement as indicated by the following contrast:

(59)　a. Mona　xadit　　　　　il-kitaab　leeh?
　　　　　 Mona　take (3SF.PAST)　the-book　why
　　　　　'Why did Mona take the book?'

　　　　b. leeh　xadit　　　　　Mona　il-kitaab?
　　　　　 why　take (3SF.PAST)　Mona　the-book
　　　　　'Why did Mona take the book?'

　　　　c. Mona　leeh　xadit　　　　　il-kitaab?
　　　　　 Mona　why　take (3SF.PAST)　the-book
　　　　　'Why did Mona take the book?'

　　　　d. Mona　xadit　　　　　leeh　il-kitaab?
　　　　　 Mona　take (3SF.PAST)　why　the-book
　　　　　'Why did Mona take the book?'

(60)　*imta₁ ᶜirfit　　　　Mona fikrit inn Ali ha-ysaafir　　　　MaSr t₁?
　　　 when　know (3SF.PAST) Mona idea　that Ali will-travel (3SM.PRES) Cairo
　　　 '*When₁ Mona knew [the idea that Ali will travel to Cairo t₁]?'

For the ungrammaticality of the wh-questions like (60), three accounts in the frameworks of Principles and parameters, Relativized Minimality and the MP were discussed in Section 7.4.

Ko (2010) discusses Korean and Japanese as two SOV languages that allow elements to freely undergo scrambling and produce non-canonical word order. For example, the wh-adjunct *way* and *naze* 'why' can either precede or follow elements such as *Amwuto* 'anyone' and *sika* 'only'; Ko refers to them as scope-bearing elements. The idea is explained by the following examples:

(61) a. Amwuto   way   ku   chayk-ul   ilk-ci-anh-ass-ni?   (Korean)
         anyone   why   that   book-ACC   read-CI-not-PAST-Q
         'Why did no one read that book?'

      b. Way   amwuto   ku   chayk-ul   ilk-ci-anh-ass-ni
         why   anyone   that   book- ACC   read-CI-not-PAST-Q
         'Why did no one read that book?'

(62) a. Taroo-sika   naze   sono   hon-o   yoma-nakat-ta no?   (Japanese)
         Taroo-only   why   that   book-ACC   read-not-PAST   Q
         'Why did only Taroo read that book?'

      b. Naze   Taroo-sika   sono   hon-o   yom-nakat-ta no?
         why   Taroo-only   that   book-ACC   read-not-PAST   Q
         'Why did only Taroo read that book?'

(Ko 2010: 321)

To analyse the Korean and Japanese data, Ko (2010: 232) argues that 'why' in wh-in-situ languages is an adverb which is externally merged, or base-generated in Spec CP of the clause it modifies. He refers to this proposal as the CP-Modifier Hypothesis (CMH). Under the CMH, Ko offers the following word order in 'why'-questions:

(63)   Word order in 'why'-questions under the CMH view

      a.   [$_{CP}$ 'why' [$_{IP}$ XP YP V]]
      b.   [$_{CP}$ XP$_i$ [$_{CP}$ 'why' [$_{IP}$ (t$_i$) YP V]]

(Ko 2010: 326)

The structures in (63) represent the word order of the following sentences respectively:

(64) a. Way   John-i   ku   chayk-ul   ilk-ess-ni?
         why   John-NOM   that   book-ACC   read-PAST-Q
         'Why did John read that book?'

b. John-i   way ku   chayk-ul   ilk-ess-ni?
John-NOM why that book-ACC   read-PAST-Q
'Why did John read that book?'

(Ko 2010: 326)

Ko argues that the structure in (64a) reflects the base word order where the subject *John* follows the wh-adjunct *way* 'why'. The structure in (64b) is a derived order which results from the scrambling of the subject 'John' over the wh-adjunct *way* 'why' as in the following representation:

(65)   [$_{CP}$ John-i$_i$ [$_{CP}$ *way* t$_i$ ku chayk-ul il-ess-ni]]?
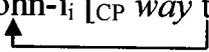
                scrambling

The examples in (59) emphasise that EA parallels Korean and Japanese in this regard; the examples will be repeated below:

(66)   a. Mona   xadit   il-kitaab   leeh?
          Mona   take (3SF.PAST)   the-book   why
          'Why did Mona take the book?'

          b. leeh   xadit   Mona   il-kitaab?[6]
           why   take (3SF.PAST) Mona   the-book
           'Why did Mona take the book?'

          c. Mona   leeh   xadit   il-kitaab?
          Mona   why   take (3SF.PAST) the-book
          'Why did Mona take the book?'

          d. Mona   xadit   leeh   il-kitaab?
          Mona   take (3SF.PAST) why   the-book
          'Why did Mona take the book?'

The above examples show that EA wh-adjuncts are subject to clause-internal scrambling. The structures in (66a) and (66b) represent *in situ* and focused wh-adjuncts respectively. The two examples have the following representations:

(67)   [$_{CP}$ Op$_i$ [$_{IP}$ XP VP NP] 'why$_i$']

---

[6] In Section 7.2, Focus movement was argued to induce subject-verb inversion; this justifies the word order of this wh-question.

(68)   [FocP 'why' [IP VP XP NP]]

In (66a), the wh-adjunct remains *in situ*, whereas in (66b), it has undergone Focus movement to the Spec of FocusP. The main concern now is with the two examples in (66c) and (66d). I will start with the example in (66d) and suggest that post-verbal adjuncts are in fact *in situ*. In other words, wh-adjuncts are base-generated in postverbal positions as illustrated by the examples (4a)-(7a) in Section 7.2. The wh-question in (66d) will have the following representation:

(69)   [CP Op$_i$ [IP XP VP ['why$_i$'] NP]

The adjunct wh-phrase *leeh* 'why' in (66d) bears Information Focus feature, similar to other wh-expressions in EA as suggested earlier, and hence it does not move.

Korean and English have structures similar to the one in (66c) repeated below.

(70)   Mona   leeh   xadit   il-kitaab^7?   (EA)
        Mona   why   take (3SF.PAST)   the-book
        'Why did you Mona take the book?'

(71)   a. John-i   way   ku   chayk-ul   ilk-ess-ni?   (Korean)
           John-NOM   why   that   book-ACC   read-PAST-Q
           'Why did John read that book?'
           (Ko 2010: 326)

        b. I, because of what he said, refused to help him.   (English)

In (71), the wh-adjunct and the adjunct phrase follow the subject NP and occur preverbally. It is not plausible to assume that in (70) the NP 'Mona' and the wh-adjunct *leeh* 'why' both are focused since it implies the existence of multiple FocusP and multiple Spec FocusP. Tsimpli (1995) refutes this proposal and holds the view that a basic property of a Focus construction is that it has only one unique Spec FocusP position which hosts the moved Focus phrase. She accounts for the ungrammaticality of the following Greek example in terms of having more than one Focus phrase:

---

[7] This structure emerged from the qualitative data analysis completed in Chapter 3. The structure was suggested by some of the EA speakers consulted for their grammaticality judgement (see Section 3.7.1, example (8f)).

(72) *O YANIS pire to VIVLIO apo ti Maria.
   the-NOM Yanis took the-ACC book from the Maria
   'YANIS took the BOOK from Maria

     (Tsimpli 1995: 191)

Thus, the subject NP 'Mona' in (70) cannot be in Spec FocusP; it appears in a different position as will be discussed in the following section.

7.8.2 [TopicP FocusP] structure in EA

In this section, I will investigate structures similar to the one in (70) which show scrambling of subject NPs over adjunct wh-phrases; the example in (70) is repeated below.

(73) Mona leeh xadit   il-kitaab?
   Mona why take (3SF.PAST) the-book
   'Why did you Mona take the book?

Cheng (1997) views the fronting of the wh-adjuncts in EA as being the result of a topicalisation process; she bases her claim on the idea that wh-adjuncts, unlike wh-arguments, can neither co-occur with *illi* nor be co-indexed with resumptive pronoun, and hence their derivation involves a topicalisation process (see Section 7.3). Cheng's analysis contradicts some suggestions proposed in Chapter 6 whereby some argument wh-questions were argued to have the consecutive structure [TopicP FocusP]. An example of these argument wh-questions is repeated below, followed by its representation:

(74) a. illi Mona ištarat-uh eeh?
    that Mona buy (3SF.PAST)-it what
    'What did Mona buy?'

   b. [$_{TopicP}$ illi Mona ištarat-uh [$_{FocusP}$ eeh]]

I claimed that in (74), the wh-phrase *eeh* 'what' first moved to the Spec of FocusP which *illi* heads, and then the whole *illi*-clause is topicalised.

Following Denham's (1997) view that if the feature which the wh-phrase bears is checked in a functional projection, the wh-phrase becomes frozen in place, I argue that in (73), the wh-adjunct *leeh* 'why' does not appear in its base-generated position; rather, it appears in the Spec of FocusP; any further movement beyond this point is suspended.

Thus, I argue that the examples in (73)-(74) have the consecutive structures [TopicP FocusP]. I postulate that the adjunct wh-question in (73) looks like a Topic-Comment structure discussed by Lewkowicz (1978); it is composed of a Topic NP and a comment clause within which the wh-phrase is focused. The wh-question in (73), repeated below, retains the properties of Topic-Comment structures.

(75)   Mona   leeh   xadit   il-kitaab?
        Mona   why   take (3SF.PAST)   the-book
        'Why did you Mona take the book?'

The first characteristic of a Topic-comment structure is that a Topic-Comment structure has a definite NP and a comment clause hosts a resumptive pronoun as in the following example:

(76)   a. 'al-waladu$_i$ maata   'abuu-hu$_i$.
           the boy   die (3SM.PAST)   father-his
           'The boy-his father died.'

                    (Lewkowicz 1978: 553)

The difference between the above example and the one in (75) is that in the latter, the comment clause (the adjunct wh-question) does not have a resumptive pronoun. The resumptive pronoun is missing in (75) due to the lack of a syntactic island which hosts it. If the adjunct wh-question which acts as a comment clause has an island, a resumptive pronoun can appear as seen below[8].

(77)   il-kitaab$_i$ leeh   maHadiš   la'a-ah$_i$?
        the-book   why   no one   find (3SM.PAST)-it
        'Why did no one find the book?'

---

[8] The EA speakers consulted for their views on the structures in (73) and (77) accepted the two wh-questions. A small number of the informants preferred to use these structures in a follow-up conversation.

Lewkowicz (1978) adds that, in a Topic-Comment structure, the comment clause is an independent sentence where the subject is implied within the verb. Returning to the example in (75), it is notable that deleting the Topic NP 'Mona' yields the following structure whereby the verb shows agreement with the null subject.

(78) leeh xadit   il-kitaab?
      why   take (3SF.PAST) the-book
      'Why did you Mona take the book?

The third characteristic which Lewkowicz (1978) argues to identify Topic-Comment structures is that the comment clause adds more emphasis to the topicalised NP as in the following example:

(79) 'al-'amiiru   fii   qaSrihi   'al-jawaahiru   'al-mašhuuratu.
      the-prince   in   palace-his the- jewels   the-famous
      'The prince-in his palace are the famous jewels.'

(Lewkowicz 1978:554)

Similar to the NP *'al-amiiru* 'the prince' in the above example, I argue that the subject NP 'Mona' in (73), repeated in (75), is topicalised over the focused adjunct wh-phrase to receive extra emphasis, and that it appears in a TopicP, rather than a FocusP since there is only one FocusP in a given sentence as suggested by Tsimpli (1995:191). The subject NP 'Mona' is topicalised, while the wh-phrase *leeh* 'why' remains in the lower position within the Focus field as suggested by Rizzi (1997). The possibility of having a TopicP followed by a FocusP is non language-specific as discussed in Chapter 6. Taking over the structure in (80) suggested by Rizzi (1997), the wh-question in (75), repeated in (81), will have the representation in (82).

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

(81) Mona   leeh   xadit   il-kitaab?
      Mona   why   take (3SF.PAST) the-book
      'Why did you Mona take the book?

(82) [ForceP [Force [TopP [Top [Top0 Mona]i [FocP leeh [Foc0 FM [FocP xadit ti il-kitaab

To summarise, scrambling is evident in adjunct wh-questions where a constituent can be topicalised over a FocusP. The resultant structure has the interpretation of a Topic-Comment.

Having investigated adjunct wh-phrases in EA, the main strategies employed by the grammar of EA to form adjunct wh-questions are listed below.

(83) a. Mona   xadit   il-kitaab   leeh ? (wh-in-situ)
         Mona   take (3SF.PAST) the-book   why
         'Why did you Mona take the book?

      b. leeh   xadit   Mona   il-kitaab? (F-movement to Spec FocP)
         why   take (3SF.PAST) Mona   the-book
         'Why did you Mona take the book?'

      c. Mona leeh xadit   il-kitaab? (F-movement to Spec FocP+topicalisation)
         Mona why take (3SF.PAST) the-book
         'Why did you Mona take the book?'

The the wh-question *in situ* in (83a) is the most economical one. It satisfies the economy conditions on derivations called for by the MP. The other possible derivations (83b & c) are triggered by two distinct features: a Topic feature, and a Focus feature. These features result in syntactic structures which have different presuppositions.

7.9 Conclusion

The chapter aimed at completing the work initiated in Chapter 5 by providing a unified account for the fronting of wh-phrases (arguments and adjuncts). In this chapter, I proposed that the fronting of wh-adjuncts is an instance of Contrastive Focus movement. When adjunct wh-phrases are focused, the strong [+Focus] features which they bear need to be checked; hence, overt Focus movement to the Spec of FocusP takes place. Within focused adjunct wh-questions, the functional projection (which is left-branching) is a Focus projection whose functional head hosts a Focus morpheme [FM]. The wh-adjunct is the specifier of the [FM]. The Focus feature needs to be checked by the [+F] feature on the wh-phrase. As a consequence, the wh-phrase moves to the specifier of the FocusP.

In this chapter, the behaviour of wh-adjuncts with respect to extraction out of syntactic islands was examined. The ungrammaticality of long-distance movement was accounted for in terms of the standard constraint on movement (e.g. the ECP), and the subsequent Relativized Minimality. The Minimal Link Condition, proposed in the MP, was also employed to account for the EA data.

In this study, wh-phrases in EA are claimed to exhibit the following properties: (1) they have weak [+wh] features (this explains why they cannot be attracted to C); (2) they are inherently focused (they bear Information Focus features which do not trigger movement); (3) they can show island violation; and (4) when they are enriched with the [+Focus] features (i.e. Contrastive Focus), they move.

After discussing the *in situ* and the wh-fronting strategies of question formation in EA, this chapter concludes with a table which illustrates the cross-linguistic variation among Hungarian, English, and EA regarding the type of movement they show evidence of:

Table2: Cross-linguistic variation on movement type

Element of comparison	Hungarian	English	EA
Movement of the Focus element	Focus element moves in overt syntax	Focus element remains *in situ*	Focus element moves in overt syntax
Position of the moved category	Focus element moves into Focus Projection	Wh-element moves into Spec CP position	Focused wh-element moves into Spec FP

Chapter 8: Conclusion

The main objective of this work was to consider the syntactic structure of wh-questions within Egyptian Arabic (EA), an apparent optional wh-movement language which employs both wh-fronting and wh-in-situ strategies. The major task was to propose a minimalist account for the syntax of wh-questions, and, at the same time, resolve the linguistic problem of optionality excluded by the Minimalist Program. Following a detailed analysis of the two strategies of question formation within EA, this concluding chapter sums up the major research findings (which answer the research questions proposed in Chapter 1) coupled with the robust features of wh-constructions in particular, and some aspects of the grammar of EA in general.

In this thesis, a literature review regarding wh-questions within EA was first outlined. Wahba (1984) and Osman (1990) claim that wh-phrases within EA undergo LF movement similar to movement in syntax. Lassadi (2003) and Soltan (2010) were also reviewed; the former suggests that movement in EA is triggered by Focus, while the latter proposes the existence of an operator which unselectively binds wh-phrases either in their base-generated positions, or in the specifier of a FocusP. As the study was conducted within the theoretical framework of the Minimalist Program (Chomsky 1995), I outlined (in Chapter 2) the basic minimalist assumptions regarding optionality, and the conditions that govern wh-movement. The MP excludes optionality as this phenomenon predicts that a language can have both strong and weak features at the same time. Regarding wh-in-situ, the MP assumes that when wh-phrases carry weak [wh] features, they cannot be attracted to the C-domain; this yields a wh-phrase *in situ* which is licensed and assign scope via LF movement of an operator (which bears a [wh] feature) to the Spec CP position which is the appropriate checking domain). LF movement of formal features is permitted in the MP, contrary to LF movement of wh-phrases which violates the economy condition on derivation by virtue of being a more costly operation.

The present work aimed at providing an accurate analysis for wh-questions by carrying out an experimental study on grammaticality judgement. It was essential to investigate whether or not EA has true optionality, so in the experimental study (described in Chapter 3), a group of EA speakers were asked to provide their grammaticality judgement on a sample wh-questions. The informants were also requested to provide the grammatical counterpart for the structures they judged to be ungrammatical. The following are the findings from the data gathered in the experimental study:

1. EA has real cases of optionality whereby the fronting and the *in situ* strategies can, in certain cases, be used interchangeably.

2. The wh-in-situ strategy is more commonly used.

3. Argument wh-questions with *illi* have different syntactic realisations.

4. Not all wh-phrases can occur with *illi*.

5. Some wh-questions can be initiated by full pronouns such as *huwwa* 'he'.

6. In addition to suggesting true optionality, adjunct wh-questions demonstrate scrambling of subject NPs over the wh-adjuncts.

In Chapter 4, some possible syntactic structures of wh-questions were described. It is of note here that investigating the way in which wh-phrases behave within different types of wh-questions revealed certain elements of discrepancies between the subject wh-phrases *miin* 'who' and *eeh* 'what', on one hand, and subject and object wh-phrases, on the other hand. For example, the subject wh-phrase *miin* 'who' has to be associated with animate [+human] NPs and followed by definite, indefinite NPs, or NPs in the genitive case as in *miin mudarris* 'who is a teacher?' and *miin il-mudarris* 'who is the teacher?' and *miin SaHib il-biit* 'who is the landlord?' respectively. The subject wh-phrase *miin* 'who' can be followed by *illi* as in *miin illi šaʿraha Tawiil* 'who has long hair?'. The subject wh-phrase *eeh* 'what' is more restricted; it has to be followed by either definite NPs, or NPs in the genitive case. The structure [*eeh* (subject) + *illi* + NP] is ungrammatical, in contrast to [*eeh* (subject) + *illi* + VP]. The NP following the subject *eeh* 'what' has to be both definite and [-human] as in *eeh il-asbaab* 'what are the causes?'. These differences between the subject *miin* and *eeh* signal an asymmetry within a single type of wh-phrase. Subject wh-phrases can optionally be followed by *illi* whereby resumptive pronouns disappear. By contrast, fronted object wh-phrases have to be followed by *illi* and bind the resumptive pronoun. Thus, the fronted subject wh-phrase *miin* 'who' (without *illi*) is in fact *in situ*; like other subjects, it moves to the [Spec IP] position to check EPP features. When it is focused, it moves to Spec FocusP and is followed by *illi*. In *miin fataH il-baab* 'who opened the door?' and *Mona 'aablit miin* 'who did Mona meet?' the subject and the object wh-phrases *miin* 'who' and *eeh* 'what' are both *in situ*, while in *miin illi fataH il-baab* 'who opened the door?' and *miin illi Mona 'aablit-uh* 'who did Mona meet?', the two wh-phrases are in Spec FocusP. The only difference between subject and object extraction is that in the former, the extraction site is marked by a trace, whereas in the latter, it is marked by a resumptive pronoun. In addition to

this asymmetry between the subject wh-phrase *miin* 'who' and the subject wh-phrase *eeh* 'what' with regard to co-indexation with [+/-human] NPs, the description of argument wh-phrases revealed a further significant type of asymmetry, namely, subject/object asymmetry.

In Chapter 4, some interesting structures where argument wh-phrases occur in clause-final positions were presented. Besides, it was suggested that the conditions which govern the fronting of wh-arguments with *illi* also restrict the appearance of argument wh-phrases in a clause-final position. This can be expected if the wh-question of the structure [*illi* + VP/NP + *miin/eeh*] is assumed to be derived from [*miin/eeh* + *illi* + VP/NP]. My claim was that, when the argument wh-phrase first moves to the Spec of FocsuP, the structure [*miin/eeh* + *illi* + VP/NP] is derived. Then, when the *illi*-clause is topicalised, it leaves the wh-phrase in the FocusP and therefore the structure [*illi* + VP/NP + *miin/eeh*] is formed.

In this chapter, yes/no questions were described whereby it was claimed that these questions can be introduced by elements which perform the grammatical function of question particles; these elements are the phrase *ya-tara* (translated as 'I wonder') and the pronoun *huwwa* 'he'. It was observed that EA has some expressions that function like idioms referred to as Discourse-Condition Questions (DCQs); some of these DCQs are unaltered, while others show true optionality.

Following the full description of the different types of questions in EA, the way in which argument wh-phrases behave regarding the standard constraints on movement and the restrictions imposed by the MP, was tested in Chapter 5. I hypothesized that extraction out of syntactic islands such as wh-island, adjunct island, co-ordinate structures and complex NPs is possible with the insertion of *illi* and the resumptive pronoun (both of which I referred to as extraction tools). I furthermore argued that wh-phrases are weak islands (following Cinque 1990); this is why they allow extraction. Thus, the fact that they are weak islands, along with the insertion of the extraction tools, work together to allow wh-extraction.

In the course of this discussion, the different word orders in EA were investigated. I assumed that the SVO is the default word order (as suggested by Edwards 2010) and that the OSV is derived via topicalising the object, while the subject remains in Spec IP as assumed by the VP-Internal Subject Hypothesis (Koopman & Sportiche 1991). The OVS order is derived when the resulting sentence has the structure [TopicP TopicP NP]. To account for the

position of subject wh-phrases *in situ*, the VP-Internal Subject Hypothesis was adopted and it was claimed that the subject wh-phrase originates within the VP, then it moves to Spec IP, leaving the verb in I° or V.

Regarding the manner in which wh-phrases *in situ* are licensed, some minimalist assumptions were adopted. I claimed that wh-phrases *in situ* are licensed via LF movement of an operator [Op] which bears a strong [wh] feature, and which is inserted after the Spell-Out point. I proposed that wh-phrases *in situ* do not undergo wh-movement to the Spec CP position like their English counterparts do due to the weak [wh] features they bear. Feature strength is an essential difference between English and EA. In EA, the head C, which has a strong [wh] feature, cannot attract wh-phrases. When the Op moves at LF to the Spec CP position, the [wh] feature it carries enters into a checking relation with the [wh] feature on the wh-phrase *in situ*. In the MP, wh-phrases *in situ* assign scope by being co-indexed with the [wh] feature which covertly moves to the Spec CP position. In a wh-question *in situ*, the operator-variable relation is established via LF movement of Op (which is a phonologically null element) to the Spec CP position, whereby it binds the variable (the wh-phrase *in situ*). Therefore, when the wh-phrase is co-indexed with the Op, a proper chain is formed.

I explained how wh-phrases do not demonstrate similar behaviour regarding the violation of the constraints on movement; in this respect, a descriptive generalisation on wh-extraction was proposed. This generalisation restricts the possibility of extraction out of islands to simple and D-linked wh-phrases, in contrast to adjunct wh-phrases (e.g. *feen* 'where') and wh-objects of prepositions (e.g. *li-miin* 'to who').

On the role of resumptive pronouns within wh-questions, I suggested that resumptive pronouns are employed mainly to enhance condition on derivations. Thus, within argument wh-questions, if Focus movement takes place without the cliticisation of resumptive pronouns, the derivation is doomed to crash. Resumptive pronouns also enhance conditions on representation by satisfying the requirement that, for a derivation to converge at PF, oblique positions (e.g. NP-internal positions) have to be filled with resumptive pronouns. Both resumptive pronouns and Parasitic Gaps are base-generated; they both yield licit structures although they can violate constraints on movement. This idea is employed to support the major claim that EA is a wh-in-situ language that does not have wh-movement of the English type. When a wh-question (which is formed via the insertion of both a resumptive

pronoun and *illi*) is compared to an *in situ* wh-question in terms of economy, the latter wins as a more economical derivation. However, it is not possible to form a wh-question with a fronted wh-argument without the use of the extraction tools (e.g. *illi* and the resumptive pronoun). Fronting argument wh-phrases without these extraction tools yields a derivation that does not converge at PF, nor does it satisfy the principle of Full Interpretation.

Following a brief review of some proposals that advocate LF movement of wh-phrases, I tested the phenomenon of the Intervention Effect which characterises LF movement. In line with Soltan (2010), I concluded that EA wh-phrases do not undergo LF movement since they do not show intervention effects.

In Chapter 6, the role *illi* played in the formation of wh-questions was examined. In this respect, some illustrative examples which demonstrated the syntactic realisations of *illi* in wh-questions, relative clauses, topicalised constructions, and cleft structures were presented. I refuted previous views on *illi*: I cited some examples which illustrated that EA has other definiteness markers. Besides, *illi* cannot be a complementiser due to its distinct distributional properties. In this respect, some examples that demonstrated how it is not possible to use *illi* and the complementiser *inn* 'that' interchangeably were offered; for example, *illi*, contrary to *inn* 'that', can have a wh-phrase as its specifier. In addition, *illi* cannot perform the grammatical function of a scope marker as it is absent in adjunct wh-questions, while it is optional within subject wh-questions. Within *illi*-questions, *illi* is not a wh-particle since it is not possible for a wh-question to have both wh-phrase and wh-particle as suggested by Cheng (1997). Thus, I concluded that *illi* is a relative pronoun which occurs in C and heads both the CP in relative clauses and the FocusP in wh-questions. The basic similarity between wh-questions and relative clauses (which is the use of *illi* and resumptive pronouns) were exemplified, and the following properties of relative clauses were proposed: (1) that they embed wh-in-situ; (2) that they block wh-extraction; and (3) that relativisation out of syntactic islands is possible. Moreover, a minimalist account for relative clauses was suggested: an account which was partially based on Al-Momani (2010) regarding Jordanian Arabic; however, I refuted his argument concerning certain aspects which might be language-specific parameters. I argued that within EA relative clauses, *illi* carries [+Definite] and [+nominal] features since it occurs solely with definite NPs. I suggested that relative clauses have an Op which carries certain features that match the features on *illi*, so the [+Definite] and the [+nominal] features on *illi* are checked against the features on Op. When the Op is

lexicalised to an overt pronominal form, it becomes overtly realised and occurs as the specifier of C. Given that *illi* is [+nominal], the Op can either be covert or overt. This optionality is thus resolved by assuming that when the relative clause receives emphatic interpretation, the Op is lexicalised to an overt pronominal form; therefore lack of emphatic interpretation yields a null operator.

A minimalist account for the way in which *illi* is inserted into relative clauses was offered. I suggested that the IP first merges with *illi* to form the relative clause; then the relative clause merges with the determiner to form the matrix relative clause; the last step involves the insertion of *illi* before Spell-Out so that its LF and PF properties can be interpreted.

The Focus analysis of *illi*-questions was initiated by a distinction between two types of Foci: Information Focus and Contrastive Focus. The former introduces new information and does not trigger movement, while the latter refers to a set of entities established within the discourse and induces movement (É. Kiss 1995). I claimed that the initial argument wh-phrase followed by *illi* bears a Contrastive Focus feature, and this is what triggers its movement to the Spec position of a Focus projection headed by *illi*. The wh-phrase in Spec FocusP binds a variable (a resumptive pronoun and a trace in object and subject wh-questions respectively). To account for the structure of the *illi*-questions analysed in terms of Focus, Rizzi's (1997) structure of the left periphery has been adopted. In line with the minimalist assumption that an element which carries a strong feature can project, I claimed that *illi* (which bears a strong Focus feature) projects into FocusP; it heads the projection and attracts the wh-phrase to its Spec position. Thus, *illi* appears in Focus^0, whereby it functions as a Focus particle and the wh-phrase is in Spec FocusP; both *illi* and the wh-phrase are in a Spec-Head configuration since they both bear the [+Focus] feature. The Focus projection is the checking domain of the wh-phrase in Spec FocusP. Focus movement takes place in order that the Focus feature of the wh-phrase can be checked against the strong Focus feature of *illi*. In an *illi*-question, what defines the scope of the wh-phrase is its co-indexation with the variable it binds (i.e. the resumptive pronoun). I emphasised that *illi*-questions bear their own presuppositional force; these questions carry Contrastive Focus by virtue of implying the existence of entities previously established within the discourse. Accordingly, negative polarity items, for example, give infelicitous answers. Based on this analysis, I concluded that the two wh-questions; *Mona ištarit eeh* and *eeh illi Mona ištarit-uh* 'what did Mona

buy?'; do not show genuine optionality since they are derived via two distinct features, and have two different interpretations.

The other form of *illi*-question which was discussed involves an argument wh-phrase in a clause-final position. Rizzi's (1997) claim that the left periphery of the clause can host TopicP and FocusP sandwiched between Force and Finite projection has been adopted. Accordingly, it is worth suggesting that *illi*-questions with final argument have the interpretation of subject-predicate structures whereby the subject of the predicate is the FocusP (*illi*-clause). The focused wh-phrase remains in spec of FocusP, lower to the TopicP. Thus, the wh-question with final argument has the structure [TopicP...FocusP]. I suggested that the final argument wh-phrase is not the result of movement, following Denham's (1997) proposal that after feature checking, the item becomes frozen in place, and does not move any further. Thus, after checking the Focus feature, the wh-phrase moves to Spec FocusP where it remains. Then the *illi*-clause moves to receive the topic interpretation: an interpretation which *illi*-questions with initial wh-arguments lack. Hence, the two *illi*-questions have two different interpretations.

In this chapter, the possibility of using a pronoun within wh-questions was also investigated. This form of wh-question (*huwwa*+wh-q) was suggested by the EA speakers, during the experimental study, as being a grammatical counterpart of a structure they judged to be ungrammatical. The occurrence of the pronoun within both yes/no questions and wh-questions was tested. I claimed that the pronoun could be analysed as a wh-particle if: (1) it is associated with wh-phrases in main, rather than embedded, wh-questions; (2) it occurs initially within the wh-question; and (3) it is accompanied by rising intonation. I therefore suggested that when the pronoun *huwwa* 'he' is accompanied by rising intonation, it acts as a discourse marker which introduces yes/no questions and wh-questions. Within *illi*-questions, the pronoun was claimed to be a [+Focus] particle. Regarding the position which *huwwa* 'he' occupies within the wh-questions, Rizzi's (1997) suggestion that some languages can use a head C specified for (non)-interrogative sentences and an operator for clause typing purposes has been adopted. In this respect, I suggested that EA uses both techniques: *illi* licenses the FocusP, then the resultant structure hosts *huwwa* 'he' as an operator which shares similar features with *illi*. Since the Force of the clause is determined by the head C, I accounted for the structure of wh-questions with *huwwa* 'he' as involving a ForceP which the pronoun heads. As for the question as to why the pronoun appears in wh-extraction out of a co-

ordinate structure, the reduced copy theory (Koppen 2007) was assumed, and it was claimed that the pronoun is a Spelled-Out copy of the wh-phrase. Thus, when a wh-phrase is extracted out of a co-ordinate structure, the movement leaves behind a copy which is Spelled-Out as a full pronoun; hence, both of the following conditions are satisfied: the Complex-NP Constraint and the condition which disallows any constituent to be missing from a co-ordinate structure. The resumptive pronoun and the full pronoun both improve the following two conditions: condition of derivation (no element is to be extracted out of a complex NP), and condition on representation (no element can be missing from a co-ordinate structure).

In Chapter 7, the second type of wh-phrases, namely adjunct wh-phrases were considered. I proposed some descriptive generalisations drawn from the different syntactic realisations of adjunct wh-phrases. This type of wh-phrase is interesting as it evinces optionality (adjunct wh-phrases allow alternation between the fronting and the *in situ* strategies). Within adjunct wh-questions, subject-verb inversion takes place when the Focus morpheme [FM] attracts the verb to a Focus position; this is a basic similarity between EA, Hungarian, and Berber. Adjunct wh-phrases do not give rise to the *that*-trace effect when they are associated with main verbs, rather than embedded verbs. An essential difference between argument and adjunct wh-phrases is that the latter do not co-occur with *illi* as they lack the following bundle of features: the [+nominal], [+predicational], and [+definite] features. In some cases, an adjunct wh-question which has the structure [*feen* 'where'] + [$_{RC}$ Ø *illi*] is formed when *illi* introduces a headless relative clause which follows the adjunct wh-phrase.

For the analysis of adjunct wh-phrases, the minimalist views regarding wh-in-situ were assumed whereby adjunct wh-phrases *in situ* were claimed to be licensed via LF movement of [Op] to the Spec CP position. Fronted adjunct wh-phrases were analysed as being the result of Focus movement to the Spec FocusP. Wh-phrases in EA were argued to carry two types of features which do not trigger movement: the [wh] features and the Information Focus features. When wh-phrases are enriched with Contrastive Focus features, they move to the Spec FocusP. Within adjunct wh-questions, the FocusP is headed by an abstract Focus morpheme [FM] which creates the appropriate checking domain of the Focus feature.

In this chapter, some examples which demonstrate scrambling of subject NPs over wh-adjuncts were provided. I suggested that the subject NP which precedes the wh-adjunct is not in the Spec of FocusP since this suggests the existence of a multiple Focus projection and a

multiple Spec FocusP: a suggestion I do not defend in this work. Thus, the subject NP which precedes the focused wh-adjunct is topicalised to receive emphasis. I proposed that the adjunct wh-questions which show scrambling of subjects over the wh-phrases have the structure [TopicP FocusP].

To summarise: this work proposed a Focus movement analysis for the wh-fronting strategy in EA. The major claim was that within argument wh-questions (*illi*-questions), the Focus head hosts *illi*, whereas in adjunct-questions, the Focus projection is licensed by a Focus morpheme [FM]. In EA, the two question formation strategies (the wh-in-situ and the wh-fronting) are licensed differently; the former is licensed via LF movement of formal features to the [Spec CP] due to the weak [wh] features on wh-phrases, whereas the latter is Focus-licensed by a functional Focus head.

In this work, I attempted to investigate a wide range of wh-questions, rather than focus on the analysis of the *in situ* vs. the fronting strategies. I emphasised how some wh-phrases do not demonstrate unified behaviours within different contexts. Previous research on EA does not provide unified accounts for the fronting of wh-phrases (both argument and adjunct); for example, Cheng (1997) views the fronting of wh-arguments as a wh-clefting, whereas wh-adjuncts are fronted in a manner that resembles topicalisation. Thus, the present research was inspired by the need to provide a unified account for the fronting of wh-phrases (both argument and adjunct), whereby the fronting of argument and adjunct wh-phrases is motivated by the same feature (i.e. the Focus feature). The theory of Focus adopted here is one of the theories concerned with justifying the existence of more than one strategy in a given language, and hence explaining and indeed elucidating the phenomenon of optionality. Under economy conditions, optionality is excluded, the only exception being the few special cases of alternative derivations that are equally economical. If two structures are not derived by the same feature, they cannot act as proper alternatives. The present research focused on introducing and emphasising the fact that in EA, all alternative derivations require extra steps; hence, there are no optional (alternative) structures which the MP can account for. In this study, I attempted to prove that the structures which evince real cases of optionality are in fact derived by two distinct features, and hence have different interpretations; therefore, EA does not exhibit genuine optionality.

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PENDICES

pendix A: A Questionnaire on wh-questions in Egyptian Arabic (EA)

ıeral instructions

The questionnaire is edited as a Microsoft Office Word file containing different tions that cover different strategies of forming wh-questions (questions that begin h wh-words such as who, when, what etc.) in the grammar of Egyptian Arabic. After wering the questions in Section 1, you will encounter a context followed by some wh-:stions that are based on that context. The questions run from Section 2-7. Please d carefully each question and decide whether it is right or wrong. If you judge an mple to be wrong, please write down in the space provided the correct structure m your own point of view.

:tion 1

In this section, you are asked to provide some personal information about ırself. In some questions, you can choose more than one option:

(1) Your date of birth -----------   (2) Are you: Male   ( )
                                                       Female ( )

(3) What is the subject area of your research?

    Linguistics
    Engineering
    Maths
    Biology
    Physics
    Fine Arts
    Other   Please specify: -----------

(4) In which part of Egypt is your city of origin situated?

    Lower Egypt (the delta)
    Middle Egypt
    Upper Egypt (the south)

(5) Have you spent part of your life in any Arabic country other than Egypt?
    Yes   ( )
    No   ( )
    If your answer is yes, please specify which country and how long have you lived there?

---

5) How would you rate your knowledge of Modern Standard (e.g., classical) Arabic?

Very good knowledge   ( )
Good knowledge   ( )
Some knowledge   ( )
Little knowledge   ( )
No knowledge   ( )

ᵢ read carefully the following context and the questions in sections (2-7). Decide ᵢer the questions are right or wrong. If your answer is 'wrong', please write down ᵢrrect structure(s) to the best of your knowledge.

talaata	wi	tis^ciin	Salim	faaz	bi-gayzat	aHsan	kaatib	riwaa'i.
three	and	ninety	Salim	won	with-prize	best	writer	narrative

˙	ma^caaditš	sana	^cala	il-gayza di	illa	wi	^camal
ᵢunately	not-passed	year	on	the-prize this	until	and	made

ᵢ	rahiiba	bi-l^carabiyya	illi	bint-uh	Fariida	ištarat-ha.
ᵢnt	terrible	with-the-car	that	daughter-his	Farida	bought-it

kaan	saayi'	bi-sur^ca	wi	ma-kanš	naayim	kuwayyis	^calašaan	kaan
was	driving	with-speed	and	not-was	sleeping	well	because	was

ib qiSSa	gidida.	il-Hadsa	HaSalit	fi-šaari^c	il-Sawra	illi fi-madiinit writing
new	the-accident	happened	in-the-street	Al-Sawra	that in-city

il-naas	šaluu-h	^calatuul	wi	wadduu-h	mustašfa	il-šurTa
people	carried-him	immediately	and	took-him	hospital	the-police

ᵢguuza.	wi	il-garaayid	kullaha	našarit	Siwar	il-Hadsa.
-Agoza	and	the-newspapers	all	published	pictures	the-accident

ᵢ3, Salim won the prize of the best narrator. Unfortunately, after less than one year of ng this prize, he made a terrible car accident with the car which his daughter, Farida, ᵢt. Salim was driving so fast and he hadn't had enough sleep because he was writing a ᵢovel. The accident took place in Al-Sawra Street which is in Nasr city. People carried ᵢmmediately and he was taken to the police hospital in Al-Agoza. All newspapers have ᵢhed pictures of the accident.

Section 2

(1) illi   faaz   b-l-gayza   **miin**?
   that won   with-the-prize who
   'Who won the prize?'

   right ( )   wrong ( )
   If your answer is wrong, write down the correct structure
   _____

(2) illi   asbaab   il-Hadsa   **eeh**?
   that causes the-accident what
   'What are the causes of the accident?'

   right ( )   wrong ( )
   If your answer is wrong, write down the correct structure
   _____

(3) illi raaH   la-ha **anhi**   **mustašfa**?
   that went   to-it which hospital
   'Which hospital did he go to?'

   right ( )   wrong ( )
   If your answer is wrong, write down the correct structure
   _____

(4) illi šaari^c   il-sawra   feen ?
   that street   Al-Sawra where
   'Where is Al-Sawra Street?'

   right ( )   wrong ( )
   If your answer is wrong, write down the correct structure
   _____

(5) illi   ^camal il-Hadsa **leeh**?
    that did the-accident why
   'Why did he make the accident?'

   right ( )   wrong ( )
   If your answer is wrong, write down the correct structure
   _____

(6) illi raaH   il-mustašfa **izzayy**?
    that went   the-hospital how
    'How did he go to the hospital?'

   right ( )   wrong ( )
   If your answer is wrong, write down the correct structure
   _____

(7) illi il-Hadsa   HaSalit   **imta?**
    that the-accident took place when
    'When did the accident take place?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

tion 3

(1)**miin** illi   faaz   b-l-gayza?
    who that won   with-the-prize
    'Who won the prize?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(2)**eeh**   illi asbaab il-Hadsa?
    what   that causes the-accident
    'What are the causes of the accident?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(3) **anhi**   **mustašfa** illi raaH   la-ha?
    which   hospital   that went to-it
    'Which hospital did he go to?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(4)**feen**   illi šaari^c   il-sawra?
    where that street   Al-Sawra
    'Where is Al-Sawra Street?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(5) **leeh** illi   ^camal il-Hadsa?
    why that did the-accident
    'Why did he make the accident?'

right ( )   wrong ( )

If your answer is wrong, write down the correct structure

(6) **izzayy** illi raaH il-mustašfa?
how that went the-hospital
'How did he go to the hospital?'

right ( )　　wrong ( )
If your answer is wrong, write down the correct structure

(7) **imta** illi il-Hadsa　HaSalit?
when that the-accident took place
'When did the accident take place?'

right ( )　　wrong ( )
If your answer is wrong, write down the correct structure

Section 4

(1) il-naas bitis'al faaz b-l-gayza　**miin**.
people asking won with-the-prize who
'People are asking who won the prize.'

right ( )　　wrong ( )
If your answer is wrong, write down the correct structure

(2) Fariida ᶜirfit asbaab il-Hadsa　**eeh**.
Farida knew causes the-accident what
'Farida knew what the causes of the accident are.'

right ( )　　wrong ( )
If your answer is wrong, write down the correct structure

(3) il-garaayid　'aalit il-naas wadduu-h **anhi　mustašfa**.
the-newspapers said people took-him which hospital
'The newspapers said which hospital people took him to.'

right ( )　　wrong ( )
If your answer is wrong, write down the correct structure

(4) il-kull ᶜirif　il-Hadsa　HaSalit　**feen**.
all knew the-accident took place where
'All knew where the accident took place.'

right ( )　　wrong ( )
If your answer is wrong, write down the correct structure

(5) il-kull ᶜirif   il-Hadsa   HaSalit   **leeh**.
all   knew   the-accident   took place why
'All knew why the accident took place.'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(6) il-kull ᶜirif   il-Hadsa   HaSalit   **izzayy**.
all   knew   the-accident   took place how
'All knew why the accident took place.
right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(7) il-kull ᶜirif   il-Hadsa   HaSalit   **imta**.
all   knew   the-accident   took place when
'All knew when the accident took place.

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

Section 5

(1) il-naas bitis'al **miin** faaz b-l-gayza.
people asking who won with-the-prize
'People are asking who won the prize.'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(2) Fariida ᶜirfit **eeh** asbaab il-Hadsa.
Farida knew what causes the-accident
'Farida knew what the causes of the accident are.'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(3) il-garaayid   'aalit **anhi mustašfa** il-naas wadduu-h li-ha.
the-newspapers said which hospital people took-him to-it
'The newspapers said which hospital people took him to.'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(4) il-kull ⁿirif **feen** HaSalit   il-Hadsa.
    all   knew where took place the-accident
    'All knew where the accident took place.'

    right ( )   wrong ( )
    If your answer is wrong, write down the correct structure

(5) il-kull ⁿirif **leeh** HaSalit   il-Hadsa.
    all   knew why   took place the-accident
    'All knew why the accident took place.'

    right ( )   wrong ( )
    If your answer is wrong, write down the correct structure

(6) il-kull ⁿirif **izzayy** HaSalit   il-Hadsa.
    all   knew how took place the-accident
    'All knew how the accident took place.'

    right ( )   wrong ( )
    If your answer is wrong, write down the correct structure

(7) il-kull ⁿirif **imta** HaSalit   il-Hadsa.
    all   knew where took place the-accident
    'All knew where the accident took place.'

    right ( )   wrong ( )
    If your answer is wrong, write down the correct structure

Section 6

(1) **miin** faaz   b-l-gayza?
    who won   with-the-prize
    'Who won the prize?

    right ( )   wrong ( )
    If your answer is wrong, write down the correct structure

(2) **eeh**   asbaab il-Hadsa?
what causes   the-accident
What are the causes of the accident?

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(3) **anhi**   mustašfa raaH   la-ha?
which hospital   went to-it
'Which hospital did he go to?

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(4) **feen**   šaari^c il-sawra ?
where street Al-Sawra
Where is Al-Sawra Street?

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(5) **leeh** ^{c}amal il-Hadsa?
why did   the-accident
'Why did he make the accident?

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(6) **izzayy**   raaH il-mustašfa?
how   went the-hospital
How did he go to the hospital?

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

(7) **imta** il-Hadsa   HaSalit?
when the-accident took place
'When did the accident take place?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

Section 7

(1) faaz b-l-gayza   **miin?**
won with-the-prize who
'Who won the prize?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

---

(2) asbaab il-Hadsa   **eeh?**
causes the-accident what
'What are the causes of the accident?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

---

(3) raaH **anhi   mustašfa?**
went which   hospital
'Which hospital did he go to?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

---

(4) šaari^c il-sawra   **feen?**
street Al-Sawra where
'Where is Al-Sawra Street?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

---

(5) ^{c}amal il-Hadsa   **leeh?**
did the-accident why
'Why did he make the accident?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

---

(6) raaH il-mustašfa **izzayy?**
went the-hospital how
'How did he go to the hospital?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

---

(7) il-Hadsa   HaSalit   **imta**?
   the-accident took place when
  'When did the accident take place?'

right ( )   wrong ( )
If your answer is wrong, write down the correct structure

Appendix B: Data matrices

Table 7: Data matrix for initial *illi* with in-situ wh-phrases (*illi*+wh-qs)

Informant	DOB	Gender	Subject Area	City of origin	Other Arabic country	Knowledge of MSA	*illi+*wh *miin*	*illi+*wh *eeh*	*illi+*wh anhi	*illi+*wh *feen*	*illi+*wh-*leeh*	*illi+*wh izzayy	*illi+*wh imta
1	1978	1	2	1	2	2	2	2	2	2	2	2	2
2	1971	1	7	1	1	2	1	2	1	2	2	2	2
3	1973	2	1	1	2	3	1	2	1	2	2	2	2
4	1973	2	1	1	2	1	2	2	2	2	2	2	2
5	1975	1	7	1	2	2	2	2	2	2	2	2	2
6	1975	1	7	2	1	2	2	2	2	2	2	2	2
7	1978	1	2	1	2	2	2	2	2	2	2	2	2
8	1976	1	1	1	2	1	1	2	2	2	2	2	2
9	1979	1	7	2	2	3	2	2	1	2	2	2	2
10	1980	1	6	1	1	1	2	2	2	2	2	2	2
11	1977	1	7	1	1	1	2	2	1	2	2	2	2
12	1976	1	1	3	1	1	1	2	2	2	2	2	2
13	1975	2	7	3	1	3	1	2	2	2	2	2	2
14	1975	1	2	3	2	3	2	2	2	2	2	2	2
15	1976	1	1	3	2	1	1	2	1	2	2	2	2
16	1965	1	7	2	1	1	1	2	2	2	2	2	2
17	1974	1	7	3	2	2	1	2	1	2	2	2	2
18	1969	1	7	3	2	2	1	2	2	2	2	2	2
19	1972	1	7	1	2	2	1	2	1	2	2	2	2
20	1977	1	7	3	1	2	2	2	2	2	2	2	2
21	1974	2	1	1	2	1	1	2	2	2	2	2	2
22	1974	1	2	1	1	2	2	2	2	2	2	2	2
23	1978	2	2	1	2	2	1	2	1	2	2	2	2
24	1976	1	7	1	2	2	1	2	2	2	2	2	2
25	1974	2	1	1	2	1	1	2	2	2	2	2	2

Table 8: Data matrix for fronted wh-phrases followed by *illi* (wh+*illi*-qs)

Informant	DOB	Gender	Subject Area	City of origin	Other Arabic country	Knowledge of MSA	wh+ illi miin	wh+ illi eeh	wh+ illi anhi	wh+ illi feen	wh+ illi leeh	wh+ illi izzayy	wh+ illi imta
1	1978	1	2	1	2	2	1	2	2	2	2	2	2
2	1971	1	7	1	1	2	1	2	1	2	2	2	2
3	1973	2	1	1	2	3	1	2	1	2	2	2	2
4	1973	2	1	1	2	1	1	2	2	2	2	2	2
5	1975	1	7	1	2	2	1	2	2	2	2	2	2
6	1975	1	7	2	1	2	1	1	1	2	2	2	2
7	1978	1	2	1	2	2	1	2	2	2	2	2	2
8	1976	1	1	1	2	1	1	2	1	2	2	2	2
9	1979	1	7	2	2	3	1	1	1	2	2	2	2
10	1980	1	6	1	1	1	1	2	1	2	2	2	2
11	1977	1	7	1	1	1	1	1	2	2	2	2	2
12	1976	1	1	3	1	1	1	2	1	2	2	2	2
13	1975	2	7	3	1	3	1	2	1	2	2	2	2
14	1975	1	2	3	2	3	1	2	1	2	2	2	2
15	1976	1	1	3	2	1	1	2	2	2	2	2	2
16	1965	1	7	2	1	2	1	2	1	2	2	2	2
17	1974	1	7	3	2	2	1	1	1	2	2	2	2
18	1969	1	7	3	2	2	1	1	2	2	2	2	2
19	1972	1	7	1	2	2	1	1	1	2	2	2	2
20	1977	1	7	3	1	2	1	1	1	2	2	2	2
21	1974	2	1	1	2	1	1	2	1	2	2	2	2
22	1974	1	2	1	1	2	1	2	2	2	2	2	2
23	1978	2	2	1	2	2	1	2	1	2	2	2	2
24	1976	1	7	1	2	2	1	2	1	2	2	2	2
25	1974	2	1	1	2	1	1	2	2	2	2	2	2

Table 9: Data matrix for embedded wh-in-situ questions (e-wh-i)

formant	DOB	Gender	Subject Area	City of origin	Other Arabic country	Knowledge of MSA	e-wh-i *miin*	e-wh-i *eeh*	e-wh-i anhi	e-wh-i *feen*	*leeh*	e-wh-i izzay	e-wh-i imta
	1978	1	2	1	2	2	2	1	2	1	1	1	1
	1971	1	7	1	1	2	2	1	1	1	1	2	1
	1973	2	1	1	2	3	2	1	1	1	1	1	1
	1973	2	1	1	2	1	2	1	1	1	1	1	1
	1975	1	7	1	2	2	2	1	1	1	2	1	1
	1975	1	7	2	1	2	2	1	2	1	1	2	2
	1978	1	2	1	2	2	2	1	1	1	1	1	1
	1976	1	1	1	2	1	2	1	1	1	1	1	1
	1979	1	7	2	2	3	2	2	1	1	2	2	1
0	1980	1	6	1	1	1	2	1	1	1	1	1	1
1	1977	1	7	1	1	1	2	1	1	1	1	1	1
2	1976	1	1	3	1	1	2	1	1	1	1	1	1
3	1975	2	7	3	1	3	2	1	1	1	2	1	2
4	1975	1	2	3	2	3	2	2	1	1	1	1	1
5	1976	1	1	3	2	1	2	1	1	1	1	1	1
6	1965	1	7	2	1	2	2	1	2	1	1	1	1
7	1974	1	7	3	2	2	2	1	2	2	1	1	1
8	1969	1	7	3	2	2	2	1	1	1	1	1	2
9	1972	1	7	1	2	2	2	1	2	1	1	1	2
0	1077	1	7	3	1	2	2	1	1	1	1	1	1
1	1974	2	1	1	2	1	2	1	1	1	1	1	1
2	1974	1	2	1	1	2	2	1	1	1	1	1	1
3	1978	2	2	1	2	2	2	2	1	1	1	1	1
4	1976	1	7	1	2	2	2	1	1	1	1	1	1
5	1974	2	1	1	2	1	2	1	1	1	1	1	1

Table 10: Data matrix for embedded wh-fronted questions (e-wh-f)

Informant	DOB	Gender	Subject Area	City of origin	Other Arabic country	Knowledge of MSA	e-wh-f *miin*	e-wh-f *eeh*	e-wh-f *anhi*	e-wh-f *feen*	e-wh-f *leeh*	e-wh-f izzayy	e-wh-f imta
1	1978	1	2	1	2	2	1	2	1	2	1	1	1
2	1971	1	7	1	1	2	2	1	2	1	1	1	1
3	1973	2	1	1	2	3	1	1	2	1	1	1	1
4	1973	2	1	1	2	1	1	1	1	1	1	2	2
5	1975	1	7	1	2	2	1	1	2	1	1	1	1
6	1975	1	7	2	1	2	1	1	1	1	1	1	1
7	1978	1	2	1	2	2	1	2	2	2	1	2	1
8	1976	1	1	1	2	1	1	1	2	1	1	1	1
9	1979	1	7	2	2	3	1	1	2	1	2	1	1
10	1980	1	6	1	1	1	1	1	2	1	1	1	1
11	1977	1	7	1	1	1	1	1	1	1	1	2	2
12	1976	1	1	3	1	1	1	1	2	1	1	1	1
13	1975	2	7	3	1	3	1	2	1	1	2	1	1
14	1975	1	2	3	2	3	2	1	2	2	2	2	1
15	1976	1	1	3	2	1	1	1	1	1	1	1	1
16	1965	1	7	2	1	2	2	1	2	1	1	1	1
17	1974	1	7	3	2	2	2	1	2	1	1	1	2
18	1969	1	7	3	2	2	1	2	1	2	1	1	1
19	1972	1	7	1	2	2	2	1	1	1	1	1	1
20	1977	1	7	3	1	2	1	2	2	2	1	1	1
21	1974	2	1	1	2	1	1	1	1	1	1	2	2
22	1974	1	2	1	1	2	2	1	1	2	2	2	1
23	1978	2	2	1	2	2	2	1	2	1	2	2	1
24	1976	1	7	1	2	2	1	1	1	1	1	1	1
25	1974	2	1	1	2	1	1	1	2	1	1	1	2

Table 11: Data matrix for simple wh-fronted questions (s-wh-f)

Informant	DOB	Gender	Subject Area	City of origin	Other Arabic country	Knowledge of MSA	s-wh-f *miin*	s-wh-f *eeh*	s-wh-f *anhi*	s-wh-f *feen*	s-wh-f *leeh*	s-wh-f *izzayy*	s-wh-f *imta*
1	1978	1	2	1	2	2	2	1	2	1	1	1	2
2	1971	1	7	1	1	2	1	1	2	1	2	1	2
3	1973	2	1	1	2	3	1	1	2	2	1	1	2
4	1973	2	1	1	2	1	1	1	1	1	1	2	1
5	1975	1	7	1	2	2	1	1	2	1	1	1	2
6	1975	1	7	2	1	2	1	1	2	2	1	1	1
7	1978	1	2	1	2	2	2	1	2	1	1	2	2
8	1976	1	1	1	2	1	1	1	2	1	2	1	2
9	1979	1	7	2	2	3	2	1	2	1	1	1	1
10	1980	1	6	1	1	1	1	1	2	2	1	1	2
11	1977	1	7	1	1	1	2	1	1	1	2	1	2
12	1976	1	1	3	1	1	1	1	2	1	1	1	2
13	1975	2	7	3	1	3	1	2	2	2	2	2	2
14	1975	1	2	3	2	3	2	2	2	1	1	1	1
15	1976	1	1	3	2	1	1	1	1	1	1	1	2
16	1965	1	7	2	1	2	2	1	2	1	1	2	1
17	1974	1	7	3	2	2	2	1	2	2	1	1	2
18	1969	1	7	3	2	2	2	1	1	1	2	1	1
19	1972	1	7	1	2	2	2	1	2	1	1	1	2
20	1977	1	7	3	1	2	2	2	2	1	1	2	1
21	1974	2	1	1	2	1	1	1	2	2	2	1	1
22	1974	1	2	1	1	2	2	1	1	1	1	1	2
23	1978	2	2	1	2	2	1	1	2	2	2	1	2
24	1976	1	7	1	2	2	1	1	1	1	1	1	1
25	1974	2	1	1	2	1	1	1	1	2	1	1	2

Table 12: Data matrix for simple wh-in-situ questions (s-wh-i)

Informant	DOB	Gender	Subject Area	City of origin	Other Arabic country	Knowledge of MSA	s-wh-i miin	s-wh-i eeh	s-wh-i anhi	s-wh-i feen	s-wh-i leeh	s-wh-i izzayy	s-wh-i imta
	1978	1	2	1	2	2	2	2	1	1	1	1	1
2	1971	1	7	1	1	2	2	1	1	1	1	1	1
3	1973	2	1	1	2	3	2	1	1	1	1	1	1
4	1973	2	1	1	2	1	2	1	1	1	1	1	1
5	1975	1	7	1	2	2	2	1	2	1	1	1	1
6	1975	1	7	2	1	2	2	2	1	2	2	2	1
7	1978	1	2	1	2	2	2	2	1	1	1	1	1
8	1976	1	1	1	2	1	2	1	1	1	1	1	1
9	1979	1	7	2	2	3	2	1	1	1	1	1	1
10	1980	1	6	1	1	1	2	1	1	1	1	1	1
11	1977	1	7	1	1	1	2	2	1	1	1	1	1
12	1976	1	1	3	1	1	2	1	2	1	1	1	1
13	1975	2	7	3	1	3	2	1	1	1	1	1	1
14	1975	1	2	3	2	3	2	1	1	1	1	1	1
15	1976	1	1	3	2	1	2	1	1	1	1	1	1
16	1965	1	7	2	1	2	2	1	2	1	1	1	1
17	1974	1	7	3	2	2	2	1	1	1	1	1	1
18	1969	1	7	3	2	2	2	1	1	1	1	1	1
19	1972	1	7	1	2	2	2	1	2	1	1	1	1
20	1977	1	7	3	1	2	2	1	1	1	1	1	1
21	1974	2	1	1	2	1	2	1	1	1	1	1	1
22	1974	1	2	1	1	2	2	2	2	1	1	1	1
23	1978	2	2	1	2	2	2	2	2	1	1	1	1
24	1976	1	7	1	2	2	2	1	1	1	1	1	1
25	1974	2	1	1	2	1	2	1	1	1	1	1	1

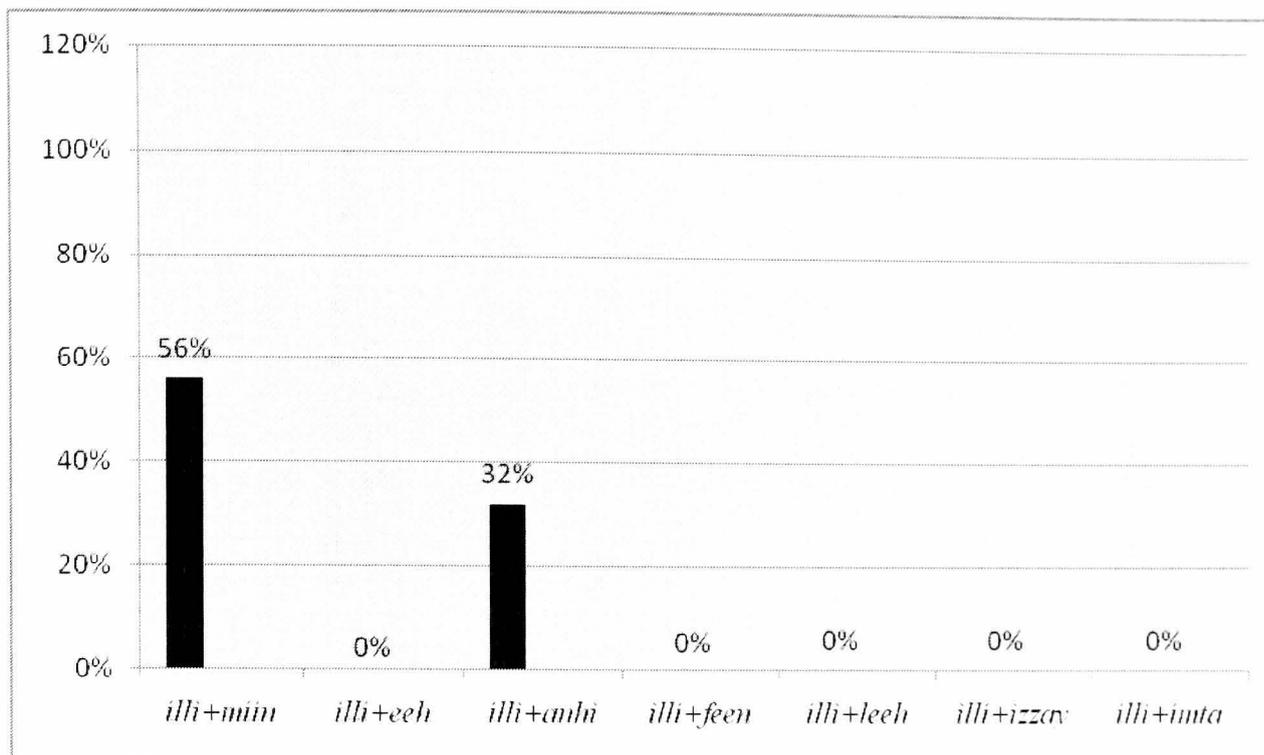**Appendix C: The distribution of data in figures**

Figure 1: Grammaticality judgments of *illi* + wh-questions (*illi* +wh qs)
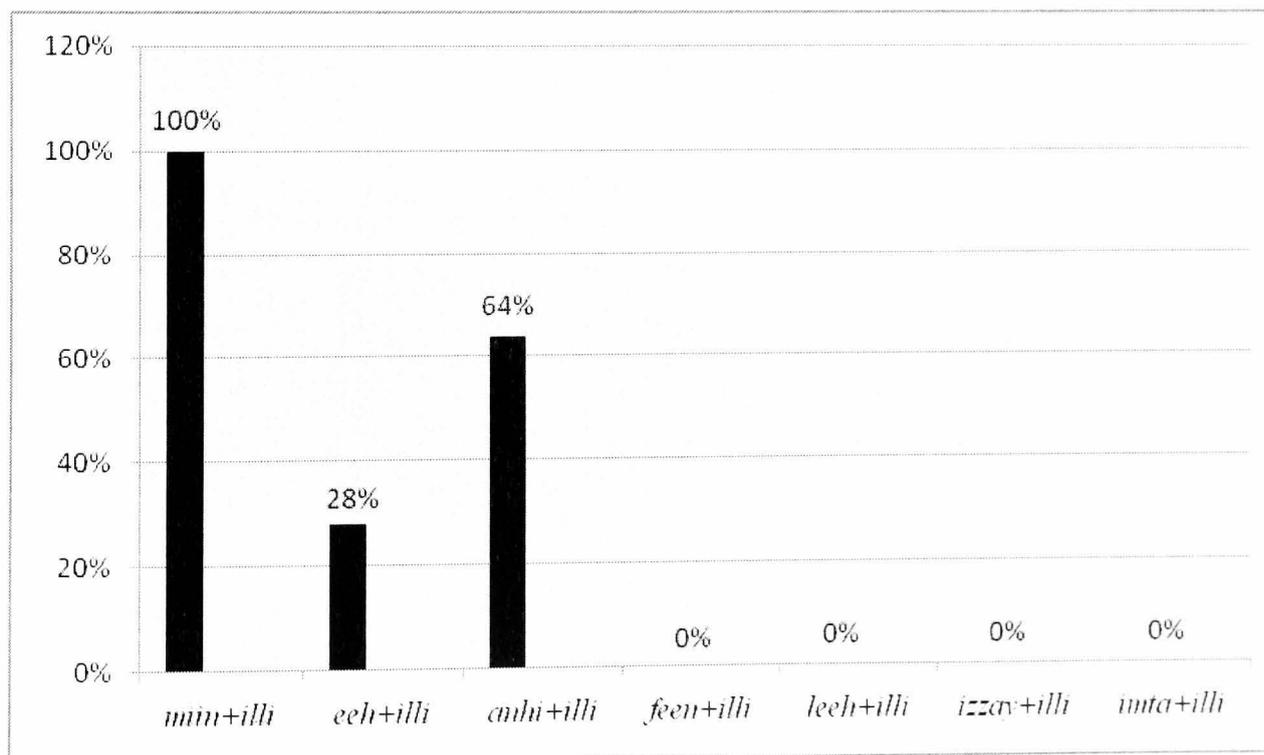

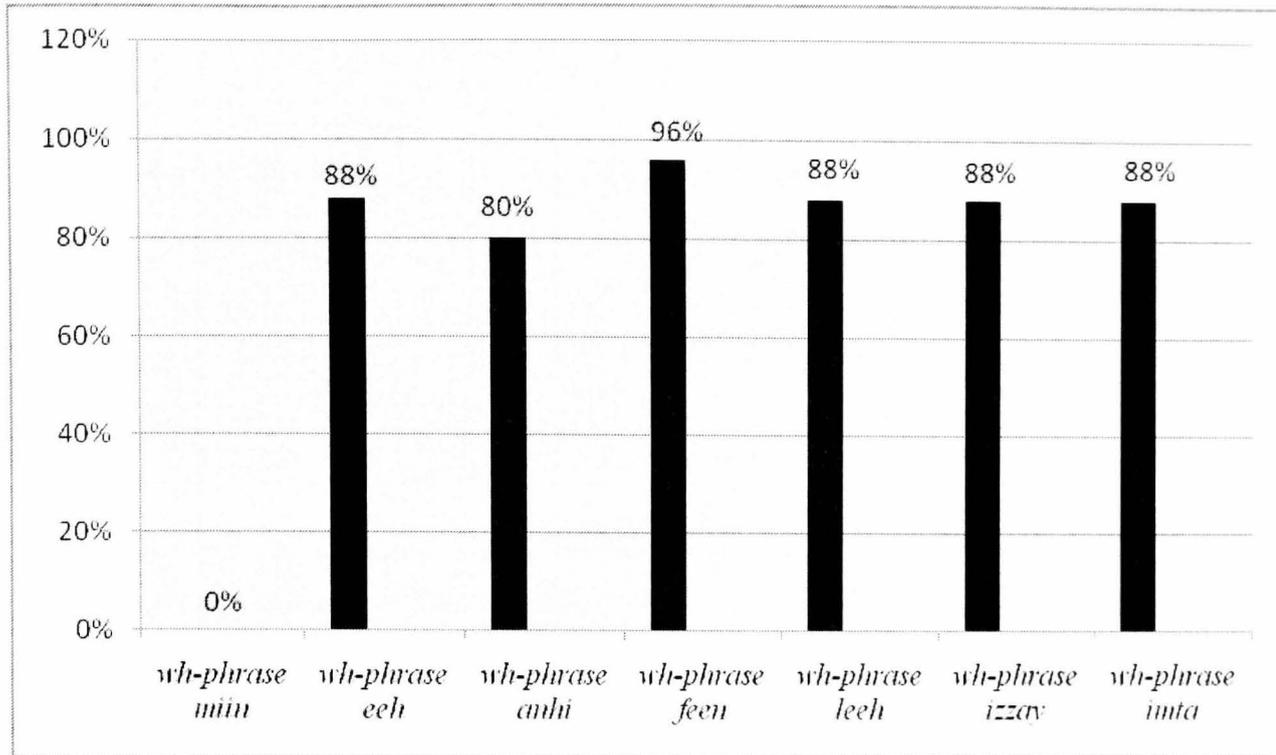**Figure 2**: Grammaticality judgments of wh+*illi* questions (wh+*illi* qs)

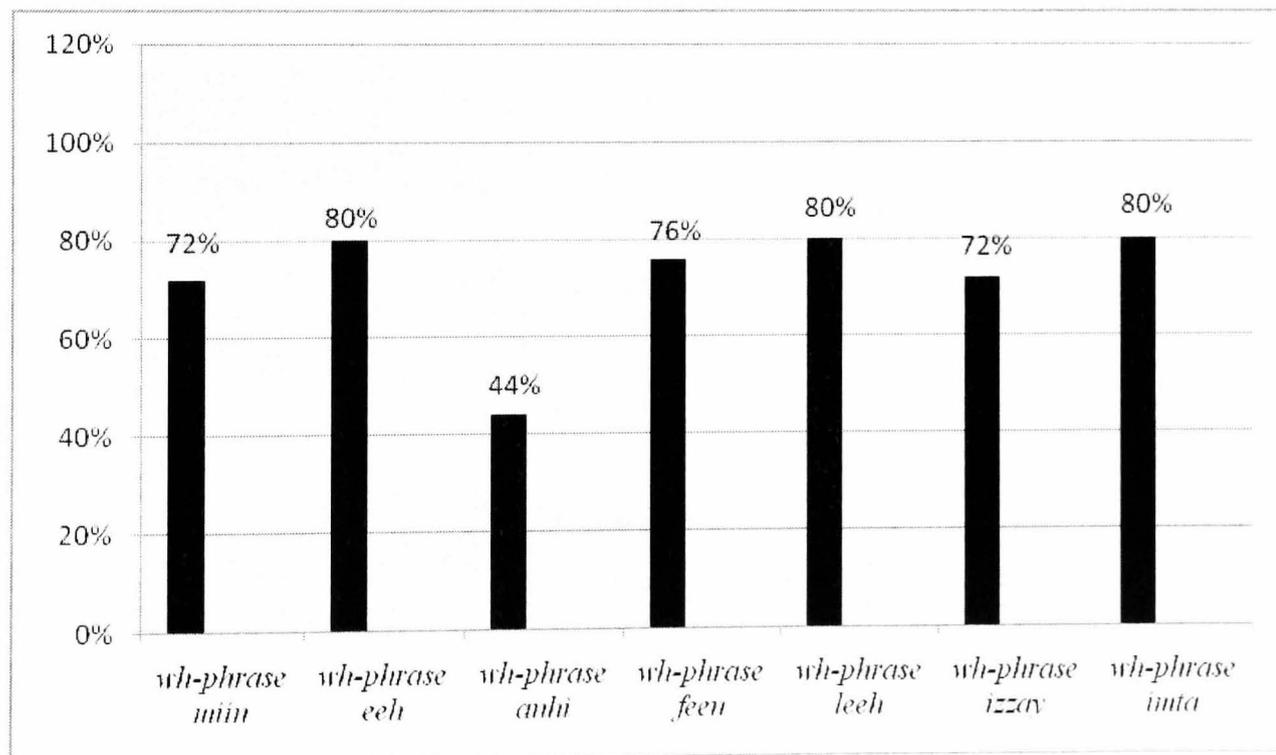**Figure 3**: Grammaticality judgments of embedded wh-in-situ questions (e-wh-i)

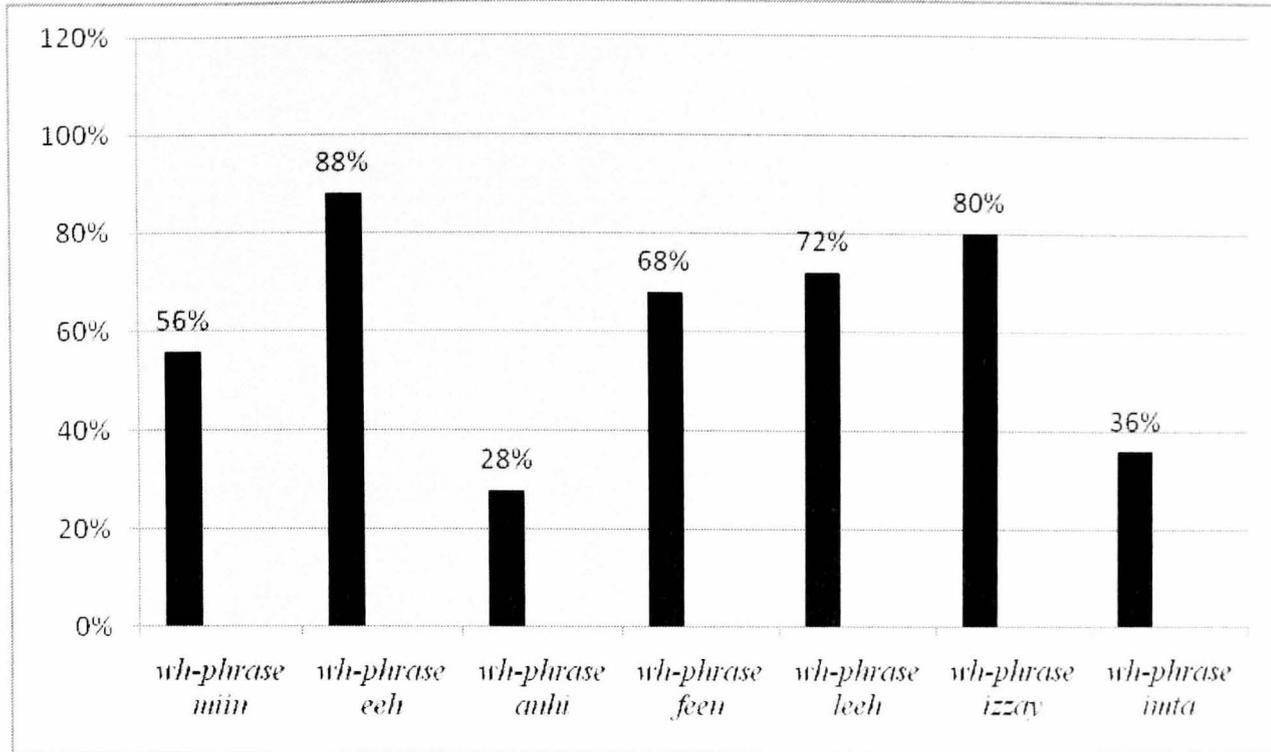**Figure 4**: Grammaticality judgments of embedded wh-fronted questions (e-wh-f)

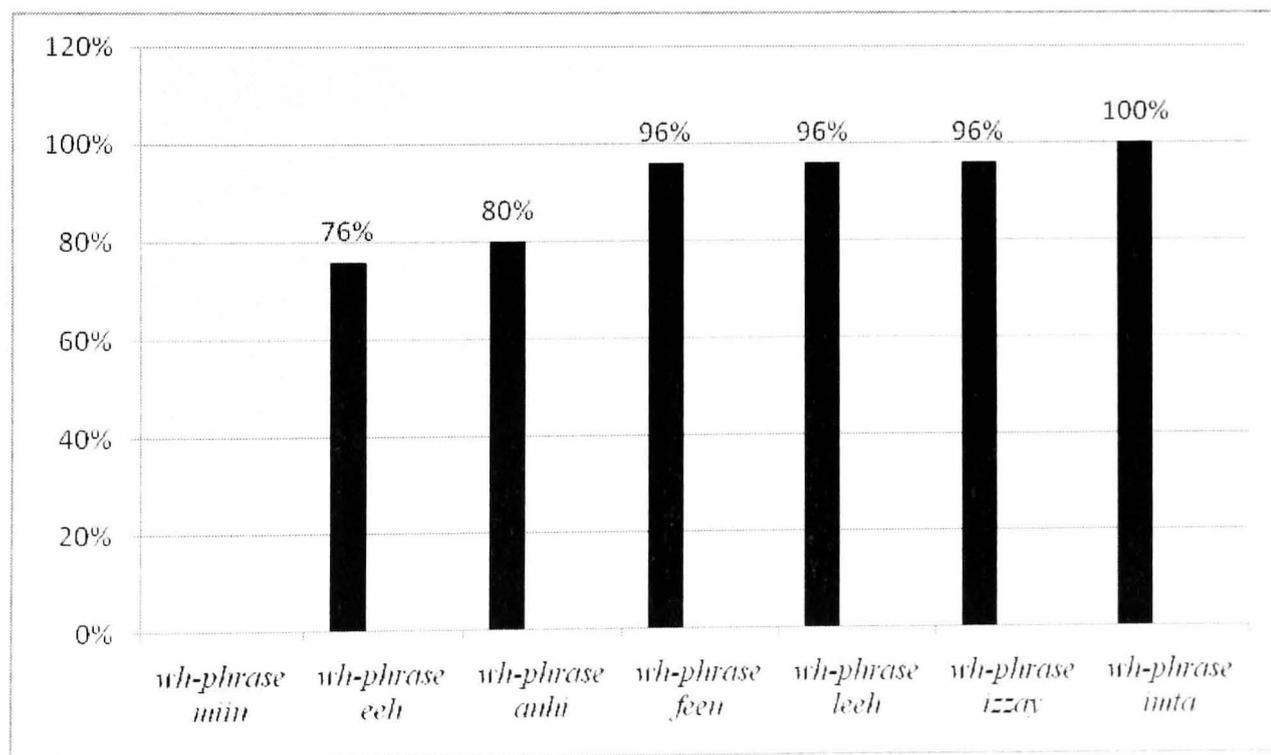**Figure 5**: Grammaticality judgments of simple wh-fronted questions (s-wh-f)

Figure 6: Grammaticality judgments of simple wh-in-situ questions (s-wh-i)