WH-CONSTRUCTIONS IN MOROCCAN ARABIC

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Finally, I wish to dedicate this thesis to my family, whose good care, love and patience know no bounds.

Abstract

This thesis is designed to study various Moroccan Arabic (MA) wh-constructions both within the Government and Binding (GB) framework (chapters 2-4) and the Minimalist Program (MP) (chapter 5). It is, specifically, confined to relative clause formation, left dislocation (topicalization) and questions.

A detailed analysis of relative clauses formation is provided. It is particularly argued that the resumptive pronoun insertion in relatives is a last resort strategy which is used only where movement fails. It is also shown that resumptive pronouns function as variables which are bound by null operators in LF. In the course of this analysis, the issues of the Binding Theory and of the A'-disjointness requirement with respect to resumptive pronouns are also discussed.

Subsequently, an examination of yes-no questions is given. First, it is shown that the Question Feature (QF) in the raising tone questions always translates as a rising intonation in PF, thus triggering no movement. Secondly, various arguments supporting the fact that the yes-no question particle *waʃ* is a wh-phrase are also presented. As a natural consequence, the QF in questions with this particle is deemed to be licensed in a Spec-Head configuration before Spell-Out.

Additionally, Cheng's (1991) generalization that the availability of question particles correlates with the lack of syntactic wh-movement is investigated in detail. It is made clear that MA, which does possess a yes-no question particle, has mandatory movement. Accordingly, a revision, which holds that languages whose particles are XPs should not be subsumed under this correlation, is proposed.

Finally, the recent minimalist version (Chomsky 1995) is applied to the issue of optionality in word orders and to certain wh-constructions. First, it is suggested that in MA, both SV and VS configurations are derived overtly. Secondly, a re-examination of relative clause formation from a representational view is offered. In particular, the free variation between the resumptive strategy and the movement strategy is analysed as a consequence of instances wherein the licensing condition for both strategies are met. Thirdly, left-dislocated phrases are argued to be attached to a TopicP, which dominates IP and is dominated by CP. Ultimately, the cases of the argument-adjunct asymmetry and the Vacuous Movement Hypothesis are examined. More precisely, it is shown that the former is to be accounted for in terms of the Uniformity Condition on Chains and trace-deletion, while the latter is shown to be an unavailable option for MA matrix subject questions by virtue of an Economy Condition on adjunction.

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Chapter one

1. Introduction

The goal of this thesis is to explore the various wh-constructions in Moroccan Arabic (MA) within recent developments of the Government Binding (GB) framework (namely chapters 2-4) and within the recent minimalist version (chapter 5). The thesis is mainly confined to relative clause formation, left dislocation (topicalization) and finally questions, namely yes-no questions and constituent questions.

2. Basic theoretical assumptions of GB Theory

This thesis adopts the Government and Binding (GB) framework, and in particular, the Principles and Parameters (P&P) model. The basic concepts in GB theory, as put forth in Chomsky (1981 and subsequent work), are levels and modules. I adopt here the usual model of grammar (also called T-model), organised as in (1)[1].

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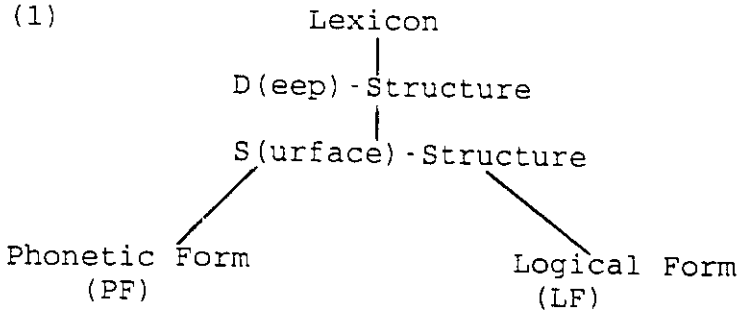
[1]Chomsky (1995) proposes considerable changes to the model in (1). He, particularly, abolishes the D- and S-structure levels of the representation. In chapters two, three and four, except for very brief mentions, I will not consider the Minimalist approach. In chapter five, I will present an overview of this framework and put it into application, in a preliminary fashion, with respect to some Moroccan wh-constructions.

(1)

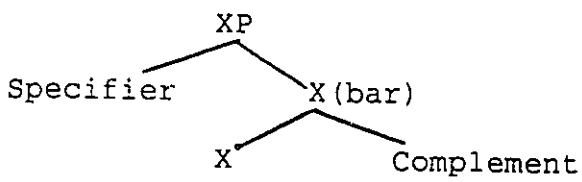


In (1), the D-structure, representing the underlying grammatical relationships, is mapped into a S-structure through successive movement operations. The S-structure is mapped into both a Phonological Form (PF), the basic for a phonetic representation, and a Logical Form (LF), a significant part of the meaning of an expression.

D-structure is generated by the base rules, as dictated by X(bar)-theory, and the specific properties of lexical entries. Lexical items are projected from the lexicon. We adopt the version of X(bar)-Theory introduced in Jakendoff (1977), and further developed in Chomsky (1986a), whereby all syntactic categories project phrases in the syntax. For example, the Noun is the head of an NP, the adjective the head of an AP, and so on. Inflection heads the projection IP, and a complementizer heads CP. Therefore, phrases structures are constrained by X(bar)-Theory.

We, further, assume that two levels of structure are projected: the phrasal level (XP) and the intermediate level (X(bar)), as diagrammed below.

(2)



Besides X(bar)-Theory, several other modules conditioning the well-formedness of syntactic constructs are distinguished as well:

(3) a. *X(bar)-Theory*
b. *Theta Theory*
C. *Government Theory*
d. *Trace Theory*
e. *Binding Theory*
f. *Bounding Theory*
g. *Control Theory*

The list in (3) gives the fundamental representational sample of the various modules of the syntactic component of the P&P model. For recent illustrative and introductory books for GB grammar, see Haegeman (1994), Freidin (1992) and Ouhalla (1994), among many others.

3. Outline of the thesis

The thesis is organised as follows. Chapters 2 to 4 deal with wh-constructions within a GB framework. Chapter 5 exclusively treats these constructions from a Minimalist perspective.

In chapter 2, I examine issues concerning relative clause formation and resumptive pronoun distribution. In particular, I adopt Shlonsky's (1992) analysis of relative clauses, arguing that resumptive pronouns are inserted as a last resort when a relative cannot be derived by movement. I also show that resumptive pronouns function as variables bound by null operators in LF. Being pronominal variables, resumptive pronouns are argued to be subject both to the disjointness requirement that applies in the domain of A(bar)-binding and to Condition C of the Binding Theory. Moreover, I argue that Moroccan relative clauses are formed by two

morphologically non-distinct complementizers, which I refer to as *IIiA* and *IIiA*(bar). The former is associated with the resumptive strategy, while the latter is correlated with the movement strategy.

In Chapter 3, I examine yes-no questions. I show that the difference between declaratives and raising tone yes-no questions is essentially prosodic, suggesting that the Question feature translates as a rising intonation in prosodic phonology, hence triggering no overt movement. I also examine the syntactic status of the yes-no question particle **waʃ**, arguing that it is a wh-phrase, on a par with English *whether*. Consequently, in a way similar to constituent questions, the Q feature in **waʃ** yes-no questions is also licensed in a Spec-Head configuration before Spell-Out.

In chapter 4, I investigate the relevance of Cheng's (1991) correlation, which posits a direct relationship between the existence of yes-no particles and wh-in situ, for Moroccan Arabic. I show that in contrast to Egyptian Arabic, MA has mandatory movement, and I accordingly argue for a slight revision of Cheng's correlation. Specifically, it is suggested that languages, like MA, whose yes-no particles are XPs, on a par with English *whether*, should not be subsumed under this generalization.

In chapter 5, I attempt to apply the insights of the Minimalist Program (MP) to the issue of optionality in word order and to certain wh-constructions, namely relative clauses, left dislocation (topicalization) and wh-questions. Adopting the clause structure developed in Chomsky (1995), I propose that in MA, which exhibits

full agreement in both SV and VS orders, both configurations are derived overtly (i.e. before Spell-Out). In SV order, the subject moves to Spec of AgrSP, and subsequently the verb moves to AgrS via T°. In VS order, on the other hand, the verb moves to T° then to AgrS, while the subject remains in situ in Spec of VP. In section 3, the aim is to re-examine relative clauses and, in particular, the seeming optionality between the resumptive strategy and the movement strategy. I argue that the two strategies do not necessarily preclude each other, by showing that the choice between them is essentially determined by whether the relevant licensing conditions for each of them are met in a certain context. As to their free variation, it is analysed as a natural result of instances wherein the licensing conditions for both of them are satisfied. With respect to left dislocation, I argue that left-dislocated phrases are attached to a TopicP, which is located between CP and IP. As concerns questions, I show that Moroccan Arabic wh-questions are to be treated in a comparable way to English-type languages. Finally, I employ certain minimalist assumptions for cases like the argument-adjunction asymmetry and the Vacuous Movement Hypothesis in subject questions. More precisely, I empirically demonstrate that the former is to be accounted for in terms of the Uniformity Condition on Chains and trace deletion (Chomsky (and Lasnik) 1995). The latter, on the other hand, is shown to be subject to an Economy Condition on adjunction, proposed by Fukui and Saito (1993), that makes vacuous adjunction an unavailable option for MA subject questions.

4. Review of the literature

The following is a very short survey of the related works on Standard Arabic (SA) and some Arabic varieties. To the extent that

can be ascertained, I can say that, with the exception of a brief look at questions by Benmamoun (1992), no (thorough or independent) work regarding wh-constructions (including wh-questions) in MA has been done in generative grammar, including the GB framework. However, some dissertations on the subject have been written on Standard Arabic (Farghali, 1986), Egyptian Arabic (EA) (Wahba, 1984; Osman, 1990 and (partially) Cheng, 1991). The same matter is also investigated in Palestinian Arabic (PA) by Shlonsky (1991).

Both Farghali and Wahba reached the conclusion that SA and EA respectively exhibit syntactic wh-movement. Osman, on the other hand, disputes Wahba's conclusion on the grounds that EA has two types of interrogatives: relativized questions (arguments) and syntactically moved questions (adjuncts). This asymmetric dichotomy between arguments and adjuncts in EA has also been of important concern in Cheng (1991). She argues that EA is actually a wh-in-situ language and that the apparent fronting of wh-words is an instance of the cleft sentence in the case of arguments and topicalization in the case of adjuncts. Pointing in the same direction, Shlonsky concludes that argument questions in PA can also be analysed as disguised clefts or relative clauses.

Consequently, this thesis is basically meant to fill out the gap on MA by devoting itself to the study of different kinds of wh-constructions and their potential implications for recent linguistic theory.

5. Basic assumptions about the structure of MA

Following Aoun, Benmamoun and Sportiche (1993), MA is basically a VSO language. However, two word orders are possible: the subject

can precede or follow the verb, for example:

(4) nʒhu d-draari
succeeded-3rd-pl-masc the-children
The children passed the exam

(5) *d-draari* nʒhu
the-children succeeded-3rd-pl-masc
The children passed the exam

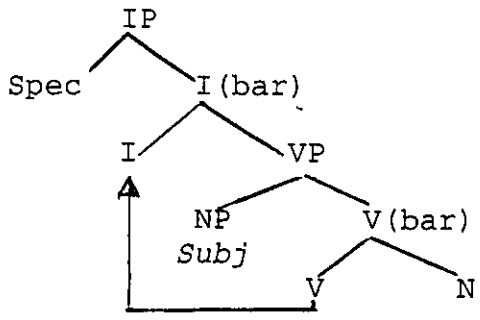
In configurations (4) and (5), the verb fully agrees (i.e., in person, number and gender) with the subject under both orders (VS (4) and SV (5))[2].

As to the syntactic rules that instantiate these two configurations, I first assume, along the lines proposed by Koopman and Sportiche (1991) among others, that the thematic subject is generated in Spec of VP. I, accordingly, also assume the following characterization made in Fassi-Fehri (1989 and 1993):

(5) a. VSO order is derived at S-structure by V-to I raising
b. SVO order is further derived by subject-to-Spec IP raising

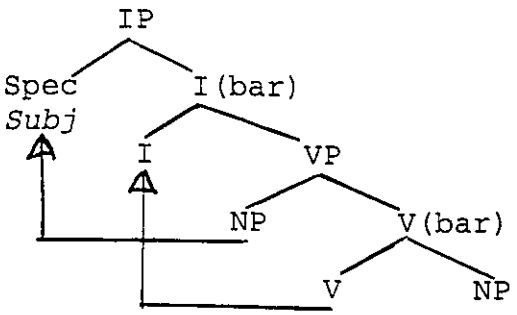
These two assumptions instantiate phrase structures like (6) and (7).

(6)



[2]For various issues regarding agreement in Standard Arabic and Arabic dialects, see Fassi-Fehri (1993) and Kenstowicz (1989), respectively. For basic facts about SA agreement, see chapter 5, fn. 3.

(7)



In these structures, it is assumed that both movements (i.e., the verb movement to I and the subject movement to Spec of IP) take place at S-structure. Note also that MA is a pro-drop language. As such, it exhibits certain characteristics, especially missing subjects (and resistance to *that*-trace effect, see Rizzi 1986), for example:

(8) ʒa (Mohammad) mn s-souq
came-3rd-sing-masc (Mohammad) from the-market
He came from the market

In brief, these are the basic facts about the structure of Moroccan Arabic simple clauses. What should be kept in mind is that MA is essentially a VSO language and a pro-drop language, and as such, it shows two main properties: free inversion and missing subjects.

Chapter two

RELATIVIZATION IN MA

In this chapter I adopt an analysis of Moroccan relative clause formation based on a last resort principle, in its earlier and more intuitive use[1]. Section 2, in particular, elaborates on Shlonsky's (1992) analysis of relative clauses, arguing for the relevance of the resumptive strategy as a last resort strategy. Relatedly, in section 3, resumptive pronouns are analysed as variables which are bound by null operators in LF. As part of this analysis, the issue of the Binding Theory with respect to resumptive pronouns (i.e., variables) is thoroughly discussed.

1.Relative clauses formation

I propose to divide relative clauses in MA into two main types: definite and indefinite relatives[2]. This division is basically

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[1]The label *last resort* is to be understood in the sense that a grammatical operation is resorted to when another one fails. Here, resumptive pronouns are assumed to be resorted to when movement fails to yield a grammatical sentence. This label is not, thus, to be confused with *Last Resort*, the principle used by Chomsky (1995) in *The Minimalist Program* for what used to be called the *Greed Principle*.

[2]Definiteness here is meant to include nouns, personal nouns, nouns that are prefixed with the definite article *l* "the" or double consonants, nouns that are modified by demonstratives that function as deictic elements and nouns that are annexed to definite nouns. According to Arab grammarians, these are the five types of definite nouns (NPs) in Arabic (cf. Wright, 1975). Conversely, any NP which is not inherently definite, i.e., is not of the five categories mentioned above, is considered indefinite.

motivated by the fact that the relative particle *lli* "that" (see the examples below) is obligatorily present in the former (except for oblique objects which can also be derived without *lli* (see ex. 5b) and obligatorily absent in the latter.

We first begin with definite relatives. In MA a wide range of definite NPs can be relativized such as subjects (1), embedded subjects (2), objects (3) embedded objects (4), oblique objects (5a-b), genitives (6), NP-internal position (7), and coordinate subjects (8). Here, it should be noted that the relative particle *lli* is morphologically invariable in MA. That is, it neither inflects for gender or number as in Standard Arabic (SA)[3], nor does it inflect for gender or number as in SA and English, nor does it vary according to whether it is referring to animate or inanimate nouns as in English.

1- l-wald **lli** mʃa l-xariʒ
def-boy that went to-abroad
The boy that went abroad

2- l-wald **lli** danni-t blli (**huwwa**) mʃa l-xariʒ
def-boy that think-I that (he) went to-abroad
The boy that I thought that he went abroad

3- ʒbar-t l-ktab **lli** nsit-i(**h**) f-l-qism
found-I def-book that forgot-you (it) in-def-class
I found the book that you forgot in the class room

---

[3]See Suaih (1980) and Fassi-Fehri (1981, 1985) for thorough accounts of relativization in SA.

4- l-ktab **lli** danni-t blli nsi-i-**h** f-l-qism
def-book that thought-I that forgot-you-it in-def-class
The book that I thought that you forgot in the class room

5a- r-rajal **lli** mʃi-t mʕa-**h**
def-man that went-I with-him
The man that I went with

b- r-rajl mʕa mn mʃi-t
def-man with whom went-I
The man with whom I went

6- kanʕraf t-talaba **lli** nsaw ktub-**hum**
know-I def-students that forgot books-their
I know the students that forgot their books

7- ha-l-bant **lli** xu-**ha** ʕskri
this-def-girl that brother-her soldier
This is the girl whose brother is a soldier

8- r-rajal **lli** **huwwa** u mart-u mʃaw l-xarij
def-man that he and wife-his went to-abroad
The man that he and his wife went abroad

In (1), the definite antecedent *lwald* (the boy) is followed by *lli*. In (2) and (3), the antecedents are followed by *lli* and are optionally coreferent with the resumptive pronouns *huwwa* and *h*, respectively. In (4), the antecedent is also adjacent to *lli* and relates to the embedded pronoun *h*. In (5a), the relative is formed with *lli* and the oblique resumptive pronoun *h*, while in (5b) the relative is exclusively formed both without *lli* and without resumptive pronoun. The antecedent in (6) is also adjacent to the complementizer *lli* and is coreferent with the pronoun *hum*. In (7), the antecedent *lbant* (the girl) is followed by *lli* and is associated with the NP-internal pronoun *ha*. Finally, in (8), the

definite antecedent is followed by *lli* and a resumptive pronoun *huwwa*. Note that (1) and (5b), where no resumptive pronoun occurs, are assumed to be relativized via a movement strategy. (4), (5a), (6), (7) and (8), on the other hand, are taken to be formed by a resumptive strategy. As to (2) and (3), they are supposed to be optionally formed either by base-generation or the movement strategy.

Indefinite relative heads, on the other hand, can also occur in all the forms expressed above. With the exception of the subject NP, all indefinite NPs require coindexing resumptive pronouns as indicated in the following examples corresponding to (1), (2), (7) and (8) respectively.

9a- wahd l-wald mʃa l-xarij
one the-boy went to-abroad
A boy that went abroad

b- jbar-t wahd l-ktab nsiti-**h** f-lqism
found-I one the-book forgot-it in-class
I found a book that you forgot in the class room

c- ha-wahd l-bant xu-**ha** ʕaskri
this-one the-girl brother-her soldier
This is a girl whose brother is a soldier

d- wahd r-rajl **huwwa** u mart-u mʃaw l-xarij
one the-man he and wife-his went to-abroad
A man that he and his wife went abroad

In a way parallel to definite relatives, indefinite relative clauses could be interpreted to mean that *lli* has a phonetically null counterpart, [φ], which appears when the relative head is marked [-specific].

Finally, there is a third type of relatives in MA which could be called "free relative". See for example:

10a- **lli** ʃraf l-ʒawab igul-u
that know def-answer say-it
The one who knows the answer should tell it

b- **lli** dannit blli (**huwwa**) ʒawab ʃla s-su?aal
that thought-I that (he) answered on the-question
The one that I thought that he answered the question

We assume that in these relatives, the head has no phonological content. Moreover, we assume that these relatives fit neatly under definite relative clauses given their identical behaviour regarding resumptive pronouns. In the same way to (1), (10a) illustrates relativization from matrix subject position, where the resumptive pronoun is also obligatorily absent. (10b), like the definite relative in (2), exemplifies relativization out of embedded subject position wherein the resumptive pronoun *huwwa* may freely occur.

2.Distribution of resumptive pronouns

In the present section, I will provide a description and an analysis of the distribution of resumptive pronouns in relative clauses. MA has two distinct strategies for relativization: the insertion of a resumptive pronoun (e.g.,6,7 &8),and the more familiar strategy of wh-movement (e.g., 1,2,3 & 5b). Following Shlonsky (1992), I will argue that resumptive pronouns are never in free variation with gaps, as it may appear. Rather, their distribution is severely regulated by last resort considerations ,

strategies which are recently given much attention in the literature.

Chomsky (1991), for instance, explicitly relates these strategies to principles of economy that impose a markedness hierarchy on grammatical operations. He further argues that last resort operations are language-specific rules that come into play only when Universal Grammar (UG) operations are blocked. This implies, in other words, that language-specific rules will automatically be blocked if a UG rule is available. In a similar vein, Rizzi (1990), Safir (1986) and Chomsky (1977), among others, suggest that the resumptive pronoun strategy is a last resort strategy which is used only when movements violate some syntactic constraint. Accordingly, during our investigation, the focus will be on where the movement is blocked, to account for where resumptive pronouns are allowed to occur.

Descriptively, in MA three ways of distributing resumptive pronouns are available. In some positions, resumptive pronouns are obligatory and gaps are excluded (e.g., 5a, 6, 7 & 8). In one position (1), the gap is obligatory and the resumptive pronoun is impossible. In other positions, resumptive pronouns freely vary with gaps (e.g., 2 & 3).

First of all, in order to show that resumptive pronoun insertion is always a last resort device and never a freely available grammatical strategy on its own, we must examine the positions where resumptive pronouns occur. Further, it must be demonstrated, for the cases in question, that the occurrence of resumptive pronouns is indeed forced by the illicitness of gaps. This is the case in oblique objects (5a), genitives (6), possessor positions (7) and coordinate subjects (8).

Given that MA possesses a constraint against preposition stranding, a gap instead of a resumptive pronoun in object preposition clearly violates the Empty Category Principle (ECP) as in (13b) below.[4]

Here, we will depend on the conjunctive formulation of the ECP provided in Rizzi (1990), which reduces proper government to proper head-government:

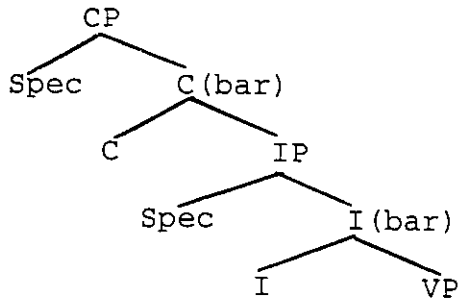
(11) A non-pronominal empty category must be properly head-governed. (Rizzi, 1990:87)

A category YP is said to be properly head-governed by a head category X° if YP is contained inside the immediate projection X(bar) of X°. One important result of this definition is that X° cannot properly head-govern the specifier of the Xmax in which it

[4]For the sake of coherence, I will repeat or give new examples.

is contained. Thus in (12), for example, I does not properly head-govern [Spec IP], but C° potentially does.

(12)



The constraint against Preposition stranding in MA imposes that objects cannot split away from the prepositions; i.e., prepositions in MA should always assign case to an overt complement to their right. In (13), for example, the preposition *f* "in" assigns locative; it requires an object after it to bear this case. So, the gap in (13b) is not properly head-governed, and therefore would not meet the ECP.

(13)a- ha d-dar lli skant fi-**ha**
this def-house that lived-I in-it
This is the house that I lived in

b- *ha d-dar lli skant fi-***t***i*
this def-house that lived-I in-*ti*
(same as 13a)

Any complement to the preposition in MA -e.g.,*f(i)*- must thus be an overt object rather than a trace.

Likewise, resumptive pronouns are obligatory inside coordinate subjects, as in (14). In accordance with the last resort principle, consider (14b) where movement that leaves a gap inside a coordinate

subject violates the Coordinate Structure Condition (and ultimately the ECP).

(14)a- l-wald lli **huwwa** u xu-h ʃziza ʃli-hum l-halwa
def-boy that he and brother-his like on-them candy
The boy that he and his brother like candy

b- *l-wald lli ***ti*** u xu-h ʃziza ʃli-hum l-halwa
def-boy that ti and his brother like on-them candy
(same as (14a))

Similarly, given the fact that extraction of elements internal to NPs is sanctioned in MA, a resumptive pronoun is obligatory in (15) and (16).

(15)a- l-bant lli ba-**ha** barlamani
def-girl that father-her parliamentary
The girl whose father is a member of parliament

b- *l-bant lli ba-***ti** barlamani
def-girl that father-ti parliamentary
(same as (15a))

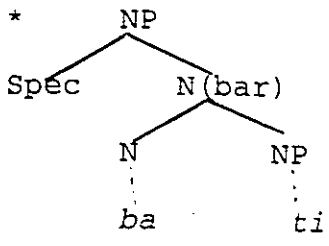
(16)a- t-talaba lli jabu ktub-**hum**
def-students that brought books-their
The students that brought their books

b-*t-talaba lli jabu ktub-***ti**
def-students that brought books-ti
(same as (16a))

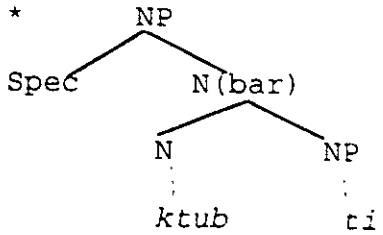
In MA, as well as in SA (see Fassi-Fehri, 1989), the possessive and genitive are assumed to be in [Spec N(bar)], in a rightward fashion. Thus, the structure of the internal NP in (15b) and (16b) would roughly be (17a-b) respectively.

(17)

(a) *



(b) *



Thus possessive/genitive NPs in [Spec N(bar)] are not immediately head-governed by the lexical head N, hence the ungrammaticality of the sentences. In other words, movement out of [NP/NP] in MA, like extraction from [NP/PP] in (13b), is clearly reducible to ECP reasons. We can, therefore, view a resumptive pronoun in such positions as a saving device for otherwise ungrammatical sentences.

Now we return to the unique position where a gap is obligatory and a resumptive pronoun is completely ruled out, namely the matrix subject position. This exclusion is generally considered to be the result of the Highest Subject Restriction (HSR) (cf. McCloskey, 1990)[5] which severely constrains the occurrence of the resumptive pronoun in such position. Consider the following example and its schematic structure:

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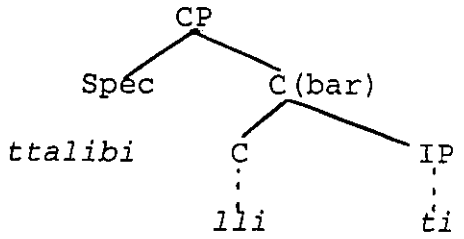
[5]McCloskey identifies a basically identical phenomenon in Irish. The phenomenon is also confirmed in a number of Null Subject languages such as Hebrew and Palestinian Arabic (Shlonsky, 1987 & 1992), Egyptian Arabic (Wahba, 1984), Jordanian Arabic (Kenstowicz, 1989) and Berber (both Tarifiyt and Tashlhiyt varieties) (for Tarifiyt see Ouhalla,1988 & 1993).

(18)a- t-talib lli nʒah
def-student that succeeded
The student that past the exam

(b)



In principle, nothing prevents the short movement of the subject *ttalib* "the student" from [Spec IP] to [Spec CP]. Indeed, this movement could also be viewed as a direct consequence of the principles of economy. In other words, the possibility of movement blocks the last resort strategy; naturally then, the movement takes place and the insertion of the resumptive pronoun is ruled out.

As to the ECP diagnostic, the trace in (18) is properly head-governed. Moroccan relatives have a special C° element *lli*, which can be considered to incorporate an Agr(eement) element triggered by the presence of the wh-operator in [Spec CP] (see Rizzi, 1990 for details). This complex C° element can serve as the proper head-governor of the trace in [Spec IP]. Unlike this complex C° element, *blli* (*that*-complementizer), in 2 & 4 for example, does not incorporate an Agr element, and therefore does not possess the ability to govern, making it, in Rizzi's terms, inert for government. On this view, the C° *lli* does count as an appropriate head-governor for the trace in (18), respecting the ECP

requirement[6],[7].

Relatedly, additional confirmation for the occurrence of resumptive pronouns as a last resort comes also from English. For example, resumptive pronouns are obligatory in the following English relative clauses, specifically where a gap is impossible:

(19)a- The guy who wondered whether he (*t) was sane (Safir, 1986: 684)

b- The book that I wondered whether I could get it (*t) in the mail (Kayne, 1984: chp. 3, fn. 23)

Safir and Kayne assume that the rule that generates resumptive pronouns in examples such as (19) constitutes a last resort operation designed to rescue an otherwise illicit structure (see also Chomsky, 1977).

In a nutshell, it seems straightforward of all MA relatives, where a gap can be shown to violate the ECP, that the resumptive pronoun

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[6]Note that the subject here can also be assumed to be generated postverbally. However, I do not wish to discuss which possibility is more likely to be the case simply because if the extraction has taken place postverbally, the trace will also be head-governed by the verb. Thus since the ECP cannot be the cause of ungrammaticality, the choice between the two options is not deemed imperative, at least at this point of the discussion.

[7]Note again that the exclusion of the pronominal subject from this position could also be accounted for by the Condition B of the Binding Theory which requires that pronouns be non-locally bound. Once again, I ignore this treatment for the time being for the simple reason that the analysis we adopt at this point focuses on the possibility or impossibility of movement rather than on the licensing requirements of pronouns.

strategy is clearly a last resort device in the sense discussed by Shlonsky (1992).

Ultimately, the case where the gap and the resumptive pronoun are in free variation seems, indeed, to cast some doubt on the last resort assumption. To resolve this seeming contradiction, I will once again continue adopting the alternative proposed by Shlonsky (1992) with respect to Hebrew data which exhibits the same behaviour for the distribution of resumptive pronouns. I will suppose that MA, in fact, possesses two distinct complementizers. The first, which we will call *lli*A, selects an A-specifier[8]. The second, which we will label *lli*A(bar), identifies an A(bar)-position. So when the former C° is selected, the resumptive pronoun

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[8]Palestinian Arabic (PA) and Egyptian Arabic (EA) have a complementizer *illi* that always selects a resumptive pronoun in all relative clauses, except for the highest subject position. Shlonsky then hypothesizes that the Palestinian (and hence Egyptian) complementizer always identifies its specifier as an A-position. As a matter of fact, movement from direct object, for example, is blocked in PA and EA by the Specified Subject Condition (SSC) which is made relevant by the lexical properties of the C° *illi*. In other words, movement to [Spec CP] would be a case of A-movement which is constrained by the SSC.

Note also that *illi* shows up in relative clauses of all kinds, in clefts, and in interrogative clauses which Shlonsky (1991) analyses as disguised copular constructions. Indeed, the consistent appearance of *illi*, alongside the resumptive pronoun, in all these constructions proves that it is always followed by a predicate even in questions. Thus according to the feature system developed by Rizzi (1990) for classifying complementizers, *illi* can be considered basically a [+predicational] complementizer. Moroccan *lli*, on the other hand, does not appear in questions, except optionally in subject position (see chapter 4, section 3 for the exact classification of *lli*).

appears obligatorily. When the latter C° is selected, on the other hand, movement is no longer subject to A-movement constraints (such as SSC) and hence wh-movement freely takes place. This is the case in direct object (3) and embedded subject (2) positions. It follows then that the apparent optionality problem is primarily due to the fact that MA has two morphologically non distinct complementizers: one that identifies an A-specifier and one that takes an A(bar)-specifier[9].

The possible existence of morphologically ambiguous C° elements has been already discussed in Rizzi (1990) and McCloskey (1990). Moreover, Rizzi (1990, chapter 2) suggests that [Spec CP] may sometimes function as an A-position. He hypothesizes that given the formal relation of Spec-head coindexing, some instances of C° could be provided with agreement specification in C°. Accordingly, it is possible to consider the Moroccan complementizer *lli*(A) as being endowed with a feature grid consisting of slots that coindexes with a specifier[10]. Such an agreement is quite similar to the type

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[9] One important result, then, is that the difference between Palestinian and Egyptian relative clauses, on the one hand, and Moroccan relatives, on the other, reduces to the fact that PA and EA have only a single complementizer, one that identifies an A-specifier, whereas MA has two complementizers, one that identifies an A-specifier and one that does not.

[10]Classical Arabic manifests a clear example of a language that overtly represents all the morphological features in its complementizer, for example:

of agreement characterized by the subject and INFL. By analogy with the I system, *lli*(A) can, then, be determined as an A-position. Constrained by all A-movement conditions[11].

A concrete confirmation for the possible existence of two distinct complementizers is clearly attested in Irish. In the latter, as described in McCloskey (1990), the presence or absence of a resumptive pronoun correlates with a morphological alternation in the form of C°.

In a similar way to MA, resumptive pronouns in Irish are obligatory in the same positions, ruled out in the highest position, and seemingly optional in positions such as direct object and embedded subject. The only difference, however, is that in Irish the complementizer that introduces clauses containing gaps is overtly (morphologically) distinct from the one that introduces clauses

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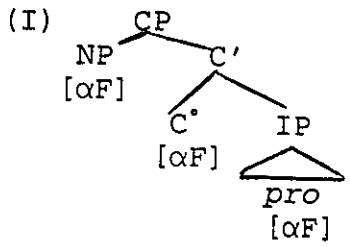
allaəi (who masc. sing) *allati* (who fem. sing)
allaəaani (who masc. dual) *allataani* (who fem. dual)
allə-iina (who masc. plural) *allawaati* (who fem. plural).

[11]This analogy suggests that the form of relative pronoun relatives will be such as the following:



with resumptive pronouns. Following McCloskey (1990), I represent the former as *aL* and the latter as *aN*[12]. Furthermore, every intermediate Comp separating the gap from the matrix CP is obligatorily filled by *aL* , whereas an embedded pronoun induces the occurrence of *aN* only in the matrix CP, the intermediate Comps being filled by the regular subordinating particle *go*. These options are illustrated schematically in (20).

(20) a- [NP NP[CP *aN*[IP...pronoun...]]]
b- [NP NP[CP *aL*[IP...t...]]]
c- [NP NP[CP *aN*[IP...[CP *go*[IP...pronoun...]]]]]
d- [NP NP[CP *aL*[IP...[CP *aL*[IP...t...]]]]]

Thus, the formal distinction between *aN* and *aL* can be considered to correspond respectively to *Illi*A and *Illi*A(bar) in MA. Note, however, that the choice of complementizer per se, in view of our analysis, does not determine the choice between the pronoun or a trace. This choice is, indeed, regulated by the possibility or impossibility of movement to [Spec CP]. The idea is simply that the choice of *aN* or *Illi*A severely reduces the number of positions accessible to movement. Thus, the last resort strategy is forced to take place in a greater number of cases[13].

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[12]In McCloskey (1990), *aN* and *aL* stand respectively for nasalization mutation and lenition mutation on a following verb.

[13]Note also that this correlation does not hold for the matrix subject position, as it is also the case in MA, PA and EA. This confirms further that the selection of the complementizer is independent of the appearance of a resumptive pronoun. The idea is that only when the highest subject position is relativized that the identification of [Spec CP] as an A-position by an *illi*-

3.Resumptive pronouns as variables in LF

In the preceding section, our discussion has been centered on two main questions. The first has been to provide a systematic account of the distributional pattern of resumptive pronouns in relative clauses. The second has been to demonstrate that the insertion of resumptive pronouns is an operation regulated by a last resort strategy, which is, in its turn, motivated by principles of economy. This latter question also implies that some relative constructions (those containing gaps) do, indeed, involve syntactic movement. In this respect, Shlonsky's analysis regarding Hebrew data affords a coherent treatment for somewhat analogous cases in MA. Building on the previous assumptions, the present section investigates what makes resumptive pronouns variables, and what element functions as antecedent to them. The other related question is that if resumptive pronouns are A(bar)-bound[14], as we assume

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type complementizer fails to block movement. This is why *illi* and perhaps *lliA* correlate with traces in the highest subject position.

[14]Notice, first of all, that since Chomsky (1977), it has been normal to classify certain constructions as having the unified characteristic of wh-binding (A(bar)-binding). Chomsky identifies the following eight constructions as being of this type: (1) restrictive and nonrestrictive relative clauses, (2) constituent questions, (3) clefts, (4) topicalization structures, (5) comparative and equative clauses, (6) infinitival relatives, (7) purpose clauses, and (8) complex adjectival (though movement) constructions.
So the idea of considering resumptive pronouns in relative clauses as being A(bar)-bound variables would not be very surprising, but rather it has some motivation in the theory.

here, then at what level this takes place. In fact, MA provides sufficient data that could directly bear on those issues.

Consequently, admitting that resumptive pronouns are in principle A(bar)-bound pronouns, then their relation with regard to the binding theory also calls for some clarification. If taken to be directly A(bar)-bound, resumptive pronouns could then be pronominal variables. Relatedly, we should sufficiently explain how their status as pronominal variables is expected to behave with respect to the Binding Theory (BT).

3.1. Resumptive pronouns are bound variables

In the literature, a variable is generally understood as an element which is bound and whose most immediate binder is an element in A(bar)-position. On this view, various works related to bound variable anaphora and of the syntax of quantification (see Lasnik & Stowell, 1987 and May, 1989) suggest, either implicitly or explicitly, that direct A(bar)-binding of a pronoun is impossible. The important goal of these works has been to assimilate the structures produced by wh-movement and quantifier raising (QR) at LF. Thus a natural consequence of this assumption would be that structures such as (21a) are well-formed, while structures such as (21b) should be ruled out (where no other binder, i.e., coindexed c-commanding element, intervenes between XP*i* and the element it

binds).

(21)a- [CP XPi[IP...ti...]]
b- [CP Xpi[IP...proi...]]

Previous data, however, demonstrates that (21b) is, in fact, well-formed. Thus, the idea of whether or not resumptive pronouns are A(bar)-bound _at least in languages such as MA, Hebrew, Irish and Tashlhiyt_ is closely related to the question of what element exactly functions as antecedent to the resumptive pronoun. Indeed, the question of identifying this antecedent has a direct relation to the Binding Theory.

We have seen previously that Moroccan relative clauses are introduced by two different complementizers (i.e., *lliA* & *lliA*(bar)), depending on whether they contain a gap or a resumptive pronoun. To finesse those non-distinct morphological complexities, we adopt a schematic structure parallel to McCloskey's in (20).

(22)a. [NP NP[CP *lliA*[IP...pro...]]]
b. [NP NP[CP *lliA(bar)*[IP...t...]]]
c. [NP NP[CP *lliA*[IP...[CP *blli*[IP...pro...]]]]]
d. [NP NP[CP *lliA(bar)*[IP ...[CP *blli*[IP...t...]]]]]

The complementizer, which is associated with the appearance of a resumptive pronoun, is in (22a-c); and the complementizer, which correlates with a gap, is in (22b-d). In fact, this schematic distinction is useful in helping us concretize a clear view of resumptive pronouns structures.

It has been established so far that resumptive pronouns can generally appear -alongside wh-traces in certain instances- in every relative clause position except that excluded by HSR, namely the highest subject position. Given this regular pattern, we can postulate, as a starting point, that A(bar)-chains in MA may terminate sometimes in pronouns. Essentially, this statement has the consequence that resumptive pronouns are defined as variables. This is so since it predicts that the closest binder for a resumptive pronoun is some c-commanding element in a A(bar)-position. Accordingly, resumptive pronouns should show the characteristic behaviour of variables. In particular, they should be subject to condition C of the Binding Theory. Variables, like R-expressions, are subject to principle C of BT, which states the following.[15]

(23)a. An R-expression must be A-free in the domain of its operator
b. An R-expression must be A-free
(Chomsky, 1986a: 86)

More specifically, one should find Strong crossover (SCO) effects for resumptive pronouns, such as illustrated in (24) (taken from Haegeman, 1994: 417; exp.93a).

(24) *Who$_i$ does he$_i$ think you saw t_i?

This sentence is ungrammatical because it fails to meet the requirement of condition C which requires that R-expressions (and

[15]Here only (23a) applies to variables.

thus variables) be A-free in the domain of their operators. In other words, they should lack a c-commanding antecedent in argument position. In (24), the trace of *who* is coindexed with *he* (which is in subject position and within the domain of the operator *who* that binds t_i), and hence, it will be A-bound violating condition C of BT.

At this point, we should address the question as to whether resumptive pronouns in MA also display SCO effects. In addressing the same question with regard to Irish, McCloskey (1990) provides various examples to demonstrate that resumptive pronouns do not produce SCO effects. Applying his argument to MA, the contrast in (25) cannot be taken alone to say that resumptive pronouns differ from traces in failing to produce condition C effects.

(25)a.*hada huwwa r-raʒli lli gult li-**h**$_i$ blli l-buliis ɣadi iʃəd t$_i$
this he def-man that said-I to-him that def-police will arrest ti
This is the man that I told him that the police will arrest him

b.hada huwa r-raʒl$_i$ lli gult li-**h**$_i$ blli l-buliis ɣadi iʃəd-u$_i$
this he def-man that said-I to-him that def-police will arrest him
(same as 25a)

This is the case because nothing prevents the first rather than the intended second pronoun to be taken as the resumptive (i.e., bound) pronoun in (25b). In such a case, the second pronoun can be interpreted as coreferential with the first pronoun rather than as bound by (to anticipate little) the (null) operator in Comp. Hence,

this sentence, in which both pronouns are coindexed, can be derived without violating condition C. Such an option is unavailable in (25a) because there is only one pronoun in the sentence and it c-commands the trace, resulting in condition C violation. Thus, McCloskey concludes that the determination of whether resumptive pronouns pattern with variables with respect to condition C requires a different diagnostic.

His proposed diagnostic, which I also apply to MA, is to replace the first pronoun with an epithet[16]. To make the argument, we substitute an epithet (which may not itself function as a resumptive element, i.e., a variable) for the c-commanding pronoun in examples such as (27) in order to eliminate the possibility of taking the c-commanding element itself to be a variable.

Relatedly, this diagnostic is further confirmed by Lasnik (1989), who discusses the status of epithets with respect to the Binding Theory. He explains that epithets show simultaneously the properties of R-expressions and of pronouns with regard to binding conditions. This is true of their behaviour both as binding and as bound elements. In particular, when functioning as c-commanding antecedents to lexical NPs, epithets pattern with pronouns in

[16]Resumptive epithets are also attested in French (see Hirschbühler 1975).

giving rise to robust condition C violation. Therefore, they provide a particularly good way to test for condition C effects. Note first that epithets do give rise to SCO effects when they c-command and are coindexed with R-expressions (variables or lexical NPs). Examine the following examples in (26) from English.

(26)a. The stupid$_i$ said he$_i$ would go
b. * The stupid$_i$ said John$_i$ would go
c. * Who$_i$ did the stupid$_i$ say **t**$_i$ would go?

The sentence in (26b) is ungrammatical because the lexical NP *John* is c-commanded by, and coindexed with, the epithet *the stupid*. The sentence in (26c) is also ungrammatical because the embedded subject trace is A-bound by the epithet *the stupid*, giving rise to a condition C (SCO) violation.

Turning to Moroccan data, consider the following examples:

(27)a. ha r-rajal$_i$ lli gult l-b l-mfallas$_i$ blli xaS-**u**$_i$ itʃəd
this def-man that said-I to-father def-loser that should-he be arrested
This is the man that I said to the loser's father that he should be arrested

b. *ha r-rajal$_i$ lli l-hbiil$_i$ gall blli xaS-**u**$_i$ itʃəd
this def-man that def-fool said that should-he be arrested
This is the man that the fool said he should be arrested

c. *ha r-rajal$_i$ lli gult l-mfallas$_i$ blii xaS-**u**$_i$ itʃəd
this def-man that said-I to-def-loser that should-he be arrested
This is the man that I said to the loser that he should be arrested

Sentence (27a) is grammatical. The epithet does not c-command the

resumptive pronoun and there is, therefore, no condition C violation. Second, sentence (27b) is ungrammatical because the epithet does c-command the resumptive pronoun, a state which clearly results in SCO. Third, the sentence (27c) is also ruled out because again the epithet c-commands the resumptive, resulting in SCO effects. As a matter of fact, this state of affairs falls nicely into place if resumptive pronouns are in fact considered A(bar)-bound, and are, therefore, variables.

In conclusion, we can say that the distributional pattern of resumptive pronouns, together with the arguments from Binding Theory, suggests that it is correct to consider resumptive pronouns in MA as A(bar)-bound variables. Additionally, the fact that relative clauses with gaps generally mean the same thing as relative clauses with resumptive pronouns shows that they both display characteristics of variables, and as such, they should be treated in a uniform manner.

At this point, it is worth noting that this conclusion may seem to contradict our earlier hypothesis that when a resumptive pronoun occurs in Moroccan relative clauses in, say, direct object, as in (3), [Spec CP] is an A-position. If resumptive pronouns are considered variables, there must be an operator in A(bar)-position to bind them. But if [Spec CP] is an A-position, an operator in

that position would not be able to bind the resumptive pronoun, resulting in a violation of the Full Interpretation (FI) (Chomsky, 1986b)[17]. In fact, this seeming contradiction, as we will see later, will disappear once we consider the different levels of representation (see section 3.3.).

3.2. The antecedent is a null operator

As pointed out earlier, the fact that resumptive pronouns in MA are A(bar)-bound raises the issue of what precisely functions as antecedent to them. It is thus the purpose of this subsection to attempt to give an answer to this issue.

Examine a relative clause such as (28a) and its schematic structure (28b).

(28)a. l-qawaaniin **lli** ka-ttabaq-**ha** d-dawla
def-laws that prog-applies-them def-state
The laws that the state applies

b. [NP NP[CP *lli*$_i$A[IP...pro$_i$...]]]

here, we assume, as we anticipated earlier, that the antecedent of the resumptive pronoun is a null operator within Comp[18]. Indeed, we

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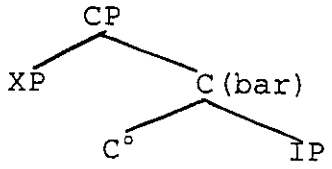
[17]The principle of FI is a condition on the licensing of the constituent elements of constructions. Chomsky (1986b) defines this principle as follows: the principle of Full Interpretation "...requires that every element of PF and LF...must receive an appropriate interpretation_ must be licensed..." (p.98)

[18]Note that one obvious possibility is to say that NP is the antecedent. In fact, this answer is compatible with the conclusions that have been established so far, to the extent that

can adopt the theory of CP developed in Chomsky (1986a). This proposal looks forward to rationalizing the analysis of categories IP and CP within X(bar)-theory. CP is taken to be a projection of (the zero-level category) C° with a complement and a specifier.

(29)



XP in (29) is taken to be the landing site for wh-movement and is, therefore, the locus of the various wh-operators that function as A(bar)-binders at LF. As a natural extension of this view, it can be proposed that there are also null operators in this position for resumptive pronoun structures, and that it is these operators that function as antecedents to resumptive pronouns.

To make this case, we should consider, once again, in more detail, the nature of HSR which can be explained in terms of some binding principle.

Recall that this is a constraint that bans the appearance of a resumptive pronoun in a relative clause in the subject position immediately subjacent to the head:

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it is possible to call the head position of a relative clause structure an A(bar)-position. The justification we give during our analysis in favour of the null operator option is, however, deemed sufficient to discard this possibility.

(30). *r-rajl lli **huwwa** ʃaaf l-kSida
def-man that he saw def-accident
The man that (he) saw the accident

This example reflects a requirement that pronouns should be, if bound, nonlocally bound. That is, they have the character of a disjoint reference effect -a condition B effect applying in the domain of the A(bar)-binding rather than in the domain of A-binding[19]. This is a constraint, like condition B, whose effect renders ungrammatical structures in which a pronoun (a pronominal variable in this case) is too close to its antecedent. The position in which resumptive pronouns can optionally appear (especially direct object) and in which they obligatorily appear (e.g., prepositional object and NP-internal position) are all separated from their respective antecedent by the intervention of at least one more maximal projection boundary (VP, PP, NP) than is the case in the highest subject position. Recall also that if a resumptive pronoun appears in embedded subject position, this effect does not show and the structure is perfectly acceptable. Indeed, this observation implies that distance plays a role in the HSR. Consider the following:

(31). r-raʒl lli gult blli (**huwwa**) ɣaadi irbah
def-man that said-I (he) will win
The man that I said that he will win

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[19]Condition B is generally defined as:
A pronominal must be free in its governing category.
(Haegeman, 1994: 233)

The resumptive pronoun *huwwa* would be separated from the null operator in the highest Spec of CP by two projections (IP and CP), a distance which would explain its licit occurrence (for more on this example, see the discussion of the requirement (33) below).

The disjoint character can also be observed in situations where the resumptive pronoun is embedded within a subject NP, as is the case in NP-internal position and coordinate subjects. In these two cases, the effect disappears as in below.

(32)a. l-wald lli xu-**h** mriid
def-boy that brother-his sick
The boy whose brother is sick

To account more appropriately for these facts, Borer (1986, among many others) tried to account for HSR by extending the domain of application of condition B, so that it encompasses both A(bar)-binding and A-binding. More recent work by Aoun & Li (1989) also explores this idea, drawing on data concerning the distribution of pronouns bound by quantifier expressions in Mandarin Chinese. They propose that bound pronouns (those linked to antecedents that at LF occupy A(bar)-positions) are subject to a requirement of A(bar)-disjointness. This condition, adapted from Aoun & Li (1989), can be defined as (33).

(33) *The A(bar)-disjointness Requirement*

A pronoun must be A(bar)-free in the smallest Complete Functional Complex (CFC)[20] which contains it[21].

To start with, let us first assume, following McCloskey (1990), that the least CFC refers to IP. Thus a subject resumptive pronoun contained in the same clause as its antecedent will be in violation of the A(bar)-disjointness Requirement. The example (30), for instance, is ungrammatical because the CFC, the higher IP in which the whole relative clause is embedded, contains both the operator and the pronoun. The pronoun is not A(bar)-free in this domain. For the case of embedded subjects as in (31), the minimal CFC will again be the next IP of the relative structure; the pronoun is A(bar)-free in this domain. As to NP-internal positions and coordinate subjects, in which the resumptive pronoun is contained in a larger subject NP, the smallest CFC is simply the minimal IP

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[20]The notion CFC is to be understood in the sense of Chomsky (1986b). Chomsky defines a CFC as a governing category where "...all grammatical functions compatible with its head are realized in it -the complement necessarily, by the projection principle, and the subject, which is optional unless required to license a predicate, by definition." (1986b: 169)

[21]McCloskey (1990) proposes a slightly modified definition for A(bar)-disjointness Requirement which is as follows:

A pronoun must be A(bar)-free in the least Complete Functional Complex (CFC) containing the pronoun and a subject distinct from the pronoun.

For our present discussion, Aoun & Li's formulation is deemed sufficient.

containing the resumptive pronoun. The pronoun is free in this domain and the sentences are grammatical.

Secondly, a possible alternative is to assume, following Ouhalla (1993), that the least CFC is always the minimal CP which contains the pronoun. Without going through the same examples, we simply say that, exactly as the IP option, we come up with the same conclusions. That is, the resumptive pronoun is banned in the highest subject position and is legal in the embedded subject and possessor/coordinate subject positions. However, both alternatives are inconsistent with the licit appearence of the resumptive pronoun in MA (as well as in Hebrew and Irish) in direct object position. Consider this example.

(34). r-radyo **lli** ʃrit-ii-**h** mn Brahim
def-radio that bought-you-it from Brahim
The radio that you bought from Brahim

If the least CFC which contains the resumptive pronoun, be it the higher IP or the minimal CP, also contains the antecedent, then a violation of the A(bar)-disjointness Requirement is expected to arise. So the problem is that the subject position, where a resumptive pronoun is invariably excluded, and the direct object position, where the resumptive pronoun is optionally inserted, cannot have the same CFC. This is, indeed, an intractable question.

One potential (and simple) suggestion is to say that the subject position, on the one hand, and all the other positions, including the object position, on the other, should not have the same CFC. In fact, this, in one way, makes the proposal made in Borer (1984) more relevant. We have said earlier that Borer suggests extending condition B of the BT directly to A(bar)-binding. The idea is that pronouns must be simply free (that is A(bar)-free and A-free) in their governing category. Relatedly, she suggests that subjects are to be taken as unique in having two governors: INFL and Comp. Thus they should have CP as their governing category, while IP is to be the governing category of all the other clausal positions.

This approach can be criticized on one crucial level. It is very difficult, indeed, to reconcile the idea that subjects NPs are governed by both INFL and Comp with the minimality requirement. This idea is least motivated especially in a syntactic theory where the notion of minimality has become one of the most crucial conditions, particularly on government relations. My suggestion, however, is also similar to Borer's in that subjects are distinct from all other clausal position in having CP rather than IP as their CFC. In my view, the chief distinction is that, unlike any other position, the highest subject position, in all languages mentioned here, uniformly excludes the insertion of the resumptive pronoun by a condition which requires pronouns to be A(bar)-

disjoint from a closely located antecedent. This is true independently of whether the language is pro-drop or not (e.g., English versus Arabic).

This observation also holds, as pointed out before, independently of the correlation that exists in some languages between the absence or presence of a resumptive pronoun and the alternation in the complementizers (e.g., Irish, Hebrew and MA). It appears again that the subject position maintains its behaviour regardless of language-internal properties. Recall also the idea that *illi*-type complementizers (in PA and EA, for example), which invariably select resumptive pronouns in all positions, fail to block movement in the highest subject position. It is once again true that the subject position always sanctions the resumptive pronoun irrespective of the type of the language, be it a syntactic movement language or an in-situ one (e.g., Irish vs Egyptian).

A likely observation, then, is to say that the highest subject position has a special status in comparison to the rest of the other positions. In effect, the idea that this position should uniquely have CP as its CFC would obviously solve the problem[22].

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[22]Here we may assume that the subject is, in fact, base-generated in an adjoined CP, in the following way:

Subject resumptive pronouns will always be bound within the minimal CP and will thereby always violate the A(bar)-disjoint Requirement. Resumptive pronouns in other positions (recall that resumptive pronouns can appear in all these positions, either optionally or obligatorily) will also be bound within CP, but this will not matter since their CFC is IP and in this category they are clearly A(bar)-free.

The basic example in (34) will now be grammatical because the pronoun will be A(bar)-free in its least CFC which is the minimal IP. The example in (30), on the other hand, will be ungrammatical because it is not A(bar)-free in the domain of the minimal CP .

In short, concurring with Ouhalla (1993), Shlonsky (1992) and McCloskey (1990), all these arguments fall nicely into place if we take a null operator to be the antecedent of the resumptive pronoun.

3.3. Resumptive pronouns are LF variables

One of the questions defended previously is the idea that resumptive pronouns are pronominal variables. An important argument

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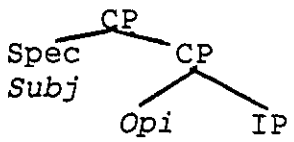
(i)



has been that since resumptive pronouns produce Strong Crossover (condition C) effects, they should be regarded as variables; that is, as being A(bar)-bound by an operator. As pointed out earlier, this consequence, though it may seem, does not contradict our hypothesis that when resumptive pronouns occur in MA, the [Spec CP] is identified as an A-position if we consider the idea of distinct levels of representation. Accordingly, the present subsection plausibly assumes that resumptive pronouns in MA are LF variables.

Along the lines of Chomsky (1982), we assume that resumptive pronouns come to be variables only in LF. The base-generated resumptive pronoun is licensed as a regular (i.e., unbound) pronoun at S-structure and as bound pronoun (i.e., variable) in LF. Assuming this, we plausibly predict that resumptive pronouns would not license parasitic gaps, which are (following Lasnik 1991, Ouhalla 1994 and Haegeman 1994) crucially an S-structure process. This is, indeed, the case in MA. In the latter, relative clauses formed by movements differ from relative clauses with resumptive pronouns in that parasitic gaps are licensed only in the former[23]. Since parasitic gaps must be licensed by an A(bar)-chain at surface

[23]parasitic gaps, as reported in Shlonsky (1991), do not appear at all in Palestinian Arabic. I do not know if this is also the case in Egyptian Arabic.

structure[24], we suppose that only in the relative clauses formed by movement is an A(bar)-chain formed at S-structure in order to account naturally for the contrast in (35) below.

(35)a. hadu huma l-ksawi lli ʃrat ***ti*** Rqiya bla ma-tqayas-***hum***
*these they def-dresses that bought **ti** Rqiya withou not-try-**them***
These are the dresses that Rqiya bought without trying

b. hadu huma l-ktub lli xda ***ti*** Brahim blla ma-yxallas ***ti***
*these they def-books that took **ti** Brahim without not-pay **ti***
These are the books that Brahim took without paying for

c. *hadu huma l-ktub lli ʃra-***hum** Brahim blla ma-iqra **ti**
*these they def-books that bought-**them** Brahim without not-read **ti***
These are the books that Brahim bought without reading them

d. hadu huma l-ktub lli ʃra-***hum*** Brahim blla ma-iqra-***hum***
*these they def-books that bought-**them** Brahim without not-read-***them***
(Same as 35c)

In (35a-b), parasitic gaps are licensed because they are bound by a trace, creating an A(bar)-chain which is mediated by a trace. (35c), on the other hand, is excluded because the parasitic gap is bound by the pronoun *hum*, giving rise to an inconsistent A(bar)-chain (*opi, humi, ti*). The sentence is clearly solved by replacing the parasitic gap by the resumptive pronoun *hum*, establishing an uniform chain (*opi, humi, humi*).

This data, then, provides crucial support to the idea that resumptive pronouns are A(bar)-bound by an operator only by LF, and not earlier.

---

[24]This is maybe the reason why parasitic gaps are not licensed by wh-elements in situ.

Additionally, we assume that the operators of the resumptive pronouns are base-generated in the [Spec CP]. This is motivated, in the first place, by prohibiting the insertion of an operator by a principled ban on lexical insertion after D(eep)-structure. Recall also our hypothesis which stipulates that occurrences of resumptive pronouns in MA are the result of the identification of [Spec CP] as an A-position. At this point, this assumption is deemed necessary because it provides an extra A-position for base generating an operator. In fact an operator base-generated in [Spec CP] will not be able to bind a variable unless it moves to an A(bar)-position. Such movement, we assume, is held off until LF. Reasoning through this option, our present hypothesis and the predictions it engenders fall naturally into place.

It has been argued that the Moroccan Agr-bearing complementizer *lli* (as well as Palestinian and Egyptian *illi* and Irish *aN*) identifies an A-specifier. This argument indeed suffices to allow the base-generation of an operator in [Spec CP] where C° is filled by an *illi*-type complementizer (such as *lli*A).

If a resumptive pronoun bearing characteristics of a variable in LF is base-generated (as defended here), then it becomes obvious that the operator that would bind it must be also inserted at D-structure. But this is only possible if [Spec CP] is assumed to be

an A-position. Accordingly, in MA (like in PA and EA) all occurrences of resumptive pronouns in relative clauses are coupled with *lli*A. Freedom to choose between *lli*A and *lli*A(bar) gives rise to the apparent optionality. In the positions, where resumptive pronouns are obligatory, on the other hand, the idea is that when choice of *lli*A(bar) fails to yield a grammatical sentence, *lli*A, then is automatically selected.

The main point to reiterate as a conclusion here is that operators of resumptive pronouns are allowed to be base-generated in [Spec CP] only in case [Spec CP] is an A-position _a state of affairs around which the whole chapter is centered.

The problem, however, is that an operator in [Spec CP] identified as A-position cannot bind its variable. This is only possible if the operator appears in an A(bar)-position. The evidence given previously shows that resumptive pronouns are variables in LF, which means that the operator cannot be in [Spec CP] in LF.

One possible technical step is to assume, following Shlonsky (1992), that the operator is moved and adjoined to CP and that its trace in the A-[Spec CP] is deleted. Indeed, this is not an *ad hoc* solution since adjunction to a maximal position is an accepted device for moving operators from A to A(bar)-positions. Moreover,

the traces that are needed neither for interpretation nor for antecedent government should generally be allowed to delete. According to this movement and the deletion of the trace, a well-formed A(bar)-chain is thus established; and the resumptive pronoun also becomes a variable bound by the CP-adjoined operator.

4. Conclusion

In this chapter, it has been argued that resumptive pronouns insertion is not a freely available strategy in MA. It is, rather, a last resort, in case some syntactic constraint prevents movement. This is only possible if the language in question allows pronouns to be used resumptively. In other words, if pronouns are allowed to function as variables in LF. This seems to be the case in MA. We have also seen that the double nature of resumptive pronouns (i.e., simultaneously pronouns and variables) is reflected in their behaviour with respect to Binding Theory. Being variables, resumptive pronouns are subject to condition C. But, being pronouns, they are also subject to a disjointness requirement that applies in the domain of A(bar)-binding.

Moreover, it has been argued that in the type of Moroccan relative clauses which are formed with *lli*A, movement is highly restricted in all positions except for the highest subject position. The point has been that this complementizer, unlike *lli*A(bar), has Agr-

specifications that identify the specifier of CP as an A-position. As a result, wh-movement in this case is subject to all A-movement constraints such as the SSC.

Ultimately, we wish to point out that the whole argumentation in this chapter is a direct result of the power of our analysis to mark one of the (two) complementizers in MA as capable of bearing argument features. It is also worth noting that the ability to possess an agreeing complementizer such as *lli*A appears to be, as it is developed in the literature (see Borer 1984 and Manzini & Wexler 1987), straightforwardly related to some particular lexical properties of a particular complementizer in a given language, rather than to the grammar as a whole.

Chapter three

Yes-no questions

In this chapter, I will present the basic properties of yes-no questions and the various manifestations of the question particle **waʃ**.

Questions which call for a "yes" or "no" answer are introduced either by the interrogative particle **waʃ** or by a rise in intonation.

1.Raising tone yes-no questions

I will first examine questions manifested by intonation and contrast them with their declarative counterparts. Consider the declarative and interrogative sentences in (1) and (2) respectively[1].

1a. ʃra Brahim t-tomubiil
bought Brahim the-car
Brahim bought the car

b. Brahim ʃra t-tomubiil
Brahim bought the-car
Brahim bought the car

2a. ʃra Brahim t-tomubiil?
bought Brahim the-car
Did Brahim buy the car?

---

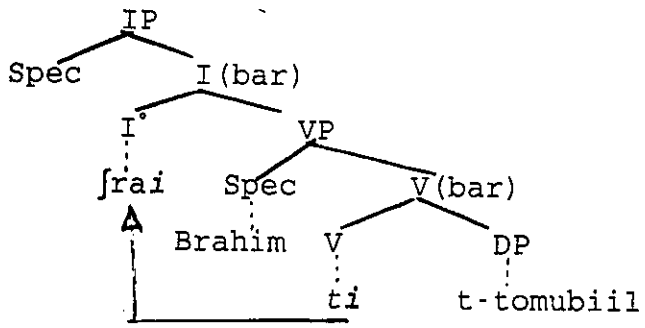
[1]To the best of my knowledge, all Arabic dialects can form their yes-no questions by rising intonation. In this respect, they differ from Standard Arabic which obligatorily uses particles (*cf.* footnote 3).

b. ?Brahim ʃra t-tomubiil?
Brahim bought the-car
Did Brahim buy the car?

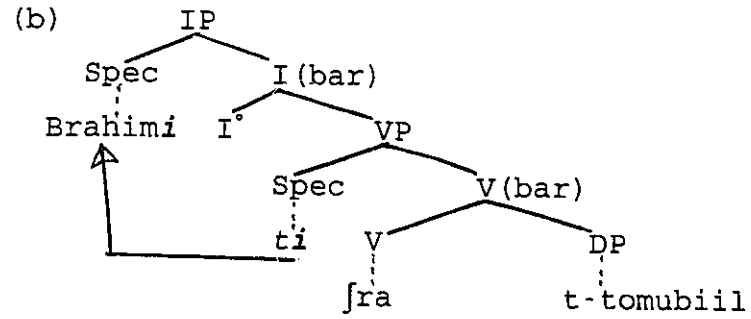
A direct comparison shows that S/V inversion is much freer in the declarative sentences. In sentence (1a), the subject *Brahim* precedes the transitive verb *ʃra* "bought". In (1b), the same subject is preceded by the verb *ʃra* "bought".

In yes-no questions, on the other hand, most Moroccan speakers view the VS order to be much more natural than SV order (as indicated by ?). In (2b), in which the subject *Brahim* precedes the verb *ʃra*, SV order should often be uttered with much higher pitch in order to emphasize its interrogative nature. At first sight, this comparison could suggest that, in a way similar to French verbs and English auxiliaries and modals, the verb *ʃra* in (2a), for example, may be in C°. But this is not a very straightforward conclusion if we consider yes-no questions with **waʃ** (see the upcoming section). At this point, then, we deem it sufficient to assume that V in (2a) does raise to I° but does not continue to C° (for verb movement in constituent questions, see chp. 5, sec. 5 and fn. 11). Given this, the tree diagram representations of (2a-b) are (3a-b)respectively.

3.(a)



(b)



The structure (3a) is derived at S-structure by raising V to I°. In (3b), the subject raises to Spec of IP, which results in SVO structure.

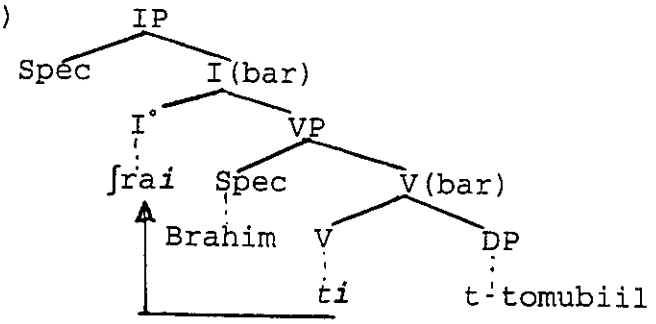
It seems that changes in word order on their own are not sufficient as a strategy to indicate interrogativity in this type of questions in MA. As a matter of fact, it is reasonable to assume that the diagrams above and those of declaratives in (4a-b) below would be identical[2]. The important point to note in this respect is that both V-to-I°, which is an instance of head-to-head movement, and subject raising, which is an instance of Spec-to-Spec movement, may take place in S-structure in MA.

---

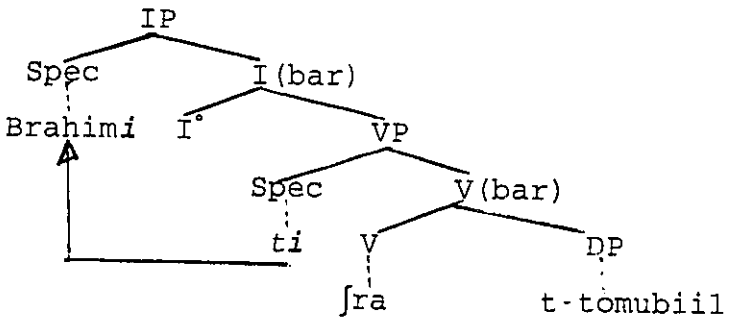
[2]The fact that a complementizer can occur with VS order in embedded clauses suggests that V does not raise to C° in declarative clauses; rather, it stops at I°, for example:

(i) gal l-ya ʕli [CP[C **ila** [IP[I mʃa l-musm ʏadi iʃri tagiya
*say to-me Ali **if** went to-def-festival will-he buy indef-hat*
Ali told me that if he goes to the festival,he will buy a hat

4.(a)



(b)



In (4a), the verb *ʃra* goes up to I°, while in (4b), the subject *Brahim*, again, moves from Spec of VP to Spec of IP.

In conclusion, we can say that the basic difference between declaratives and the present type of yes-no questions is prosodic in the first place. The utterance of declarative sentences is with a falling pitch, while the question form is pronounced with a raising one. Technically speaking, this prosodic difference may suggest that the question content here translates as a rising intonation in prosodic phonology (or specifically, P(onological) F(orm)), a translation which does not trigger overt movement. Furthermore, probably because of some idiolect cause, the SV order in yes-no questions, as in (2b), is often uttered by some speakers with a much sharper raising tone.

2. Yes-no questions with *waʃ*

The second type of yes-no questions is introduced by the interrogative particle **waʃ**, as illustrated in (5a-b)[3].

5(a). **waʃ** Omar ʒa mn s-suuq?
Q Omar came from the-market
Did Omar come back from the market?

(b). **waʃ** ʒa Omar mn s-suuq?
Q came Omar from the-market
Did Omar come back from the market?

---

[3]Contrary to MA, which employs the invariant particle **waʃ**, Standard Arabic has two yes-no question particles: **hal** and **ʔa**. for example:

(i) **hal** iʃtarayt-a sayyarat-an?
Q bought-you ind-car-accu
Did you buy a car?

(ii) **ʔa**-ʃtarayt-a sayyaratan?
Q-bought-you ind-car-accu
Did you buy a car?

(For distributional differences between **hal** and **ʔa**, see footnote 5)

Egyptian Arabic, on the other hand, uses a third person to introduce yes-no questions. For instance, (examples taken from Eid 1990)

(iii)a. **huwwa** Ali katab il-gawaab?
he Ali wrote def-letter
Did Ali write the letter?

b. **hiyya** Nadya ha-tu-xrug?
she Nadya will-she-leave?
Will Nadya leave?

c. **humma** il-mudarris-iin katab-u il-gawaab?
they def-teachers-plural wrote-plural def-letter
Did teachers write the letter?

Moreover, Eid (1990) reports that Iraqi, Palestinian, Lebanese and Mekkan Arabic also use pronouns as yes-no question marking devices.

waʃ is an interrogative marker which seems to represent more emphasis on the question in that its presence makes up, to some extent, for the raising of intonation. The assumption here is that the Question Feature (QF) in these interrogatives correlates with the particle **waʃ** and that this correlation does not need to correspond to any intonation contour, in contrast to raising tone yes-no questions. Note finally that an equivalent question phrase does not exist in English.

The very first observation in the examples above is that, unlike in (2a-b), both SV and VS orders are equally possible with **waʃ**. The question that arises in this respect is about the exact status of **waʃ**. In other words, the point is to determine whether **waʃ** is a complementizer or a wh-word. Following Kayne (1990), Larson (1985) and Cheng (1991), I will assume that English *whether* is a wh-phrase. So since the Moroccan **waʃ** can be treated on a par with English *whether*, it can, accordingly, be considered a wh-element_the only difference being that *whether* cannot occur in the matrix yes-no questions. What follows investigates these similarities.

First of all, like *whether*, **waʃ** can introduce a subordinate question, as in the following:

6. bʏit nʃraf **waʃ** Omar ʒa mn s-suuq (ulla lla)
   want-I know whether Omar came from the-market (or not)
   I want to know whether Omar came back from the market

similarily, **waʃ**, too, can occur in sentential subjects. Consider the following example.

7. (**waʃ**) tsaafr ulla tabqa mouʃkilt-k hadiik
whether travel-you or stay-you problem-your that
Whether to travel or to stay is your own buisness

Additionally, following Larson's (1985) argument for *whether*, **waʃ** can also be a [+wh] scope indicator for disjunction[4]. To make the argument, Larson provides the following example which has two readings.

8. I know whether Bill should ask John to resign or retire.

This sentence has a narrow and a wide scope reading. The first reading suggests that what it is known by me is either that Bill should ask John to resign or retire. On the second reading, I know whether Bill should ask John to resign or retire if I know that Bill should ask John to resign , or else I know that Bill should ask John to retire.

In parallel, the Moroccan counterpart of (8) is in (9) below.

9. fraasi **waʃ** Omar xaSu itlab mn Brahim istaaql aw itqaʃad
know-I whether Omar should ask Brahim resign or retire
I know whether Omar should ask Brahim to resign or retire

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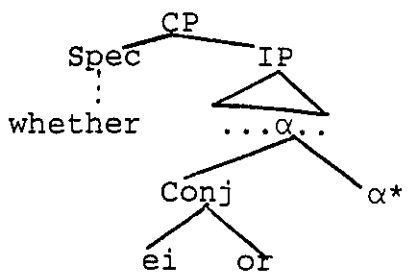
[4]Under the proposal that *whether* is [+wh] scope indicator for disjunction, Larson assumes that like other wh-items it undergoes movement to [Spec CP], generally resulting in the following representation:



Under its wide scope interpretation (i.e.,the second reading above), the example (9) will have the following surface structure (adapted from Larson's (41b)):

10. fraasi [CP [**waʃ***i* [IP Omar xaSu itlab (mn) [CP ***ti*** [IP Brahim [VP [***ei***] istaaql aw itqaʕad]]]]]]

where **waʃ** has moved successive cyclically through [Spec CP] from embedded IP. Under this analysis, **waʃ** is an XP, just like *whether* and other wh-phrases. In addition, **waʃ** can also appear in indirect questions, as in (11), and in this respect, it is also like wh-phrases which can occur in the indirect questions and move to [Spec CP].

11. ma ʕraftʃ [CP **waʃ***i* [IP nəmʃi ulla [CP ***ti*** [IP nabqa
I do not know whether I should leave or I should stay

Relatedly, Kayne (1990) provides the sentences below to prove that *whether*, unlike *if*, is an XP.

12(a). Whether they give him a seat or not, he will be happy
(b). Wherever they put him, he will be happy
(c). *If they give him a seat or not, he will be happy

Kayne states that examples such as (12a) are comparable to (12b) and it suggests that *whether* is a wh-phrase. Note first of all that MA has the equivalent of both *whether* and *if* which are **waʃ** and **ila** respectively. The following examples show that **waʃ** has the same function.

13. (**waʃ**) i-galsou-h f-l-qudam ulla lla, huwa gaʕ maaʃi suq-u
whether seat-him in-the-front or not, he at all not his-concern
Whether they seat him in the front or not, he is not concerned at all

14. finmma galsou-h huwa qaabl
wherever seat-him he accept
Wherever they seat him, he is satisfied

15. ***ila*** galsou-h f-l-qudam ulla lla huwa gaʃ maaʃi suqu
if seat-him in-the-front or not he at all not concerned
*If they seat him in the front or not, he is not concerned at all

According to Kayne's analysis, (13) and (14) are akin in the sense that **waʃ** is comparable to **finmma** *"wherever"*. Thus **waʃ** is on a par with *whether* and wh-phrases like *wherever* in English.

Additionally, Kayne, based on Larson (1985) and Katz and Postal (1964), takes *whether* to be the wh-counterpart of *either* (*neither* being the negative counterpart). *Whether* is distinct from the complementizer *if* in that the latter has no relation to *either* and, in particular, is not a wh-phrase counterpart of it. This is presumably why the combination *whether not* is licenced in English, but not *if not*, as the following examples taken from Kayne (1990) illustrate:

16. He does not know **whether or not** he should go to the movies
17. *He does not know **if or not** he should go to the movies

The present argument could also carry over to the dichotomy of **waʃ** and **ila** in MA. Consider the following instances:

18. ma ʃraftʃ **waʃ** nrad ʃliih **ulla lla**
I do not know whether or not I should reply to him
19. *ma ʃraftʃ **ila** nrad ʃliih **ulla lla**
*I do not know if or not I should reply to him

The combination **waʃ ulla lla** *"whether or not"* is fully licenced as shown in (18), while its counterpart **ila ulla lla** *"if or not"* is

categorically ruled out, as signalled by * in (19).

Furthermore, the Moroccan **ila**, like the English *if*, certainly bears some relation to conditionals, for instance:

20. **ila** ma-rad li-yya fluus-i ʏadi n-adʃii-h
if not-return to-me money-my will I-suit-him
If he does not give me my money back, I will file a suit against him

Being in C°, **ila** in (20), for example, does not alternate with wh-phrases; it is not surprising, then, that **waʃ**, a wh-phrase, is not found in the counterpart of (20).

21. ***waʃ** ma-rad li-yya fluus-i ʏadi n-dʃii-h
whether not-return to-me money-my will I-suit-him
*whether he does not give me back my money, I will file him a suit

Clearly, **waʃ**, being a wh-phrase, bears no relation at all to the conditional mood.

In short, all these arguments suggest that the Moroccan yes-no question particle **waʃ** is a wh-phrase (i.e.,Spec CP) rather than X° (i.e.,C°)[5]. On this view, we assume that the representational trees

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[5]Fassi-Fehri (1981 and 1993) assumes that **hal** and **ʔa** in SA are complementizers. Further, Fehri (1981) investigates their distributional pattern. First, **ʔa**, but not **hal**, can precede a topic. (All the examples here are from Fassi-Fehri (1981).)

(i) **ʔa** Zaydan darabt-a?
Q Zayd-accu beat-you
Did you beat Zayd?

(ii) ***hal** Zaydan darabta?
(Same as (i))

Secondly, **hal** cannot occur as a head of alternative questions, while **ʔa** can occur in such a position.

(iii) **ʔa** Zayd-un intaqadta am ʃamr-un?
Q Zayd-accu criticized-you or ʃamr
Did you criticize Zayd or ʃamr?

of examples like (22 and 23) will be (24 and 25) respectively.

22. **waʃ** bna ʕli daar-u?
Q build Ali house-his
Did Ali build up his house?

23. sawwalt **waʃ** bna ʕli daar-u?
asked-I whether built Ali house-his
I asked whether Ali built up his house

(iv) ***hal*** Zaydun intaqadta am ʕamrun?
(Same as (iii))

Likewise, **hal** cannot be used in echo questions:

(v) **ʔa** Zayd-an?
Q Zayd?

(vi) ***hal*** Zayd?
(Same as (v))

These distributional characteristics can be explained, in Fehri's (1981) view, by the different sub-categorization of **hal**, on the one hand, and **ʔa**, on the other. He makes the generalization that **hal** can never precede a topic and he, accordingly, proposes the following rule:

hal → V(double bar)

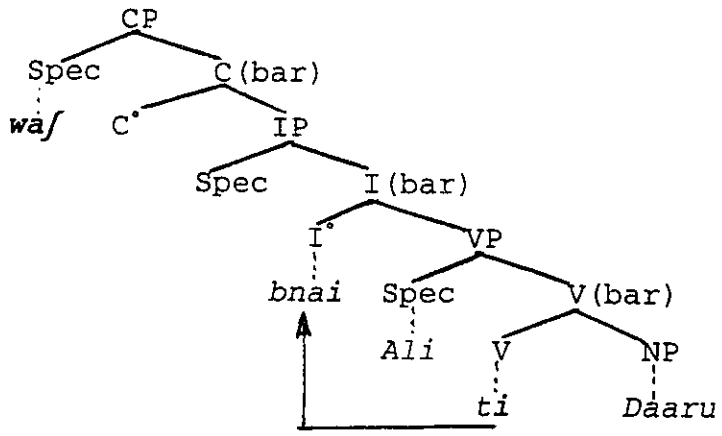
where V(double bar) stands for V projection corresponding to a simple sentence.

In what concerns Egyptian Arabic (and hence Iraqi, Palestinian, Lebanese and Mekkan Arabic), Eid (1990) demonstrates that the third person pronouns (see fn.3) are in C°. Note first of all that pronouns in SA as well as in all Arabic varieties can perform copula functions, for example:

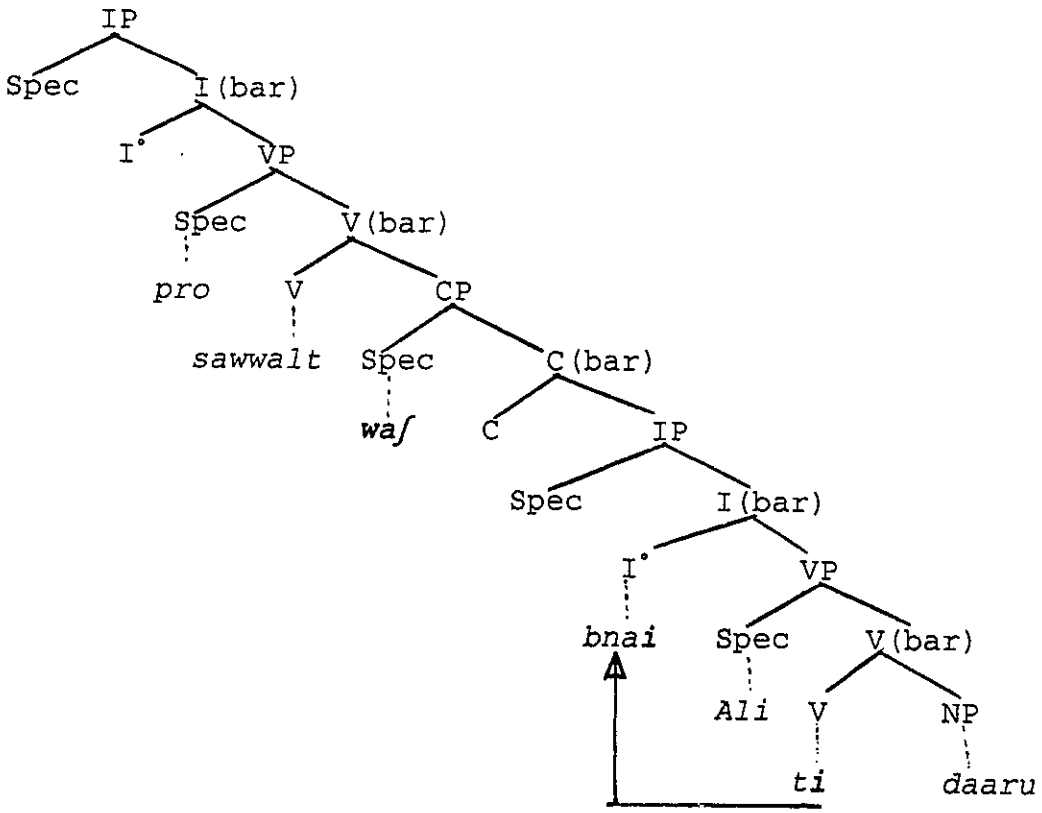
(vii) a. Mohammadun **huwwa** l-mudarrisu (SA)
b. Mohammad **huwwa** l-muʕlliim (MA)
Mohammad is the teacher

On this view, Eid argues that the pronouns in the examples cited in footnote 3, for example, constitute another instance of the copula pronouns, thereby relating their function as question markers to their function as a copula elsewhere. Accordingly, she suggests that these pronouns originate as N° of an NP in predicate position; they move via head-to-head movement first to I° then to C°. It is this movement, Eid argues, that gives these pronouns their question marking device function.

(24)


CP
Spec
C(bar)
waʃ
C°
IP
Spec
I(bar)
I°
VP
bnai
Spec
V(bar)
Ali
V
NP
ti
Daaru

(25)


IP
Spec
I(bar)
I°
VP
Spec
V(bar)
pro
V
CP
sawwalt
Spec
C(bar)
waʃ
C
IP
Spec
I(bar)
I°
VP
bnai
Spec
V(bar)
Ali
V
NP
ti
daaru

Here, **waʃ** is clearly in [Spec CP][6]. Thus it seems that yes-no questions are unambiguously specified for the feature [+wh], so that, technically speaking, yes-no questions and wh-questions would be identical in MA. More precisely, the FQ in C°, in yes-no questions with **waʃ**, on a par with constituent questions, would also be licensed in Spec-Head configuration before Spell-Out (see chapter five, section 5 for constituent questions).

As we pointed out earlier, **waʃ** and *whether* differ in one important aspect. That is, the former, but not the latter, can occur in matrix yes-no questions. In effect, this is not an odd behaviour for a wh-word. The most common cited evidence for this is the appearance of the Polish question particle **czy**, which is often analysed as a wh-phrase (see for example Cheng 1991), in both matrix and embedded yes-no questions. The argument for this will be the content of the subsequent section.

3. The Polish yes-no particle *"czy"*

Polish **czy** is used in both matrix yes-no questions and embedded yes-no questions. Consider the following examples (taken from Cheng 1991).

26. **czy** pan duzo podrozuje
    Q you much travel
    Do you travel a lot?

---

[6]Recall that in all cases of direct questions, **waʃ** always occupies the sentence-initial position and is followed either by a subject or an inflected verb. In indirect questions, **waʃ** always occupies a position which is that of introducing the embedded clause and is also followed by the same categories.

27. nie wie-m **czy** wyjecha-c (**czy** nie)
not know-I whether leave-INF whether not
I do not know whether to leave or not

Thus in a way similar to **waʃ** and different from *whether*, **czy** can be used in the matrix. Nonetheless, Cheng (1991) analyses it in a way comparable to the English *whether*; that is, it is a wh-element instead of a particle in C°.

First, note that in (27) **czy** can appear in wh-infinitivals. Kayne (1990) uses examples such as (28) and (29) below to argue that *whether* is an XP and *if* is an X°.

28. John doesn't know whether to leave or not

29. *Bill doesn't know if to leave

Kayne argues that the ungrammaticality of (29) follows from the fact that *if* is a C° and thus it governs PRO. On the contrary, the grammaticality of (28) is justified by the idea that *whether* is an XP and it cannot govern PRO. Accordingly, given the example in (27), it appears that **czy**, unlike *if*, is not an X°[7]. Consider further the following examples (taken from Cheng (1991).

30. czasami chodz do kina **czy** teatru
sometimes I go to cinema or theatre

31. **czy** dostanie miejsce **czy** nie, I tak bedzie zadowolony
whether he will get seat whether not, and thus he will be satisfied

---

7.The diagnostic of infinitivals cannot carry over to MA simply because MA does not have infinitival questions. It seems that MA puts the equivalent of *"or not"* to the end of an embedded infinitival. The Moroccan correspondent of (28) would be:

(i). maʃrafʃ Hassan **waʃ** imʃi **ulla lla**
Hassan does not know whether to go or not

Briefly speaking, (30) shows that **czy**, like *whether* and **waʃ**, also indicates disjunction. Moreover, (31) can also be analysed in a very similar way to examples in (12) above. Recall that Kayne states that examples such as (12a) and (12b) are akin.

In conclusion, this analysis suggests that **czy**, on a par with *whether* and **waʃ**, is a wh-phrase like *wherever* in English. Yet interestingly, it can appear in both matrix and embedded yes-no questions.

4. Yes-no questions with *ulla lla* "or not"

There is one important aspect in which both types of yes-no questions are similar. Raising tone questions as well as questions with **waʃ** (be they direct or embedded) allow the presence of **ulla lla** *"or not"* in the final position of the question , as illustrated below.

32a. sawwalt-ii-h **(ulla lla)**?
asked-you-him or not
Did you ask him?

b. **waʃ** sawwalt-ii-h **(ulla lla)**?
Q asked-you-him or not
Did you ask him?

c. bʏiit naʃraf **waʃ** sawwalt-ii-h **(ulla lla)**
want-I know whether asked-you-him or not
I want to know whether you asked him (or not)

In principle, the presence of **ulla lla** is quite optional , as indicated by the parentheses above. Nonetheless, it seems that it is much more acceptable in indirect questions than in direct ones. The question that arises in this respect is whether questions with **ulla lla** are equivalent to A-not-A questions, as in Chinese (Huang 1981/82) and Persian (Raghibdoust 1993).

It seems that in Chinese, for example, the A-not-A question strategy is viewed as an independent technique of constructing yes-no questions[8]. Consider these examples (taken from Huang 1981/82).

33. ta xi-**bu**-xi -huan ni?
he li-not-li -ke you?
Does he like you or not?

34. wo xiang-zhidao-ta xi-**bu**-xi -huan ni
I wonder he li-not-li -ke you
I wonder whether he likes you or not

First, contrary to (33), **ulla lla** in MA is not obligatory at all in direct questions and it is quasi-obligatory in indirect questions. Recall that intonation in the latter case can replace **ulla lla** and mark the sentence as interrogative. Further, unlike (34), the absence of the interrogative element **waʃ** in indirect questions (35) inevitably leads to ungrammaticality. English seems also to have the same constraint on the appearance of *whether*, as the English translation of (34) indicates.

35. *ma ʕraft-ʃ Hassan mʃa (**ulla lla**)
not-know-I-not Hassan left (or not)
*I do not know Hassan left (or not)

So, **ulla lla** in MA is by no means an independent device of constructing yes-no questions, as it is the case in some languages such as Chinese and Persian.

Turning now to the quasi-obligatory character of **ulla lla** in indirect questions, it seems that this matter has to do with the

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[8]Huang describes A-not-A questions in Chinese as a question in which "the first syllable of a predicate is immediately followed by *bu* '*not*' and an identical copy of the same syllable, which together with the original forms a coordinate element having the forms [A, not A]." p. 386

assignment of the intonation. Consider the following.

36. ʔʏiir kanxammam **waʃ** Brahim ʕ**ʒ**baatu d-daar
just think-I whether Brahim liked def-house
I just wonder whether Brahim liked the house

Due presumably to some phonological heaviness, it seems that Moroccan speakers, in general, tend to add the disjunction phrase **ulla lla**. However, it does not seem that the absence of **ulla lla** renders the sentence entirely ungrammatical, as signalled by ? and not *.

To emphasize the interrogative content of indirect questions without **ulla lla**, for example (36), the speaker would often assign a higher intonation to them. Specifically, the last lexical item bears the main accent, as would be the case with the noun **ddar** *"house"* in (36). In phonological terms, the object **ddar**, as the *nucleus of the focused constituent* (see Zubizarreta 1995), is identified by pitch accent. Such primary accent is normally absent in the same sentence with **ulla lla**. In the latter, it is normally the disjuction **ulla lla** that receives (though with a relatively lesser pitch) the prominence.

This prominence shift from **ulla lla** to the adjacent word (here **ddar**) is, in fact, in line with Cinque's (1993) algorithm for determining the relative prominence of words in S which says that the most embedded node in a given Intonational domain receives accentual prominence.

Similarly, with respect to (32a) and (32b), i.e., direct questions, a relatively marked intonation is always preferable in the absence

of **ulla lla.** However, an equal prominent accent on the most embedded word (**nsitih**, ie, the verb and the pronoun cliticized to it) does not seem to be as crucial as in indirect questions.

Thus, if indirect questions are uttered with ordinary intonation and low accent on the last element, they would often lack some of their interrogative load, but emphasized specifically by a prominent stress they become fully understood as indirect questions, on a par with those with **ulla lla.**

In a nutshell, the present section argues that Moroccan yes-no questions with **ulla lla** *"or not"* are not equivalent to the type of questions called A-not-A questions. This is mainly supported by the non-obligatory character of **ulla lla** and the impossible absence of the interrogative element **waʃ** in indirect questions, contrary to Chinese and Persian. The section also shows that the difference in intonation in yes-no questions is primarily accounted for by the absence or presence of the disjunction phrase **ulla lla**[9]. The absence of this phrase requires a relatively distinguished intonation with specific stress on the last lexical element in direct questions and an even higher one with more clearly prominent accent on the most embedded node in indirect questions. Therefore, the suggested explanation for the absence of **ulla lla** in such constructions is neither semantic nor syntactic but purely prosodic, as we can see.

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[9]Bear in mind that intonation is also often required in SV order in direct questions without **waʃ** (see the discussion of the example 2b).

Conclusion

In this chapter, we first examined yes-no questions constructed with a rise in intonation. It was shown that the main difference between this type of questions and declaratives is primarily prosodic, which suggests that the Question feature in this type of interrogatives corresponds to Intonation and, consequently, does not trigger any movement.

Secondly, various arguments supporting the idea that the Moroccan yes-no question particle **waʃ** is a wh-phrase were presented. Here an analogy is drawn between **waʃ**, on the one hand, and the English *whether* and the Polish *czy*, on the other. One specific result of the fact that **waʃ** is a wh-word is that, in a way comparable to constituent questions, the Q in **waʃ**-questions is also licensed in a Spec-Head configuration before Spell-Out.

Thirdly, section 4 argues that questions ending with the disjunction **ulla lla** cannot be qualified as equivalent to the type of interrogatives called A-not-A questions. Relatedly, the section also shows how the variation in intonation and main prominence shift is closely related to the presence or absence of **ulla lla**.

Ultimately, it is worth pointing out that the analysis that **waʃ** is a wh-phrase in Spec of CP, rather than a complementizer, is the most crucial issue around which the upcoming chapter expands on.

Chapter four
Cheng's analysis of questions

In this chapter, I will give an account of Cheng's (1991) analysis and check it against Moroccan data. Judging by Moroccan facts, I will suggest a slight revision regarding her correlation between the existence of yes-no particles and wh-in situ.

1. Cheng's Clausal Typing Hypothesis

In her thesis, Cheng addresses the question why some languages, like English, have syntactic wh-movement while some, like Mandarin Chinese, do not. She proposes that wh-movement serves to "type" a sentence as interrogative (and more specifically, a wh-question). Languages which do not have syntactic wh-movement have another way to "type" a clause as interrogative, namely, by the use of question particles. Furthermore, assuming the principle of Economy of Derivation (Chomsky 1991), she suggests that no language uses both ways to "type" a wh-question.

Cheng examines the relationship between the avaibility of yes-no question particles and the possibility of leaving the wh-words in situ in wh-questions. In particular, she argues that in situ languages invariably possess a way of forming yes-no questions by means of some morphologically overt element (particles, special inflection or agreement), or morphological process. She further observes that the crucial characteristic of these particles and special markings is that they can all be used in matrix yes-no questions. She, accordingly, states the following generalizations:

1. In-situ languages have special markings in yes-no questions.

2. Languages with special markings in yes-no questions are in-situ languages.

However, she argues that if a language has all the properties indicated in (3) below, then it is a counterexample to the generalization stated in (2).

3a. The language has yes-no particles and wh-in situ is not allowed;
b. the language does not have multiple fronting of wh-words; and
c. the language allows multiple wh-questions.

Additionally, she suggests that there is an implicational relationship between yes-no particles and wh-particles: the presence of the overt yes-no particles in a given language implies the presence of wh-particles (overt or non-overt). She, thus, restates the generalizations in (2 & 3) as follows:

4. In-situ languages have wh-particles. Languages with wh-particles are in-situ languages.

Relatedly, she proposes the following hypothesis:

5. *Clausal Typing Hypothesis (CTH)*
Every clause needs to be typed. In the case of wh-words, either a wh-particle in C° is used or else fronting of wh-word to Spec of C° by Spec-Head agreement.

Given the CTH, the principle of Economy makes the following predictions:

6a. No language has yes-no particles (and thus wh-particles) and also syntactic wh-movement.
b. No language has the option of using either a wh-particle or syntactic wh-movement of wh-words to type a sentence as a wh-question.

c. No language fronts more than one wh-word for Clausal Typing.

On the basis of the predictions above, Cheng examines two types of languages which seem to be counterexamples to her hypothesis: optional fronting languages (e.g., Bahasa Indonesia, Palauan and Egyptian Arabic) and multiple fronting languages (e.g., Polish). Here, our focus will be on the first type of languages, and in particular on Egyptian Arabic. This will be the content of the upcoming section.

2. Wh-questions in Egyptian Arabic

Cheng argues that the apparent fronting of wh-words in EA does not involve wh-movement of the wh-words; that is, movement of a wh-word to Spec of CP. Her basic observation is that EA, alongside wh-fronting, also allows wh-in situ in questions, for example:[1]

7a. Fariid hawil yiʃmil **eeh**
Fariid tried to-do what
What did Fariid try to do?

Also, unlike French, which only allows wh-in situ in matrix questions, EA allows wh-in situ in both matrix and embedded clauses, as shown below:

8. Mona ʃirfit Ali haawil yisaafir **feen**
Mona knew Ali tried to-travel where
Mona knew where Ali tried to go

To make the argument supporting the in situ analysis for EA, Cheng presents two coherent treatments for the wh-fronting of arguments and wh-fronting of adjuncts.

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[1]All EA examples are from Wahba (1984).

2.1. Wh-arguments

Cheng observes that sentences with a fronted wh-argument have clear resemblance to relative clauses as well as clefts, as illustrated below.

Wh-question

9a. miin **illi** Mona darabit-**uh**
who that Mona hit-him
Who did Mona hit?

b. eeh **illi** Mona ?arit-**uh**
what that Mona read-it
What did Mona read?

Relative clause and cleft

10a. il-raagil **illi** Mona shaafi-**uh**
the-man that Mona saw-him
The man that Mona saw

b. (dah) Mohammad **illi** gih[2]

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[2]Here, Cheng notes one difference between clefting and wh-fronting, namely the use of dah '***this***'. She shows that for wh-fronting the demonstrative dah cannot show up for some speakers, as shown in (i), whereas it is fine with clefts, as in (ii).

(i) *dah miin illi gih
this who that came

(ii) dah Ali illi Mona daradit-uh
this Ali that Mona hit-him
It is Ali that Mona hit

(i) is in fact fully acceptable for some speakers. Nevertheless, all speakers do not allow indefinite NPs to cooccur with the demonstrative dah in (iii), while an indefinite NP can also be clefted, as shown in (iv).

(iii) *dah kitaab illi Ali sara?-uh
this book that Ali stole-it
This is a book that Ali stole

(iv) kitaab illi Ali sara?-uh
book that Ali stole-it
It is a book that Ali stole

On the account that NPs such as *who* and *what* have been considered to be indefinite (cf. Chomsky 1964 and Katz & Postal 1964, among

this Mohammad that came
It is Mohammad that came

The two striking similarities in these constructions are the common use of **illi** and the constant occurrence of the resumptive pronoun **h**. In discussing the latter similarity, Cheng notes that wh-fronting resembles relativization in that it also requires a pronoun to fill a gap (in the case of fronting an argument), as illustrated by the ungrammaticality of (11b) below[3].

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others), she argues that if dah only appears with definite NPs in EA , then it is predicted that wh-words are not allowed to appear with dah. Relatedly, she proposes that in the cases of wh-fronting and clefting we have what McCloskey (1979) calls "reduced clefts" for Irish indefinite NPs. So, it appears that there is a restriction on the definiteness of NPs in EA and Irish.

[3]She further provides the following examples. (*) indicates that the judgements are not uniform given that Wahba (1984) considers them ungrammatical.

(i)a. dah il-beet **illi** baba yeʃraf il-raagil illi ban-**ah**
this the-house that father knows that the-man that built-it
This is the house that my father knows the man who built it

b. dah il-beet **illi** baba kaan b-yes?al miin illi ban-**ah**
this the house that my father was asking who that built-it
This is the house that my father was asking who built it

(ii)a. (*)anhi kitaab **illi** Mona teʃraf miin illi sara?-**uh**
which book that Mona know who that stole-it
Which book does Mona know who stole?

b. (*)miin **illi** Mona teʃraf feen huwwa raah
who that Mona knows where he went
Who does Mona know where he went?

Cheng observes that in (ia-b), relativization out of a relative clause and a wh-question is allowed. The sentence in (iia) is an instance of wh-island violation, which is generally considered a weak island. In particular, weak islands are not islands at all for extraction of complements (see Chomsky 1986, Cinque 1990 among others). Accordingly, she argues that this sentence should be at most mildly ill-formed.
In contrast, Wahba judges that both (iia-b) are ungrammatical,

11a. miin **illi** Mona shaafit-**uh**
who that Mona saw-him
Who did Mona see?

b. *miin **illi** Mona shaafit
who that Mona saw

Subsequently, she discusses the structures of a cleft and a reduced cleft. Assuming Browning's (1987) structure for clefts, she offers the following illustration:

12. It is [CP [DP Sharon] [CP *OPi* that [IP Marcia likes *ti*]]]

In this structure, the DP *Sharon* is the subject of the predicate CP [*that Marcia likes*]. Here, CP can function as a predicate because it is an open sentence, with an operator-variable structure in it.

In accordance with her idea that wh-clefts in EA are not full clefts but reduced clefts (cf. Footnote 2), she provides the following structure of a reduced cleft adapted from McCloskey (1979).

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and this shows that a wh-word cannot be fronted out of relative clause or a wh-question, though an overt pronoun is also present. Wahba's analysis is that the pronoun in (ia-b) (i.e., in the relative clauses) is a resumptive pronoun while the pronoun in (iia-b) (i.e., in wh-fronting) is not a resumptive pronoun. It is rather a spell out of a trace. She further argues that since relativization can violate island constraints, it does not involve movement and the pronoun is thus a resumptive pronoun. By contrast, wh-fronting violates islands, it thus involves movement and the pronoun which corresponds to the gap in these cases is a spell-out of a trace.

13. [CP[DP miin] [CP *OPi* illi[IP Mona shaafit-uh*i*]]
who *that* *Mona saw-him*
Who did Mona see?

She notes that (13) differs from (12) in that there is no copula and a subject NP. Nonetheless, in (13), there is still a subject predicate relationship. The wh-word *miin (who)* is the subject of the predicate [*illi Mona shaafit-uh*]. Furthermore, she assumes that the wh-word in (13) is base generated in its surface structure position. In the predicate clause, an empty operator moves to Spec of CP to form an operator-variable structure.

Summarizing, we can say that Cheng suggests a wh-cleft analysis for wh-argument fronting in EA. In particular she shows that there is no difference between a typical cleft and a wh-cleft. The difference is reduced to the difference between full clefts and reduced clefts. Further, based on judgements from native speakers on island violations in wh-fronting sentences, she demonstrates that relative clauses/clefts and wh-fronting are the same and no movement of a relativized NP or a wh-word is involved. There is a complete parallel between relativization/cleft, on the one hand, and wh-fronting, on the other. Finally, given the wh-cleft analysis, she concludes that the use of **illi** in wh-fronting as well as in relativization and clefting could naturally be understood.

2.2. Wh-adjuncts

With respect to the fronting of wh-adjuncts, Cheng argues that they are an instance of topicalization[4]. Her analysis is established on the following grounds.

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[4]Wahba (1984) analyses the adjunct wh-fronting in a similar way to the argument wh-fronting.

She first notes that topicalization sentences in EA do not have the complementizer **illi**, as shown in the following:

14. fi-l-sharis-dah, Mona kaanit bitdawwar ʕala sha??ah (*hinaak)
*on-the street-Dem Mona was looking for apartment (*there)*
On that street, Mona was looking for an apartment

Now consider adjunct wh-fronting sentences in these examples.

15a. maʕa miin Mona raahit il-Qahirah
with whom Mona went to-Cairo
With whom did Mona go to Cairo?

15b. feen Mona raahit
where Mona went
Where did Mona go?

In (15a-b), the complementizer **illi** does not appear. This is similar to the topicalization case in (14). In addition, she points out that, contrary to English for example, PPs and adjuncts cannot be clefted in EA. This explains the reason why the wh-cleft strategy could not be available for adjuncts as it is the case for arguments. So the fronting of adjuncts can be analysed, she argues, as a case of topicalization. Such an analysis will naturally explain the absence of **illi** in adjuncts wh-fronting.

In short, Cheng's analysis of Egyptian wh-fronting, in a nutshell, is that the apparent fronting of wh-words is actually an instance of a cleft sentence, in the case of arguments, and topicalization, in the case of adjuncts.

3. Wh-questions in Moroccan Arabic

Given the fact that Moroccan Arabic does possess an overt yes-no particle (**waʃ**), it becomes reasonable, according to Cheng's generalizations in (2 and 6a) above, to look at it as an in-situ language exactly like the Egyptian variety of Arabic. However, once MA data is checked against Cheng's arguments, the following list of

inconsistencies show up:

(a) Argument questions are not constantly similar to relative clauses or clefts with respect to the use of the complementizer **lli**.

(b) Resumptive pronouns do not obligatorily occur in all relative clauses.

(c) There is no direct relationship between relative clauses/cleft, on the one hand, and topicalization and adjuncts, on the other.

(d) Wh-in situ is never possible in wh-questions

Let us consider each point in turn.

Point(a): The striking similarity that relativization, clefting and wh-fronting all consistently use **illi** in EA cannot extend to **lli** in MA. Consider these examples:

Relative clause and cleft

16a. l-moʃarada **lli** njhaat
the-opposition that won
The opposition parties that won the elections

b. l-moʃarada hiyya **lli** njhaat
the-opposition parties that won
It is the opposition parties that won the elections

Wh-questions[5]

17a. ʃkun (**lli**) njah f-l-intixabaat
who (that) won in-the-elections
Who won the elections?

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[5]Some Moroccans also use *ʃnu* or *ʔaʃnu* (*what*) instead of *ʔaʃ* .

b. ʔaʃ ʒaab Brahim mən s-souq
what brought Brahim from the-market
What did Brahim bring from the market?

So, argument questions are not always similar to relatives or clefts with respect to **lli**. More precisely, the complementizer **lli** optionally occurs in subject questions (as in 17a) and never occurs in direct object positions, as in (17b).

Before discussing the possible implication that **lli** has with respect to argument questions, first we need to find out why **lli** may appear in the context of the subject position, as indicated by the grammaticality of (17a) above.

One appealing possibility, which I adopt here, is to argue that subject extraction in MA is to be computed on a par with subject extraction in English and French. Specifically, we will assume an in-situ-analysis for English, French and MA. Let us consider English first.

18a. Who came?

b.*Who did come?

Interestingly, (18a-b) show that the common *do*-support does not apply when matrix subject wh-phrases are extracted. Here we adopt Chomsky's (1986a) proposal that examples, like those above, do not involve movement of the wh-subject in the syntax[6]. He further argues that subject wh-words move only at LF and that LF wh-movement is needed for scope, selection and absorption purposes. Moreover, Ouhalla (1993) adds the observation that if the presence

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[6]To make the argument, Chomsky mentions considerations of language acquisition (for a similar point see also Radford 1990) and various empirical reasons such as wh-island effects. For details see Chomsky (1986a,pp.48-54).

of *do*-support can be taken as indication of movement, its absence, in (18a) for example, can plausibly mean the absence of movement of the wh-subject in the syntax. Under this view, then, the S-structure representation of (18a) will be:

19. [CP[IP who[VP came]]]?

The subject *who* in (19) does not move from Spec of IP to the Spec of CP. This, consequently, suggests that the wh-subject is in situ at S-structure.

For much the same reason, Complex Inversion (CI) also does not apply for the wh-subjects in French questions, as highlighted by these examples:

20a. qui est venu?
who is came
Who came?

b. *qui est-il venu?
who is-he came

The ungrammaticality of (20b) indicates that in the context of matrix extraction subject, the common CI is not triggered. Accordingly, the representation of (20a) will be (21).

21. [CP[IP qui[VP venu]]]?

(21) suggests that wh-subject extraction in French also patterns with wh-phrases in situ (cf. Benmamoun 1992 for a discussion).

Likewise in MA, wh-subject extraction also has a special status, in comparison to the other positions. Consider this question:

22. ʃkun **lli** njah f-l-mtihan
who that succeeded in-the-exam
Who succeeded in the exam?

It seems that the question in (22) is parallel to the subject relatives, as in (23) below.

23. t-talib **lli** njah
the-student that succeeded
The student that past the exam

Recall that in Chapter two we argued that relativization of the highest subject position is to be identified as an A-movement and not as an A(bar)-movement, though it contains a trace[7](see section 2, chp 2). Recall also that in order to obtain the uniqueness of the relativized subjects with respect to A(bar)-requirement, we proposed that the NP subject is base-generated adjoined to CP. Extending the same treatment to subject questions, we would roughly have the following representation for (22):

24. [CP ʃkun[CP lli[VP njah]]]]?

Here, we assume that the wh-subject is base generated in the adjoined CP.

More support for this non-movement option comes from Ouhalla (1993). In discussing the relationship between subject extraction and the Anti-Agreement Effect (AAE), he observes that the Null Subject languages which do not exhibit the AAE (among which are SA and MA) differ from the ones which do in that they make use of the option of not locally moving wh-subjects to Spec of CP in the syntax.

As a matter of fact, then, the subject *ʃkun* (*who*) in 24 is also base generated in Spec of CP and not moved to it, on a par with the

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[7]This was defended on the grounds that the matrix subject relative subject selects an *lliA* complementizer in contrast to *lliA(bar)* complementizer (see specifically footnote 12, chapter two).

English and French examples.

In short, the overall picture that emerges here is that the three languages in question lack short movement of subjects in the syntax. More precisely, the matrix wh-subjects remain in the subject position (Spec of IP for English and French and Spec of CP for MA) at S-structure. It seems, therefore, reasonable to assume that in the case of subject extraction in English, French and MA, the common question features, i.e., [wh] features, are not syntactically activated, exactly like in wh-in situ constructions.

Let us now turn to the implication of the absence of **lli** for interrogatives. Consider for example the paradigm in (25).

25a. *Wh-question*
?aʃ ʃafti
what saw-you
What did you see?

b. *Relative clause*
l-wald **lli** xda l-ʒa?iza
the-boy that got the-award
The boy that won the first prize

c. *Cleft*
l-wald huwwa **lli** xda l-ʒa?iza
the-boy he that got the award
It is the boy that won the first prize

We assume, here, that the relation between the relative head and the cleft head, on the one hand, and their CP complements, on the other, is a predicative one. This is primarily suggested by the consistent appearence of **lli** in relative and cleft constructions.

According to the predication analysis developed in Rizzi (1990), the Moroccan **lli** is a [+predicational] complementizer. Rizzi

proposes that complementizers generally subdivide in four classes determined by two features: [+/-wh] and [+/-predication]. For example:

26. +wh -pred *I wonder what you did*
    +wh +pred *The thing which you did*
    -wh +pred *The thing OP that you did*
    -wh -pred *I know that you did it*

First, note that (26) distinguishes between two instances of *that* [+pred] and [-pred]. Under this subdivision, Moroccan **lli** clearly falls under the category [-wh +pred][8]. Rizzi further proposes that Spec-head agreement with empty complementizers, as in the paradigm in (26) for example, undergoes a distinct type of agreement, called predicative agreement. The latter obtains directly between the complementizer (**lli**, for example) and the relative head (as *lwald* for (25b)). As we pointed out earlier (cf cht. two, section 2), this kind of agreement also turns an inert complementizer into a proper head-governor.

The direct consequence of this analysis is that the wh-word *ʔaʃ* (*what*) cannot be taken to be the subject of the interrogative in (25a), for example. More precisely, the analysis stipulates that fronted wh-arguments in MA do not parallel relativization and clefting strategy, contrary to what is reported in Cheng (1991) for EA.

Moreover, the structure for clefts and relative clauses confirms

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[8]MA has the complementizer **blli** for embedded clauses, which would categorize as [-wh -pred]. For example:

(i) ʃraft **blli** dər-ti-ha
    know-I that did-you-it
    I know that you did it

further the idea that lexical heads in these constructions are subjects and the clauses which follow are predicates. Here, we will discuss clefting phenomenon, assuming that the results will naturally extend to relative clauses. First, consider the following structure for clefts :

27. [IP XP*i*[CP OP*i* **lli**[IP...[e]*i*...]]]

Here, we assume, following Chomsky (1977) and Jaeggli (1982), the existence of a null operator in cleft structures[9]. I further assume, following Stowell (1985), that the null operator must be coindexed with an overt, lexically-headed constituent (in the sense of Chomsky (1986b)) in order to be interpreted[10]. So the null operator in cleft constructions must be in Spec of CP position subjacent to the cleft position by S-structure in order to be identified. In other words, the Spec of CP under the clefted position is the only position which allows the identification of the null operator (i.e., the coindexation with an element in cleft position).

This restriction on identification derives from a predication configuration along the lines of Williams (1980). The cleft position and the Spec of CP are coindexed via predication. The

---

[9]Chomsky (1977) takes this null operator to be the trace of syntactic wh-movement. Jaeggli (1982), on the other hand, argues that the moved operator is a PRO. However, because this operator can never be arbitrary in reference, I assume throughout that the operator involved is actually a trace operator.

[10]The *Identification Principle* of Stowell (1985) states that:
A category A may identify another category B iff
(i) A is coindexed with B and
(ii) the reference (or range) of the chain containing A is lexically specified.

focussed element is the subject and the following clause is the predicate. As a matter of fact, the predication configuration is very crucial in clefts on the grounds that movement to Spec of CP of the predicate clause is the only way the null operator can receive an index and ultimately be identified.

In addition, we can say, without further stipulation, that, on a par with clefts, relatives also instantiate the existence of a null operator with the same function; hence, the interpretation whereby the null operator is licensed only in subject-predicate configuration[11].

Accordingly, this analysis allows us to differentiate between the standard interrogative structure where an overt wh-operator (in Spec of CP) yields a very different result from cleft and relative structures where the predicational coindexation is crucial for the interpretation of the non-overt operator.

Point(b): As discussed in chapter two, resumptive pronouns are not obligatory in all Moroccar relative clauses. Specifically, they are ruled out in matrix subject position and optional in object position (and in embedded subject position). Consider these instances:

28. l-ktaab **lli** nsitii(**h**) f-d-dar
    the-book that forgot-you-(it) in the-house
    The book that you forgot at home

---

[11]So the structure for relative clauses is assumed to be as in (i).

(i) [NPi[CP *OPi* *lli*i[IP...[ei]]]]

29. t-talib **lli** (***huwwa**) ʃad l-ʒa?iza
*the-student that (*he) got the-award*
The student that won the first prize

In (28) and (29), the resumptive pronoun may not appear, which suggests that these relatives are actually a result of movement[12]. For motivation and arguments, refer to chapter two, section 2. According to the analysis proposed there, the relative clauses in (28) (with no resumptive pronoun) and (29) are instances of the structures shown in (30) and (31) respectively.

30. [NP *lktaab*[CP *OPi* [C ***lli***[IP *nsitii* **ti**...]]]]

31. [NP *ttalib*[CP *Opi* [C ***lli***[IP **ti** [VP *ʃad*...]]]]]

On this account, the null operators in Spec of CP are moved wh-operators from the embedded clause whose extraction leaves behind a coindexing trace[13]. Therefore, contrary to EA, there is no across the board occurrence of resumptive pronouns in MA.

Likewise, unlike in EA, resumptive pronouns in wh-argument questions are never possible in MA, as illustrated below.

32. ʃkun (**lli**) (***huwwa**) njah f-l-intixabaat
*who (that) (*he) Succeeded in-the-elections*
Who wan the elections?

33. ?aʃ ʃaaf(***u**) ʕli
*what saw (*it) Ali*
What did Ali saw?

---

[12]It was also argued (in chapter two, section 2) that resumptive pronouns are obligatory in the instances where traces would violate the ECP requirement.

[13]As to the ECP requirements with respect to the traces, in (30), the trace is properly head-governed by the verb and in (31), it is properly head-governed by the complementizer **lli** which is turned by predicative agreement into a proper governor (cf. *Point (a)* above).

In (32), on a par with subject relatives, as in (29) above, the resumptive pronoun **huwwa** is ruled out. In (33), in contrast to relativized object position (where the resumptive pronoun may be ruled in, as in (28)), the resumptive pronoun in questions with **ʔaʃ** (*what*) are unarguably excluded. This, once again, establishes another considerable difference between MA and EA, suggesting a movement proposal for the former and an in situ option for the latter.

Point (c): Building on the systematic resemblance in EA between relative clauses/clefts and wh-argument questions, on the one hand, and topicalization and wh-adjunct questions, on the other, Cheng proposes a cleft analysis for wh-arguments and topicalization analysis for wh-adjuncts. Indeed, this consistent dichotomy cannot carry over to Moroccan facts.

First, some instances of argument topicalization are posssible in MA, for example:

34. l-makla, klii-na
    the-meal ate-we
    The meal, we ate

at this point, it should be noted that standard object argument topicalization is not possible in MA, ror example:

35. *Brahim, tlaq-it
    Brahim met-I
    Brahim, I met

With this kind of topicalized objects, only left dislocation is ruled in. Thus the ungrammaticality of (35) could be solved by the insertion of a resumptive pronoun, as in the following:

36. Brahim, tlaq-it-**u**
Brahim met-I-him
Brahim, I met him

The only accepted version of topicalized objects are the instances where the object and the verb are derived from the same stem. For example, in (34), *lmakla* (*the meal*) and *kliina* (*we ate*) are derived from the common stem *kl*[14]. This is further exemplified by the following sentences.

37. l-**ʏda**, t**ʏdi**-na
*the-**lunch**, **lunched**-we*
Lunch, we ate

38. l-**harb**, t**harb**-na
*the-**battle**, **battled**-we*
The war, we fought

However, the forms of topicalized arguments given in (34), (37) and (38) (alongside topicalized subjects, see footnote 14) can be taken to stipulate that MA does allow some instances of argument topicalization.

Secondly, not only arguments but also adverbials can be clefted in MA. This is illustrated by the following examples.

39. l-s-sinima l-?aʃ mʃ Brahim
to-the-cenima to-which went Brahim
It is to the movie theatre that Brahim went

40. f-1969 f-aʃ bnadam tmʃa fuq l-qamar
in 1969 in-which Man walked on the-moon
It is in 1969 that Man walked on the moon

---

[14]In fact, I do not have any appropriate explanation as to why this restriction is imposed on topicalized objects in MA. In the context of subjects, topicalization is totally acceptable:

(i) draari, kaylaʃbu
the-children Cont-play
The children, they are playing

So on the basis of (39 & 40) and (34, 37 & 38) above, we can conclude *Point(c)* by recapitulating that no exact asymmetry exists between clefts and arguments nor between topicalization and adjuncts. On the contrary, these examples provide actual grounds for the existence of not only clefted arguments and topicalized adjuncts but also clefted adjuncts and topicalized arguments.

Point(d):Wh-in situ is not allowed in MA questions, be they matrix or embedded. For instance:

41. *Brahim ʃra *ʔaʃ*
Brahim bought what
What did Brahim buy?

42. *ka-tʃraf Fatima ʃra Brahim d-dar ***fiin***
cont-know Fatima bought Brahim the-house where
Fatima knows where Brahim bought the house

MA, thus, is not like optional movement languages, such as Egyptian Arabic, because it clearly does not allow wh-in situ questions. Consequently, in addition to the arguments stated above, the idea is that fronting in wh-questions in MA is actual fronting of the wh-words to Spec of CP.

4. Cheng's analysis revisited.

Turning to the main topic of this Chapter, namely Cheng's analysis, we will argue that this analysis should be slightly refined in order to account for Moroccan data.

It appears that all the arguments above, together with the analysis of yes-no question particle **waʃ** as a wh-word, suggest that MA is a wh-movement language. Thus the question that arises is whether MA is a counterexample for Cheng's hypothesis. According to the

properties indicated in (3) the answer is no. This is so because multiple questions are not allowed in Moroccan Arabic. Consider the example below.

43. *ʃkun ʃra ʃnu
Who bought what

However, MA seems not to obey the generalization which states that the presence of an overt yes-no particle in a given language implies the presence of wh-particles (overt or non-overt). In other words, the existence of an overt yes-no particle in languages which do not have multiple fronting of wh-words would not necessarily mean that the languages in question are wh-in situ. As at least manifested in Moroccan data, I presume that a further typology of yes-no particles is required in order to preserve generalizations like (2 and 6a above). For example, it could be suggested that the matrix yes-no particles whose distributional pattern resembles that of English *whether* (ie, *whether*-type yes-no particles) should be excluded from these generalizations.

In other words, Cheng's correlation which establishes that languages with yes-no particles do not have wh-movement is problematic only in case we follow Cheng in assuming that this particle occupies C°. Alternatively, if the yes-no particle is assumed to be in Spec of CP in some languages, we will be able to explain why MA (and maybe other languages like Berber) has wh-movement at S-structure[15]. In addition, we can also account for why

---

[15]The problem is further complicated by the fact that Standard Arabic yes-no particles are heads of CPs and still SA has mandatory movement (for yes-no particles refer to Chapter three, footnote 3). For example:

(i) maaθaa qaala al-qaa?idu?
what said the-leader

constituent wh-words do not cooccur with this particle[16].

In the sense of Rizzi's (1990) Wh-Criterion[17] (CTH in the sense of Cheng), the head of CP would be filled by an abstract [+wh] feature which is in Spec-head relation with the wh-phrase in Spec of CP (**waʃ**, for example).

In contrast, in languages that have overt particles that occupy the head of CP (e.g., Egyptian Arabic, Palestinian Arabic, Lebanese Arabic, Mekkan Arabic and Iraqi Arabic) movement does not take place. This is so because Spec of CP does not require any identification, which is standardly achieved through Spec-head relation.

What did the leader say?
Much more complication comes from the fact that SA also has multiple questions:

(ii) man ra?aa man
who saw who

Actually, this state of affairs in SA presents a serious counterevidence to Cheng's Typing Clause Hypothesis, and namely to the conditions stated in (3). However, I only consider Moroccan facts here, leaving the SA issue open for future research.

[16]In accordance with this idea, Cheng, herself, notes the following:
"It should be noted that the Clausal Typing Hypothesis is consistent with having particles which are XPs and by Spec-head agreement, the C° can acquire the features of this particle and the Clausal Typing Hypothesis can take place." p.49, footnote 23

[17]Within the *Barriers* framework, Rizzi (1990b) (re)states the wh-criterion (originally proposed by May (1985,p.17)) as an instance of Spec-Head agreement:

(a) Each [+wh]X° must be in a Spec-head relation with a wh-phrase

(b) Each wh-phrase must be in a Spec-Head relation with a [+wh]X°.

Moreover, the issue becomes more intractable if we consider languages like French which does not exhibit matrix syntactic wh-movement. Cheng's CTH does not give any explanation for the French case, which standardly has an optional matrix wh-in situ.

Furhermore, the problem is still more complex if we follow the recent reasoning that languages that are standardly known as not having overt movement like Japanese may after all have syntactic movement of an empty operator, as defended in the analysis of overt raising of empty operators in Japanese, developed in Wanatabe (1991 and 1992) (see also Aoun and Li (1991) for Chinese). Indeed, this idea is gaining more credit on Minimalist grounds which could permit such overt raising (without pied-piping), depending on morphological structure of the language in question (see Chomsky (1995), chapter four).

In effect, the idea will be that the major difference between English and Japanese, for example, could be reduced to the question why the former permits wh-movement operation to carry along a full category (ie, in Minimalist terminology, the movement pied pipes a full category for PF convergence), while in the latter, only one part (ie, a formal feature, or FF[F], in the sense of Chomsky 1995) raises.

Finally, the correlation between the presence of yes-no particles and wh-in situ aside, the essence of Cheng's Clausal Typing Hypothesis, which requires that the [+wh] feature may be lexically incorporated in some languages and may not be in others, could actually be an appopriate parameter in this respect (eg, English vs Japanese).

As a matter of fact, this parametric proposition has been lately implemented in accordance with the Minimalist assumptions (see Chomsky 1995: chapter 4, section 4.5.4 and chapter 1, p.69). The gist of the implementation is that when the wh-feature is strong, as in English and MA for example, it must be checked by FQ (Feature Question). For PF convergeance, the FQ raises to [Spec Q] before Spell-Out via wh-movement, which pied-pipes an entire wh-phrase. Alternatively, if the wh-feature is weak, the wh-constituent does not raise to [Spec Q] and remains in situ at PF. This so because in this case, both the wh-feature and Q are Interpretable (ie, intelligible), and hence need not be checked for convergence.

Concluding remarks

In this chapter, I have examined the relevance of Cheng's correlation, which establishes that languages with yes-no particles do not have wh-movement, for Moroccan data. Upon systematic comparison between Egyptian and Moroccan Arabic, I have argued for a version of Cheng's generalization in (1) that would not incorporate languages like MA as in-situ languages. I have, in particular, suggested that matrix yes-no particles whose distributional pattern is comparable to that of English *whether* (ie, *whether*-type yes-no particles) should be excluded from this generalization.

(1) *In-situ languages have wh-particles. Languages with wh-particles are in-situ languages*

More precisely, particles which occupy Spec of CP (like MA **waʃ**) should not be subsumed under this correlation. In other words, (1) is problematic only in case yes-no particles are in C°. We are thus, alternatively, led to the proposal in (2).

(2) *In-situ languages have wh-particles in C°. Languages with wh-particles in C° are in-situ languages.*

Finally, accepting this new generalization, Cheng's *Clausal Typing Hypothesis* (CTH) will also remain consistent with MA (and languages whose particles are XPs). In a Spec-Head configuration, the C° acquires the FQ of the particle and the CTH can, accordingly, take place.

Chapter five
Wh-constructions:
A Minimalist approach

The goal of this chapter is to explore, in a preliminary way, the possibility of a minimalist application to Moroccan Arabic wh-constructions. One special aim is to provide initial treatment of the phenomenon of optionality, namely, SV/VS inversion in clause structure and the free variation between resumptive pronouns and gaps in the formation of relative clauses.

1. The Minimalist Program (Chomsky 1995)

In the Minimalist Program (MP), language is assumed to consist of a lexicon and computational system. The lexicon specifies all the specific properties of words. Thus, the lexical categories are inserted in the syntax fully inflected. The computational system consists of two interface levels: Phonological Form (PF) and Logical Form (LF). A computation is said to *converge* at the interface levels if all of its morphological features are appropriately checked off, otherwise it *crashes*. Given this, syntactic movement in this approach is considered to be primarily driven by morphological considerations.

On this model, the basic clause structure is assumed to be as given in (1)[1].

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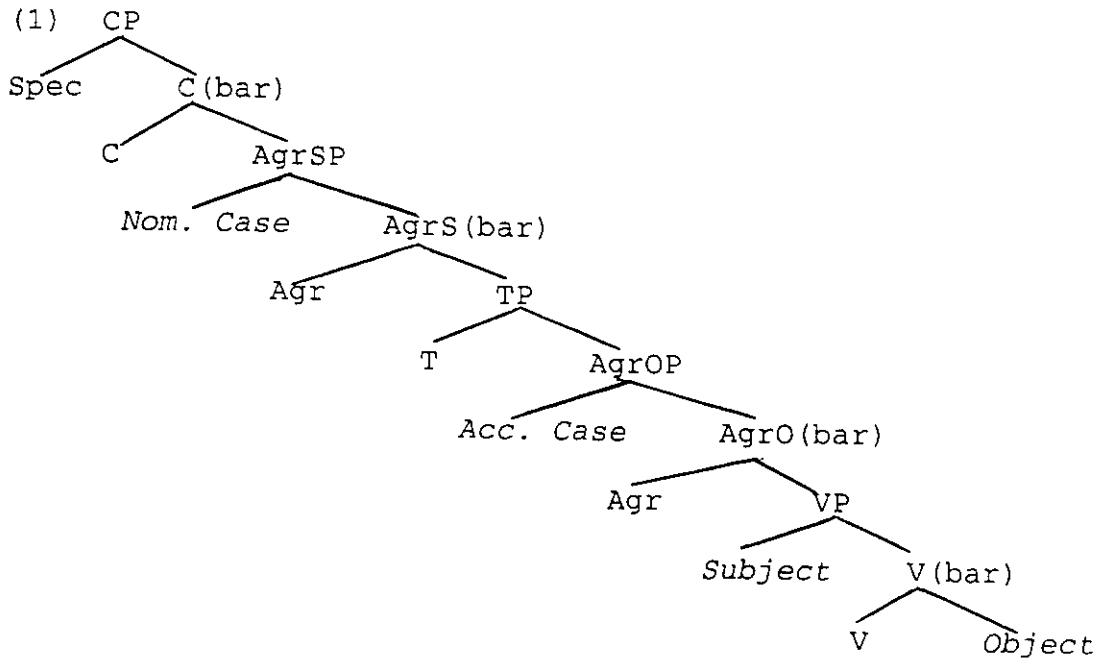
[1]Pollock (1989) proposes to "split" Infl in two separate heads T(ense) and Agr(eement). Chomsky (1991) adds to it that a clause contains two Agr phrases: AgrSP and AgrOP, separated by



In this tree, both subject and object are assumed to be base-generated internal to VP. (The object as complement of V, and the subject as the specifier of VP.) The innovative idea here is that Phi-features (person, number and gender) and case features are solely checked via Spec-Head agreement. The features which are to be checked may be either "strong" or "weak". The latter features need not be checked until LF (the interpretive component), while strong features are visible for the PF component. Furthermore, strong features are considered uninterpretable at PF so they must be checked before Spell-Out. Movement to check features may be either overt (if it occurs prior to Spell-Out) or covert (if it occurs after Spell-Out, namely LF). Nominative case checking takes place in Spec-AgrS + T, obtained via raising of tense to AgrS.

TP.

Accusative case, on the other hand, takes place in Spec-AgrO + V, obtained via movement of verb to AgrO[2] (see the tree in (1) above).

Finally, the operations that regulate movement in this approach must satisfy some crucial Economy Principles. The principle *Last Resort*, for example, prohibits superfluous steps in derivation, requiring that movement applies only if such operation is needed to make the phrase converge. Another principle of economy, the *Minimize Chain Links* (Chomsky (and Lasnik) 1995), requires that each movement be as short as possible. *Procrastination* says that movement applies as late as possible, thus favouring covert over overt movement.

2. Clause structure in MA

The model above has opened up an excellent possibility for deriving the SVO and VSO configuration in a more parametric perspective. One such development of the model is the idea that lexical items (here verbs) enter the syntax fully inflected. On this assumption, we can reduce both the difference between the SV and VS languages, on the one hand (eg, English vs Arabic), and between the partial agreement VS languages and full agreement VS languages, on the other (eg, Moroccan Vs Standard Arabic), to the degree of morphological strength with which the verb enters the syntax.

---

[2]Here, Agreement is taken to be achieved uniquely in Spec-Head or Head-Head relationship. The notion government (namely Head-government), thus, plays no role in this minimalist framework.

Moroccan Arabic differs from SA[3] in that it exhibits full agreement (ie, gender, person and number) in both VS and SV orders, as shown in (2).

2a. ʒaaw d-draari mn l-madraSa
came-MASC-3rd-PL the-children from the-school
The children came from the school

b. d-draari ʒaaw mn l-madraSa
the-children came-MASC-3rd-PL from the-school
(Same as 2a)

This suggests that, unlike SA, verbal and nominal features on Agr are strong in both orders. This in turn yields the following treatment. Let us first consider SVO order[4] to which we attribute the following structure:

---

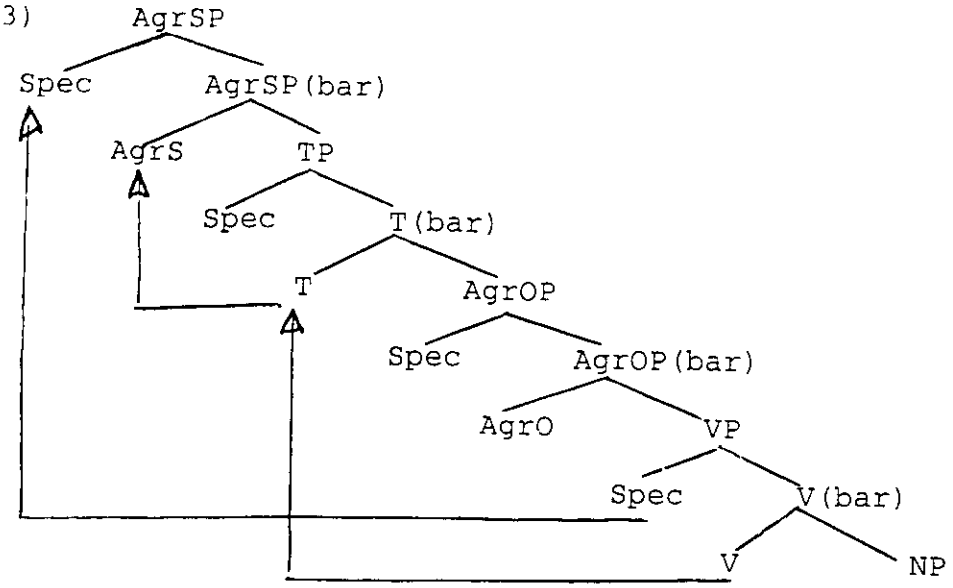
[3]In SA, in SV order, the verb must have full agreement with the subject (ie, gender, person and number), as in (i). In VS, on the other hand, agreement is only with gender and (the default third) person singular, as in (ii).

(i) al-ʔatfaalu ʒaaʔu
the-children came-MASC-3rd-PL
The children came

(ii) ʒaaʔa al-ʔatfaalu
came-Masc-3rd the-children
The children came

[4]Since our concern here is essentially with the VS/SV alternation, object (accusative) agreement is disregarded throughout.

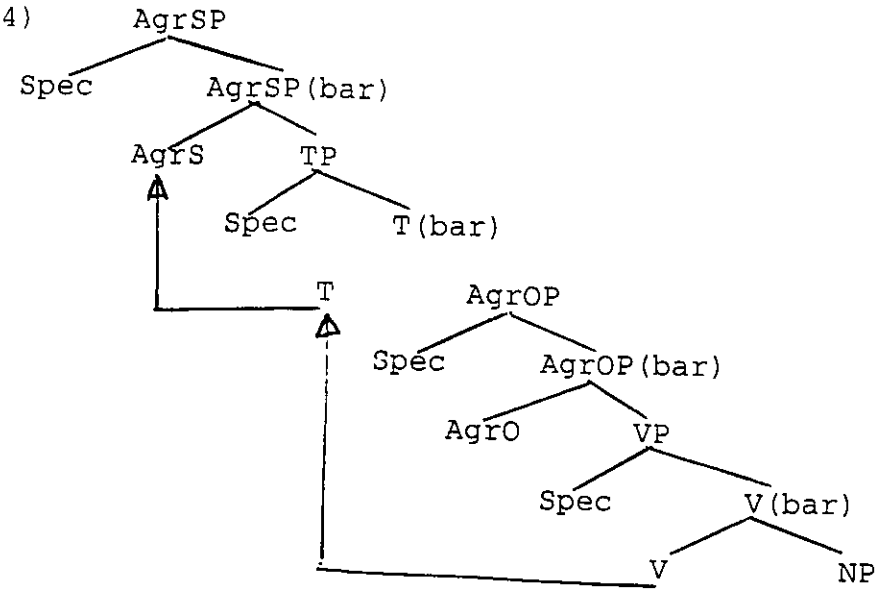
(3)



and where first the subject moves to Spec of AgrSP and subsequently the verb, in a simple stepwise fashion, moves to AgrS via T°. All the movements are executed before Spell-out because the morphological features associated with the moved elements are strong.

VSO, on the other hand, will have the following tree structure:

(4)



In this model, the verb moves to T and then to Agr, also before Spell-Out. The subject, on the other hand, remains in situ in Spec of VP in the syntax. It is only at LF that the subject moves to the specifier position of AgrSP.

In short, the main point to emphasize here is that given the morphological richness of agreement associated with both configurations in MA, movement of the constituents in question are deemed to be overt (ie, before Spell-Out) in both orders[5].

---

[5]As to the agreement variation in SA (ie, poor agreement in VS and strong agreement in SV, see footnote 3), it can be explained (in accordance with the treatment adopted for MA facts) by assuming Bolotin (1995). For SV order, it is suggested that the verbal and nominal features on Agr are strong and thus the verb must raise to AgrS (via T°), and the subject raises to the Spec of AgrSP. Both movements are executed before Spell-Out to have their features checked off, as in (i) below.

The poor agreement in VS order, on the other hand, can be accounted for, according to Bolotin, as follows. Because the tense feature is strong, the verb moves overtly to T°, while the subject remains in its in-situ position, assumed here to be [Spec VP], as shown by (ii) below. By Procrastination principle, subject movement to check off its features is delayed until LF.

Moreover, Bolotin argues that the gender agreement in VS order is an idiosyncratic property which is specified in the lexicon. In other words, in Standard Arabic, both 3rd person and gender are default characterization specified on the verb from the lexicon. This is the case, Bolotin argues, because gender is a more intrinsic property than number in that gender stays constant while number usually depends on the context, and also in that SA has feminine singular agreement with inanimate plurals. This explains why SA has historically maintained gender agreement across its agreement system.

This idiosyncratic behaviour regarding gender agreement is also attested by Ouhalla (1994), who proposes that gender and third person are generally assigned in SA by a default mechanism.

Having established the basic structure of the Moroccan sentence, the coming sections will attempt to provide a preliminary minimalist treatment of the main wh-constructions, namely relativization, left dislocation (topicalization) and finally wh-questions.

3. Relative clause formation

This section has as its aim a re-examination of the approach adopted (in chapter two) for the distribution of resumptive pronouns in relative clause formation. In particular, the aim is to provide a representational treatment of the resumptive pronoun strategy (in the spirit of Ouhalla (1993), regarding the interaction between the Anti Agreement Effect (AAE), on the one hand, and the Movement and Resumptive strategy, on the other) instead of the derivational (Shlonsky 1992) view adopted in chapter two. The suggested representational approach here is taken to mean the licensing conditions that interact, allowing the appearance of a resumptive pronoun and/or a trace. As opposed to the derivational (transformational) approach, the representational one is thus deemed to offer, in accordance with the minimalist spirit, an

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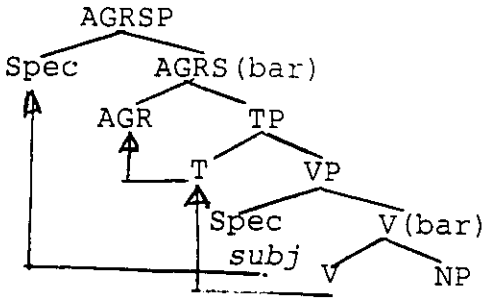
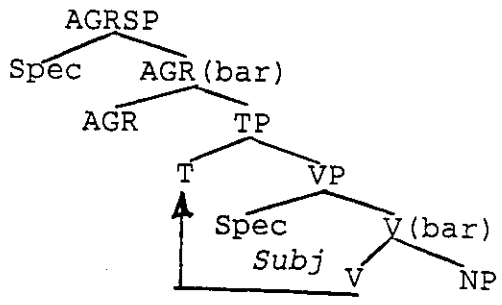
(i)



(ii)



explanation to the optionality problem in Moroccan (and presumably SA and Tashlhiyt variety of Berber) relatives.

In chapter two, we demonstrated how some relativized clauses admit either a trace or a resumptive pronoun and how others admit a free variation between the two operations. Examples (1-8) cited in Chapter two (restated below for the sake of clarity) illustrate the point.

5. l-wald **lli** mʃa l-xariʒ
   the-boy that went to-abroad
   The boy that went abroad

6. l-wald **lli** dnni-t blli (**huwwa**) mʃa l-xariʒ
   the-boy that think-I (he) Went to-abroad
   The boy that I thought that he went abroad

7. ʒbar-t l-ktab **lli** nsit-i-(**h**) f-l-qism
   found-I the-book that forgot-you-(it) in-the-class
   I found the book that you forgot in the class room

8. l-ktab **lli** danni-t blli nsit-i-**h** f-l-qism
   the-book that thought-I that forgot-you-it in-the-class
   The book that I thought that you forgot in the class room

9. r-raʒal **lli** mʃi-t mʕa-**h**
   the-man that went-I with him
   The man that I went with

10. kanʃraf t-talaba **lli** nsaw ktub-**hum**
    know-I the-students that forgot books-their
    I know the students that forgot their books

11. ha-l-bant **lli** xu-**ha** ʕskri
    this-the-girl that brother-her soldier
    This is the girl whose brother is a soldier

12. r-raʒl **lli huwwa** u mart-u mʃaw l-xariʒ
    the-man that he and wife-his went to-abroad
    The man that he and his wife went abroad

MA shows three ways for the distribution of the traces and/or resumptive pronouns. Resumptive pronouns are obligatory in (9-12). The trace is obligatory in (5). And finally, resumptive pronouns and traces are in free variation in (6) and (7).

To make a clear argument of this distribution, first, a brief recapitulation of the analysis proposed in chapter two is in order (see chapter two, section 2 for a detailed illustration).

The first point was that a resumptive pronoun is obligatory in a position where a trace would arguably violate the Empty Category Principle (ECP). Here, we adopted the ECP formulation made in Rizzi (1990) (=11, chapter two).

(13) *The Empty Category Principle*:
An empty category must be properly head-governed.

Applying this definition, it was demonstrated that traces are invariably excluded from oblique objects (9), genitives (10), possessor positions (11) and coordinate subjects (12). More precisely this was defended on the basis that a resumptive pronoun in such positions is viewed as a saving device for otherwise ungrammatical sentences.

Secondly, it was shown that the trace is imposed on the matrix subject position by the Highest Subject restriction (HSR) (McCloskey (1990)), which constrains the occurrence of the resumptive pronoun in such a position. Technically speaking, resumptive pronouns are invariably ruled out from positions where

they would violate the A(bar)-disjointness requirement. In particular, this requirement (adapted from Aoun & Li (1989)) does not allow a resumptive pronoun in a position which contains the A(bar)-antecedent. This pronominal regulation can be formulated as in (14) (=33, chapter two). See chapter two, section 2 for an application.

(14) *The A(bar)-disjointness Requirement*

A pronoun must be A(bar)-free in the smallest Complete Functional Complex (CFC) which contains it.

The context where traces freely vary with resumptive pronouns was analysed on the assumption that MA possesses two (morphologically non-distinct) complementizers. *lli*A identifies an A-specifier and *lli*A(bar) selects an A(bar)-specifier. This distinction is better illustrated in the following schematic structure (=22, chapter two).

(15)a. [NP NP [CP lliA[IP...pro...]]]
b. [NP NP [CP lliA(bar)[IP...t...]]]
c. [NP NP [CP lliA[IP...[CP blli[IP...pro...]]]]]
d. [NP NP[CP lliA(bar)[IP...[CP blli[IP...t...]]]]]

(15) implies that resumptive pronouns are obligatorily inserted with *lli*A, while traces are invariably associated with *lli*A(bar). Moreover, it was illustrated that resumptive pronouns in these positions rightly obey the A(bar)-disjointness requirement in (14), which regulates the appearance of pronominal elements. It was relatedly argued that this condition is applicable only if we adopt the minimal CP as a CFC for matrix subject position and the minimal IP for the remaining positions, including the object position.

Underlying the arguments made in chapter two is basically the

assumption that resumptive pronoun insertion in MA is always a last resort strategy (ie, a strategy used where movement fails) and never a freely used syntactic strategy on its own.

The alternative we will argue here is that resumptive pronouns are a natural result of their licensing conditions and not a last resort device, in the above sense. More precisely, the point is that resumptive pronouns obligatorily occur in positions where the licensing pronominal condition (ie, the A(bar)-disjointness condition, and presumably other conditions) but not the licensing conditions for traces, is met. Traces, on the other hand, are obligatory in contexts where the ECP is met (and probably other conditions), and the A(bar)-disjointness excludes resumptive pronouns, namely in the matrix subject position. As to the environments where the two strategies are in variation, the following explanation can be put forward. It is suggested that resumptive pronouns and traces freely vary in positions where licensing conditions for both of them (ie, the A(bar)-disjointness requirement and the ECP) are satisfied. The three distributional behaviours are respectively explained in the following.

First, in accordance with the reasoning made in chapter two, section 2, resumptive pronouns are arguably inserted in position where the A(bar)-disjointness constraint would be met and where the ECP would be violated by a gap. In MA, extraction out of NP and PP, for example, are clearly reducible to ECP reasons. For example (=15a-b, chapter two).

(16)a. l-bant **lli** b-ba-**ha** barlamani
the-girl that father-her parliamentary
The girl whose father is a member of parliament

b. *l-bant **lli** b-ba-***ti*** barlamani
the-girl that father-ti parliamentary
The girl whose father is a member of parliament

In MA, the possessive/genitive is standardly in Spec of N(bar) to the right (see the structure (17) in chapter two, inspired from Fassi-Fehri (1989)). Thus N(bar) could not properly head-govern the trace, as regulated by the ECP in (14) above.

However, assuming that the least CFC is the minimal IP in (16a), the pronoun is not contained with its antecedent in this clause; thus the pronoun is A(bar)-free in this domain and the sentence is grammatical.

Likewise, resumptive pronouns are obligatory inside coordinate subjects and PPs because movement out of coordinate structure and out of [NP/PP] violate the ECP in MA (see chapter two, section 2). Alternatively, A(bar)-disjointness requirement is clearly respected in these structures. So, the analysis adopted for (16a-b) also carries over to PP-internal positions and coordinate subjects, always assuming the smallest CFC to be the minimal IP containing the resumptive pronoun.

Secondly, a resumptive pronoun is excluded from the subject position of the clause which contains the antecedent by the A(bar)-disjointness requirement. A trace, on the other hand, is admitted because the ECP requirement is satisfactorily met, as the following example indicates.

(18) r-rajl lli (*huwwa) daar l-ʃars
*the-man that (*he) did the marriage ceremony*
The man that got married

Assuming that the least CFC exclusively refers to CP for the subject position (see cht. two, section 3.2), a subject resumptive pronoun contained in the same clause as its antecedent violates the requirement that pronouns should be A(bar)-disjoint from the nearest antecedent. By contrast, a trace in (18) is licensed by the ECP condition, either the extraction takes place preverbally or postverbally. On either account, the trace is properly head-governed according to the conjunctive formulation in (22) above. In the former case, the trace will be properly head-governed by the (special) complementizer **lli** (see cht. two, sec. 2 and cht. four, sect. 3), while in the second alternative (ie, the postverbal position), the trace could standardly be properly head-governed by the verb.

Ultimately, under the same analysis, the contexts, where a trace and a resumptive pronoun are in free variation, are assumed to present instances where the licensing conditions of both categories are met. We saw above that both a gap and a resumptive pronoun are possible in the direct object (and the embedded subject), for example:

(19) lqi-t l-ktab **lli** nsiti-(**h**) f-l-qism
found-I the-book that forgot-you-(it) in-the-class
I found the book that you forgot in the class room

In (19), the pronoun is allowed because it is not contained with its antecedent (wh-operator in Spec of CP) in the minimal IP. More precisely, A(bar)-disjointness, the condition on pronominal elements, is satisfied in this environment. Moreover, the trace in

the same example is also licensed by the ECP; in particular, the trace is properly head-governed by the verb (*nsit*)[6].

The present analysis suggests that the two strategies (ie, movement and base generation) do not necessarily preclude each other, as has been defended in chapter two (ie, last resort strategy). If this line of reasoning is correct, then, we have a straightforward explanation as to why a resumptive pronoun and a variable are sometimes in free variation. The picture is that either a trace or a resumptive pronoun can be associated with a wh-phrase in Spec of CP, if the right conditions license the occurrence of both of them.

As to the structure of relative clauses with traces (copies in the sense of Chomsky 1995), we, in short, propose that they would be identical to relatives in English-type languages. This leads us to propose the following structure for (19), for example.

(20) [DP lktab [CP *opi* [C lli [IP nsiti *ei* flqism]]]]

---

[6]As to the long subject extraction, where the resumptive pronoun is optional, we have two options, take this example:

(i) d-dərri **lli** dnni-t **blli** (**huwwa**) mʃa i-xariʒ
the-young man that thought-I that (he) went to-abroad
The young man that I thought that he went abroad

We can first assume that the movement is preverbal and that N(ull) S(ubject) languages are standardly assumed to resist *that trace* effect (see Rizzi 1986, for example, for Italian; see also Chomsky 1986a). Alternatively, we can assume that extraction is postverbal and that the trace is properly-head governed by the verb.

Here, the operator phrase is moved to Spec of CP, leaving behind a trace that functions as a variable. In line with Chomsky (and Lasnik) (1995) regarding English relatives, the movement above takes place before Spell-Out.

As to the exact driving force behind movement of the null operator in (20), for example, it is not clearly determined. However, discarding the idea that movement can be driven merely by search of interpretability (Chomsky 1995), one potential assumption is to adopt the argument made by Bošković (1995), who (based on Lasnik(p.c.)) proposes the following. Chomsky (1995) argues that question operators can be interpreted in A-positions. As a result, they remain in situ at LF. If in contrast to question operators, relative operators can be interpreted only in A(bar)-but not in A-positions, that is, they must establish an op-variable relation, relative operators would then be forced to move to Spec of CP. Thus the fact that null relative operators cannot remain in situ provides some kind of answer to what drives movement of the null operators in relative clauses.

Additionally, the suggestion that the operator-variable chain is created overtly may also extend to the pronoun strategy, by suggesting that the coindexation between the resumptive pronoun and the operator in Spec of CP is established in the syntax as well. This could be suggested, in the first place, by assuming that the crucial licensing conditions on the resumptive pronoun (among which is the A(bar)-disjointness requirement), in this model, are conditions on the overt syntax. Secondly, if we assume, following Chomsky (and Lasnik) (1995), that predication is essentially established at S-structure, then Moroccan relative clauses with in-

situ pronouns (on a par with operator-variable chain) are also constructed in the overt syntax, as would be the case in (21)

(21) [DP lktab[CP *opi*[C lli[IP nsiti***hi*** flqism]]]]

The free variation between the two categories, ie, a gap and a pronoun, can thus be explained by adopting a representational view to the resultant A(bar)-chains. In other words, following Ouhalla (1993), the nature of the category associated with the null operator in Spec of CP is determined independently of whether this operator is a consequence of movement or base generation. It is thus the interaction between the respective licensing conditions (and the characteristics of the environment) which actually determines the fact that a gap and/or a trace can occur in a given situation. In short, it appears that the interaction between the licensing conditions (of a resumptive and/or a trace) create (apriori) A(bar)-chains that arise representationally, irrespective of the nature of the anaphoric category with which they are associated.

Conclusion

Judging by Moroccan facts (and probably SA and Berber, namely Tashlhiyt), it seems that a resumptive pronoun and a trace exclude each other in environments where the licensing condition(s) for only one of them is met. As we attested above, the resumptive pronoun is excluded from the matrix subject position, but a variable is not. On the other hand, a trace is ruled out from environments which are included inside certain islands (eg, coordinate structure, NP and PP), but resumptive pronouns are not. Thus the choice between them is determined by whether the relevant licensing conditions for each of them are met in a given context.

The trace has to satisfy, among other things presumably, the ECP, while the resumptive pronoun has to satisfy, among other things presumably, the A(bar)-disjointness requirement.

Regarding the structure of the relatives, we assumed that both strategies (ie, movement and in-situ) are overt operations.

Finally, we can note that the present representational treatment (as opposed to the derivational one, developed in chapter two) blurs the (previously established) distinction between the movement strategy (which is correlated with a gap) and the base-generation strategy (which is associated with a resumptive pronoun). Accordingly, the apparent variation is, in essence, reduced to the interaction between the relevant licensing conditions allowing both strategies.

4.Left Dislocation (Topicalization)

This section is essentially concerned with the landing site of left-dislocated constituents. It, in particular, assumes that these constituents have their own projection, namely Topic Phrase (TopP). (See also Zwart (1993), who proposes the same projection, ie, TopP, for topicalization.)[7] As we pointed out in chapter four,

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[7]TopP, in effect, could also be the position for topicalization if we follow Postal (1994). Postal argues that a topicalization, indeed, always leaves a null resumptive rather than a trace, since topicalization extraction sites are not viable unless pronouns can independently appear in those sites. In other words, Postal suggests a theory that translates topicalization variables to (null) pronouns. Moreover, this is also similar in some respect to Chomsky (1977), who holds that topicalization and left dislocation have the same structure, the only difference being that the former involves movement, whereas the latter does not involve any movement at all.

section 3, object topicalization in MA is highly restricted. Thus, our focus will specifically be on left-dislocated NPs.

On the basis of the evidence put together below, left-dislocated NPs in MA seem to be external to IP and, at the same time, lower than CP. First, it seems that the dislocated NP is attached relatively higher than IP in that it may appear to the left of adverbial phrases which, in turn, we assume to be adjoined to IP. Take for example:

(22) **d-dar** mn daba ʃaam ʏadi ikammal-**ha**
the-house from now a year will-he finish-it
The house, in a year's time, he will finish it

where the NP *ddar* (house) precedes the adverbial phrase *mn daba ʃaam* (in a year's time).

Additionally, a left-dislocated NP appears consistently to the left of subjects or finite verbs, as in (23a) and (23b) respectively.

(23)a. **haad l-ktab,** ʃli qraa-**h** kullu
this the-book Ali read-it all
This book, Ali has read all of it

b. **Brahim,** ʃaf-**u** ʃli
Brahim saw-him Ali
Brahim, Ali saw him

This implies that the preposed NP (*haad lktab*), for example, occurs in a position higher than the subject in Spec of IP (or precisely Spec of AgrSP).

Furthermore, the dislocated NP can be embedded in CP, as in (24).

(24)a. kandan blli **haad l-muʃkil** xaS-na nthanaw mn-**u**
think-I that this the-problem should-we get rid of-it
I think that, this problem, we should get rid of it

b. gal-t blli **l-lun lahmr** ma-ka-**y**-ʕab-ha-ʃ
Said-she that The-colour red not-it-like-she-not
She said that, the red colour, she does not like it

Being to the right of the complementizer (*blli*), the dislocated NPs in (24a-b) suggest that left dislocation involves a position dominated by CP.

Thus, the two observations in combination suggest strongly that the left-dislocated phrase in MA is attached relatively higher than material within IP, such as IP-adjoined adverbs and subjects, and lower than material usually taken to occupy head position of CP such as the complementizer (*blli*). What this means is that the left-dislocated NP is in some specifier position left of IP and right of CP.

One way to implement these observations would be to adopt a proposal made in Müller and Sternefeld (1993), who adopt the hypothesis that dislocated phrases are attached to a Topic Phrase[8]. In particular, the proposal suggests that there is a functional head [Top] which projects a topicalized Phrase, whose specifier position is the position in which dislocated elements occur. The topicalized Phrase is dominated by CP and it in turn dominates IP, as in (25).

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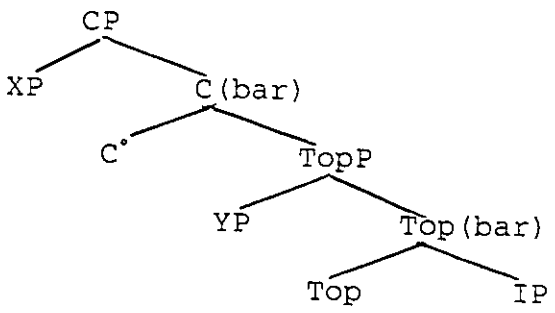
[8]This proposal is similar in many respects to Lasnik and Saito (1992 pp.75-80), who propose a TopP which includes the left-dislocated phrase and CP.

(25)



We can say, thus, that (25) represents the structure where left-dislocated (and maybe topicalized) elements occur in MA[9].
On this analysis, the structure of (23b), for example, will be (26).

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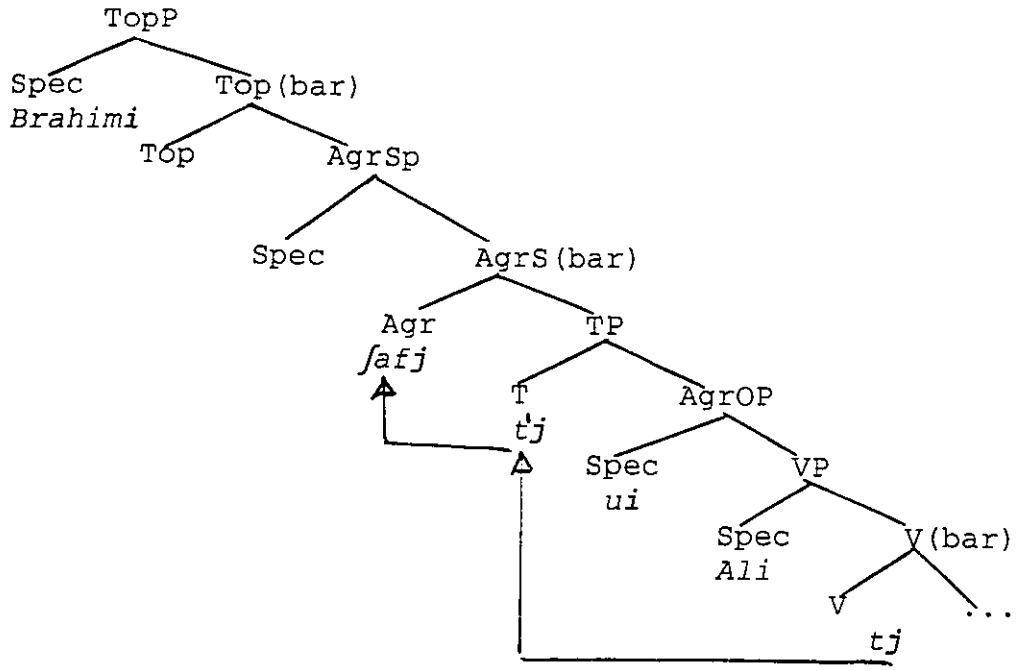
[9]Demirdash (1991) (and early Arab grammarians (specifically the Basran School)) assumes that Standard Arabic nominative subjects in SVO order are topics. So one advantage of having an independent Topic Phrase may be that it provides a structural way to distinguish subjects in SVO order from topicalized NPs. Since the subject in SA appears in the nominative in both constructions, as in (i) and (ii) respectively , the two may appear identical structurally. Thus adopting [Spec TopP] position, subjects will be located in [Spec AgrSP] and topics in [Spec TopP] (or presumably in FP, see footnote 10).

(i) Mohammad-**un** xaraʒa
*Mohammad-**NOM** went out*
Mohammad went out

(ii) Mohammad-**un** xaraʒa
*Mohammad-**NOM** went out*
Mohammad, he went out

(26)



where the subject remains in situ in Spec of VP, while the verb overtly moves to AgrS, via T°, to check its tense and agreement features. Moreover, we assume that [Spec TopP] is an A(bar)-position. This in turn suggests that the coindexation between the resumptive ***u*** (him), for example, and *Brahim* establishes an A(bar)-binding chain. In other words, left-dislocated constructions in MA are configurations wherein the resumptive pronoun is A(bar)-bound by the Spec of TopP, giving rise to a representational A(bar)-binding chain.

With respect to object topicalization, we can note the following. Unlike SA, MA lacks object topicalization (and object scrambling in general (VOS, OVS)). Apart from a severely limited number of instances where both the verb and the object are derived from a common stem, as in (27) (see sec.3, cht.4, for more examples), any other form of object topicalization (or scrambling) is ruled out in MA. As pointed out in chapter four (fn.14), the specific reasons

for the lack of such structures are unknown, at least to me. One potential explanation, however, is to relate this phenomenon to the lack of an overt Accusative Case marker in MA, which makes the distinction (contrary to SA) between preposed (or scrambled) objects and subjects almost impossible[10].

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[10]Conversely, in SA, which possesses an overt Acc-Case marker, all the structures mentioned above as lacking in MA are fully permissible. Consider, for example, the sentences illustrating OVS and VOS, respectively.

i Allah-**a** yaxʃa alʕulamaa?-**u**
God-ACC fear people of knowledge-NOM
God, people of knowledge fear

ii yaxʃa Allah-**a** alʕulamaa?-**u**
fear God-ACC people of knowledge-NOM
(Same as (i))

As to the structure of (i), we assume, following, Ouhalla (1992) and Puskas (1992), that the preposed NP, for example (Allah) *God* (which receives the focal stress) is moved to the Spec of a Focus Phrase (FP). See below for more motivation. With respect to the structure of (ii), we assume Zubizarreta's analysis regarding Spanish (and French) scrambling. To make the argument, let us first, very briefly, present this analysis and apply it to SA VOS configuration. Zubizarreta (1995) (based on Cinque's 1993 Accentual Licencing Constraint) basically departs from the following principle *Focus/Prosody Correspondence Principle* (FPCP)

iii FPCP: *the F-set of Int(onational)Pi must contain the word that bears the main prominence within IntPi.*

The core idea here is that the constituent marked [F] must dominate the word that bears the main accent. Further, she also assumes an algorithm for determining the relative prominence of words in S and which has the following fundamental property.

iv *The most embedded node in a given Intonational domain receives primary accent.*

It follows then, given (iii) and (iv), that a focused element will be the most deeply embedded node in its Int-domain. To illustrate, consider first a VSO base structure in SA(we mark the prominent accent with slashes).

v yaxʃa alʕulamaa?-**u** /Allah-**a**/
fear people of knowledge-NOM God-ACC
People of knowledge fear God

In the unmarked prosodic pattern, the object is the main prominent lexical element. If the IP is marked [F], the whole

sentence will be interpreted as assertion (as opposed to presupposition, see Jackendoff 1972, for example), meeting the PF constraint in (iii). But if the subject is focused instead, it receives the main prominence, in conformity with FPCP. To establish this focus shift, Zubizarreta proposes two possibilities: a)deaccenting (and stress-shifting) applies to the object, without involving any word order change, creating a narrow focus on the subject. b)the object is scrambled to a position between IP and VP, as in vi,

vi yaxʃa Allah-a /alʕulamaa-u/
fear God(O) *People of knowledge(S)*

Therefore, following Zubizarreta, we can say that this type of scrambling, namely VOS in (ii), that places the subject in the most embedded position, is motivated by *prosodic* considerations. More precisely, VOS scrambling takes place so that the focused syntactic constituent marked [F] (here the Spec of VP, ie, the subject) can meet the PF constraint FPCP in (iii). Moreover, this leads to the suggestion that VOS order in SA (on a par with Spanish scrambling) is derived via a Post-Spell-Out movement (which Zubizarreta labels P-movement). The proposal is finally that the VOS in (vi) has a VSO underlying structure as in (v), and that the object moves at PF, leaving the focused subject in a position to receive main stress, complying with the FPCP.

Now let us turn back to topicalization. Consider again (i) above. We assume that topicalization is a discourse related choice. More precisely, it is often perceptually salient in the discourse context. So, being explicitly contrastive in nature, fronted objects in SA cannot be, I believe, subsumed under the above analysis for scrambling. In other words, the set of alternatives (to the fronted object) should always be present in the discourse, either by means of having been mentioned beforehand, or by virtue of being perceptually salient ,a situation basically due to the topic status of the fronted position. As Zubizarreta (1995) points out, there are certain syntactic positions that favour or impose such interpretation (ie, explicit contrastiveness) on the fronted foci, as in (i) above. In Arabic Case, we assume, following Puskas (1992) and Ouhalla (1992), that the favoured syntactic Phrase is F(ocus) Phrase, which is dominated by CP (or TopP) and it in turn dominates IP. The fact that TopP may select a FP is confirmed by the fact that left-dislocated NPs can appear to the left of topicalized NPs, as in below.

vi fima yaxuSSu al?atfaala, miθla haatihi al?aʃyaa?i, laa
As to the children, *Like this stuff,* *not*
natrukuhum yafʃaluun

(27) l-**harb tharb**-na
the-battle battled-we
The war, we battled

As concerns the representation of the these highly restricted instances, we may propose that they are assigned the same structure as left-dislocated NPs; that is, TopP. Recall that Postal's proposal could lend some support to this suggestion. Thus, the object *lharb* (war), for example, moves prior to Spell-Out to the Spec of TopP. Once again, it should be pointed out that, at least to me, the exact motivation for this kind of topicalization is not clearly determined.

Finally, if we adopt Postal's assumption, which translates topicalization traces to pronouns, then we can say that both a trace and a pronoun (ie, this type of topicalization as well as left dislocation) are representationally A(bar)-bound by the same binder in the spec of TopP.

5. Wh-questions

On the view adopted, particularly, in chapter 3 and 4, movement in Moroccan questions is as mandatory as it is in English. Fronted Spec of CP, therefore, should be available as a landing site for moved phrases. In minimalist terms, because the wh-feature in MA is strong, it must be checked by F(eature) Q(uestion). FQ raises to Spec of CP prior to Spell-Out, pied piping a whole wh-phrase. We will see then, briefly, how this expectation is concretely

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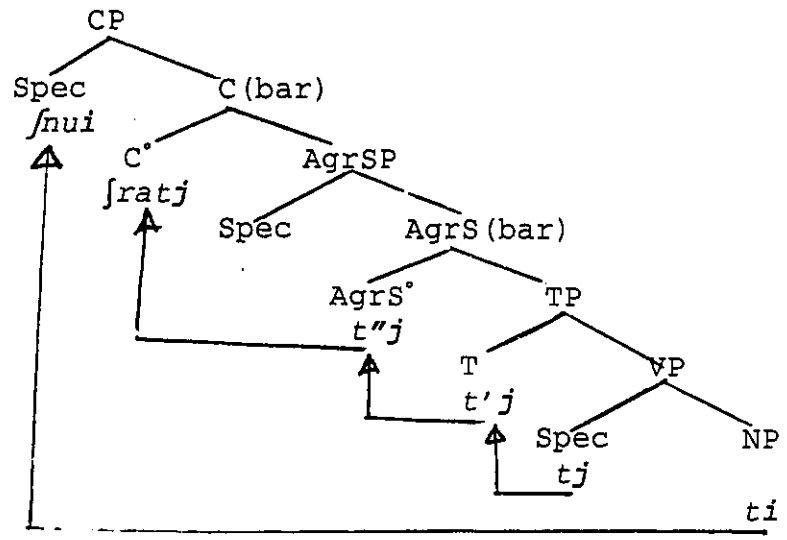
let them do
As to the children, like this stuff, we do not let them do

realized.

Consider first a typical wh-object (argument) movement in (28) and its tree in (29).

(28) ʃnu ʃrat Fatima
what bought Fatima
What did Fatima buy?

(29)



In (29), the wh-object moves in one step to Spec of CP to check the feature Q, maybe in violation of the shortest step requirement, but complying with the fewest steps requirement of economy of derivation. The verb, on the hand, moves to AgrS (via T°) to check its verbal features, and subsequently moves to C°, a movement that follows from the interaction between verb movement and wh-movement[11].

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[11]Recall that in yes-no questions, in which both SV and VS orders are allowed, the verb was assumed to stop at I°. Constituent questions, on the other hand, allow only Wh-VS and not the order Wh-SV. That is, S/V inversion is mandatory in constituent questions, as in English (auxiliaries) and other Germanic languages. It is thus reasonable to assume that the

The same analysis carries over to the adverbial (imta, *when*)[12], as (30) and (31) show.

(30) **imta** ʒa Brahim
when came Brahim
When did Brahim came?

(31) [CP *imtai* [C ʒa*j* [AgrSP [AgrS ***t'j*** [VP Brahim [V ***tj ti***]]]]]]

Now let us examine the long-standing issue of argument-adjunct asymmetry under a minimalist account. For this purpose, we first assume the Uniformity Condition on chains established in Chomsky (and Lasnik) (1995 p.91). Chomsky and Lasnik propose that a chain is uniform if it is uniform with respect to L(exical)-relatedness[13]. The Uniformity Condition, then, imposes that only chains that are unified regarding L-relatedness are legitimate LF-objects.

As is well-known, movement of an adjunct over a barrier gives rise to a more robust deviance than the movement of an argument in a corresponding context. The former is assumed to trigger both ECP and subjacency violations, while the latter triggers only a subjacency violation (see Chomsky 1981, Lasnik and Saito 1992, among others). Thus , in the following sentences, the first example (32), in which an adjunct ((kifaʃ) *how)* is extracted out of a wh-

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obligatory inversion is amenable to the same analysis that assumes that the verb raises to C°. Note, however, that both VS and SV orders may occur in embedded clauses, suggesting that V does not raise to C° in declarative clauses (see footnote 2, chapter three for an example).

[12]some speakers also use *ymta or fuqaʃ.*

[13]Chomsky and Lasnik propose L-relatedness and non L-relatedness to capture (and ground) the older distinction between A-position and A(bar)-position, respectively.

island, is totally unacceptable, whereas the second example (33), in which an argument ((ʃkun) *who*) is moved out, is less robustly deviant. Consider the examples and their representations, respectively[14].

(32) ***kifaʃ*** katsa?al waʃ Brahim ʕaaraf ʕli saafər
how wonder-you whether Brahim knew Ali travelled
*How do you wonder whether Brahim knew Ali travelled?

(33) ??**ʃkun** katsa?al waʃ Brahim ʕaaraf saafər

who wonder-you whether Brahim knew travelled
??Who do you wonder whether Brahim Knew travelled?

(34) *kifaʃ***i** katsa?al [CP waʃ [IP Brahim ʕaaraf [CP ***t'i*** [C ***e***] [IP ʕli saafər ***ti***]]]]]

(35) ??ʃkun***i*** katsa?al [CP waʃ [IP Brahim ʕaaraf [CP ***t'i***[C ***e***] [IP ***ti*** saafər]]]]]

The present contrast is accounted for, according to Chomsky and Lasnik, as follows. Suppose first that when a chain link is formed by movement, the trace created is assigned a * if a barrier is crossed as it is created (ie, if the economy condition *Minimize Chain Links* is violated, see Chomsky (& Lasnik) (1995) p.90). Thus, a sentence causes a subjacency violation if its derivation forms a starred trace. Moreover, the sentence shows an ECP-violation if the starred trace remains at LF[15].

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[14]Chomsky and Lasnik use [e] to represent an empty complementizer that functions as a proper governor to license the initial trace (see Chomsky and Lasnik (1995), for details).

[15]Chomsky and Lasnik, assuming that the operation of deletion is a last resort mechanism, propose that deletion is impermissible in a uniform chain, since it is already legitimate. But deletion is permissible "for α_i in A(bar)-position, where $i>1$ and α_n is in an A-position; that is, the case of successive-cyclic movement of an argument" (Chomsky (and Lasnik) (1995) p.91)

So, in (34), the intermediate trace ***t'i*** is starred as it is created. Furthermore, it remains at LF since deletion is impermissible because the chain C=(*kifa∫i*, ***t'i***, ***ti***) is already uniform with respect to L-relatedness (UN[L-relatedness]), with all chain members in A(bar)-positions. Consequently, (34) triggers both an ECP-violation and a subjacency violation.

In the corresponding example in (35), on the other hand, the intermediate ***t'i*** can be deleted because the chain C=(*∫kuni*, ***t'i***, ***ti***) is not uniform with respect to L-relatedness. In other words, ***t'i*** is in an A(bar)-position, whereas ***ti*** is in A-position. Therefore, the troublesome trace ***t'i*** deletes in LF, resulting in a representation that does not contain any starred trace. (35) thus exhibits only a subjacency violation, but no ECP effect.

Thus the minimalist version grants an alternative means to account for the argument-adjunct asymmetry and, in particular, the issue of improper movement, which was commonly dealt with in terms of Condition C of the binding theory.

Finally, it will also be interesting to see how the minimalist approach may account for the fact that wh-movement takes place except for the matrix subject (as is probably the case in English as well).

To achieve this, we follow Fukui and Saito (1993) in that there exists a condition on adjunction (motivated by economy considerations), which dictates that adjunction to X_{max} is possible only from a position c-commanded by the head of X_{max}. They descriptively state the intuition behind this condition on

adjunction as follows.

(36) *Adjunction cannot be vacuous.*

(37) *Adjunction is vacuous if it crosses only one node.*

Accordingly, Fukui & Saito come up with the conclusion that the subject in English does not allow adjunction to itself, as in subject topicalization, for example. They call this constraint the Subject Condition Effect. Indeed, this exactly what happens in the case of subject questions in MA. Consider the example in (38) with the representation in (39).

(38) ʃkun lli saafər
who that travelled
Who travelled?

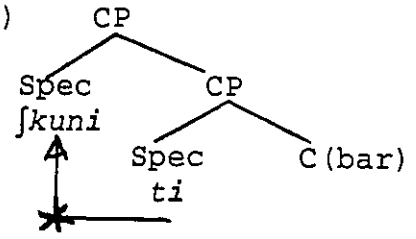
(39) [CP ʃkun [CP [C lli [IP saafər]]]]

Here, we assume that the wh-phrase *ʃkun* (who) is in situ in that it is base generated in a position adjoined to CP. By contrast, if we suppose that (38) is actually a result of movement, the representation will probably be as in (40).

(40) [CP ʃkun*i* [CP ***ti*** [CP [C lli [IP saafər]]]]]

In (40), the adjoined wh-phrase (ʃkun) adjoins to another CP. By (37), the latter adjunction is disallowed because only one node, namely the lower segment of CP, is crossed by adjunction. This illicit adjunction can be schematically represented as follows:

(41)



So, (40) is vacuous and thus banned as illicit, due to the characterization in (37).

In short, then, the movement of the subject in matrix questions in MA cannot be mediated by the adjoined CP, due to the condition on adjunction stated above. We can, consequently, see that subject movement in this type of questions is clearly ruled out in MA as a violation of the economy condition, in the first place.

Conclusion

In this chapter, I have tried to approach Moroccan Arabic wh-constructions from a minimalist perspective. I first gave a brief overview of basic assumptions of the Minimalist Program, and proposed mechanisms to derive SV and VS orders in MA.

In section 3, I argued that the movement strategy and the base-generation strategy do not exclude each other in that the choice between them is basically determined by whether the relevant licensing conditions for each of them are met.

The content of section 4 has been that left-dislocated phrases in MA are attached to Topic Phrase, which is dominated by CP and in turn dominates IP.

Finally, on the assumption that MA involves a mandatory wh-movement, I have shown that the minimalist approach can handle cases like the argument-adjunct asymmetry and the Vacuous Movement Hypothesis in subject questions in a new and elegant way. In particular, I have proposed, following Chomsky (and Lasnik) (1995), that the difference in the degree of ungrammaticality between

adjunct and argument extraction can now be straightforwardly accounted for in terms of the Uniformity Condition on Chains and trace-deletion. The Vacuous Movement Hypothesis, on the other hand is shown to be an unavailable option for MA subjects in questions, due to an Economy Condition on adjunction proposed by Fukui and Saito (1993).

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