Structural Ambiguity in Arabic DPs: A Minimalist N^{0}–to–Spec Approach•

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ملخص:

تتناول هذه الورقة ظاهرة الغموض (اللبس) التركيبي في اللغة العربية؛ مقتصرة على العبارة الحدية (الاسمية)، وتحاول تفسيرها من وجهة نظر ادنوية، وهي اخر نظرية في النحو التوليدي التحويلي، حيث يعتبر الغموض جانب عظيم الاهمية وسر من اسرار اللغة العربية العظيمة–خاصة في العبارة الحدية (الاضافة على وجه الخصوص)– التركيب الذي حير السانيين والنحاة، سواء منهم القدماء او المحدثين، بما يحويه من تفاصيل واسرار تركيبية فريدة. ان للمعنى اهمية كبيرة وتتجلى هذه الاهمية في ان الغموض ما هو الا جانب ما هو من جوانب تعدده، يختص به، ويعتمد عليه وهو بهذا– كما يرى تشومسكي– ظاهرة لغوية كونية، اي موجود– من حيث المبدأ– في كل لغات العالم وتختلف اللغة العربية (كونها لغة سامية) في هذا الجانب عن لغات اخرى في كونها تمتلك تركيب نحوي فريد وهو الاضافة وما يشتمل عليه هذا التركيب من الغموض في بعض تركيباته. ان الغموض التركيبي يحدثه التركيب نفسه ولا علاقة للكلمات نفسها في احداث ذلك. كما يبين البحث ان العبارة الاسمية البسيطة والتي غالبا ما تتكون من اسم وصفه او تلك التي تعرف بالاضافة بعامل نادرا ما تحتوي على الغموض التركيبي، لكن احتمال وجوده في الاضافة كبير وذلك لتعقيد تركيبها، فالاضافة تتركب من رأس (المضاف) ومكملة (المضاف اليه) وواصف او اكثر؛ ومن انواع مختلفة مثل الصفة، والجار والمجرور، وجملة الصلة، الخ. ويخلص الباحث الى ان الغموض في العبارة الحدية بشكل عام يعتمد على عاملين نحويين اساسيين: الاول،: المطابقة (توافق) كاملة بين عناصر العبارة، من حيت التذكير والتأنيث، والنوع والعدد والحالة الاعرابية وغيرها، والثاني: التركيب، ويتلخص في انه كلما زادت العبارة في التعقيد من حيث التركيب، اي كلما زادت عناصرها، زادت احتمالية بروز الغموض. كما ويتناول الباحث الطريقة التوليدية الادنوية (الرأس–الى–الجذر) في الاشتقاق مبينا جوانب القصور في طريقة (الرأس–الى– الحد) ولماذا تفضل الاولى على الاخيرة، كما يقدم الباحث انموذج مقترح لازالة الغموض في الاضافة التي يكون فيها الرأس مصدر، على وجه الخصوص.

Abstract

This paper provides a minimalist analysis of structural ambiguity in Arabic DPs. Three tenets constitute the crux of this paper: i) providing empirical data for structural ambiguity in MSA DPs, ii) investigating how ambiguity works at the level of syntax, and iii) proposing a minimalist approach to deriving Arabic[1] DPs in general, and disambiguating them in particular. Thus, I argue that MSA simple and Free State (FS) DPs rarely involve ambiguity due to their simple structure. However, Construct State (CS) DPs are deemed to involve structural ambiguity due to their complex structure. I also argue that structural ambiguity in Arabic DPs depends heavily on two main syntactic criteria, viz. structure and agreement. In that, the more the DP gets complex in structure, the more it involves ambiguity, and when there is a complete agreement in all ϕ-features, (in)definiteness and Case among the DP-internal constituents, ambiguity arises. However, agreement is required only when the modifiers are APs. Proposing N^0-to-Spec movement, I show how N^0-to-D^0 movement violates certain conditions and constraints on movement. I also propose a pseudo-VP in the case of deverbal CSs to disambiguate such DPs.[2]

Keywords: MSA, Structural Ambiguity, Minimalism, N^0-to-D^0, N^0-to-Spec movements, Construct States

1. Introduction

Meaning plays a crucial role in any language and ambiguity is just an aspect of such meaning, manifesting itself in all languages and their linguistic components, and proving its universality. Ambiguity has widely been seen as "a pervasive phenomenon in language" occurring in all linguistic components such as syntax, phonology, lexicon (Piantadosi *et al,* 2012, p. 180). A word, phrase or sentence is said to

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[1] The variety of Arabic used in this paper is Modern Standard Arabic (MSA). However, whenever there is another variety, it is indicated.

[2] The following abbreviations are used throughout this paper: Sg= Singular, Dl= dual, Pl= plural, F= feminine, M=masculine, Nom= Nominative Case; Acc= Accusative Case, Gen= Genitive Case, V= verb, I= inflection, C= Complementizer. Def= definiteness, (In)def= (in)definite, Lit=literally, Obj= object, Ind= indirect object, D= direct, Compl=Complement.

be ambiguous if it has more than one meaning. As far as the universality of ambiguity is concerned, Chomsky (2002, p. 107) argues that ambiguity is a property of human languages. He contends that if language were designed merely for communication and use, it would have been much simpler "because you have such properties as ambiguity. If we want to have the property that the things that we usually would like to say come out short and simple, well, it [language] probably doesn't have that property." Following Chomsky (2002), my purpose in this paper is not merely to analyze structural ambiguity for communication purposes but for the sake of understanding how such a phenomenon in Arabic DPs works, and can be accounted for in minimalism, especially in its recent assumptions.

In fact, structural ambiguity, as a linguistic phenomenon, in MSA DPs, and to my knowledge, has not been studied in-depth in generative syntax, specifically, minimalism.[3] The reasons for this may be many, but the most important is that such ambiguity is, in fact, rare because MSA uses tools which minimize the chances of ambiguity, i.e. agreement and Case inflectional morphology. In other words, agreement in φ-features and Case among the DP-internal constituents is marked with inflections, which minimizes the chances of ambiguity occurrences. Thus, I have used data which masked these facts. In other words, most of the DPs used in this paper, be they constructs or nonconstructs, are confined to those, where there is full agreement in φ-features, (in)definiteness and Case among the head N, its genitive DP complement and AP modifiers. However, in data including complex DPs as in the case of deverbal CSs, CSs with CP modifiers, etc., agreement is ignored. In fact, I ignore such agreement because in these cases agreement has nothing to do with evoking ambiguity. Rather, ambiguity arises due to the structure *per se*.

Thus, the paper proceeds as follows: in section 2, I provide a very brief sketch of minimalism. In section 3, I briefly discuss and exemplify the most important types of ambiguity in Arabic, namely, phonological, lexical and structural. In section 4, I briefly examine the different types of construct and non-construct DPs in MSA. In section

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[3]

It is worth mentioning here that one of the anonymous reviewers advocates this point, thanks to him/her.

5, I sketch the head movement, comparing and contrasting it with N-to-Spec approach, and how the latter surpasses the former in accounting for deriving Arabic DPs in general and CSs in particular. In section 6, I examine the nature of ambiguity, shedding light on the two criteria evoking it. In section 7, I thoroughly discuss the several types of MSA DPs which involve ambiguity, and section 8 concludes the paper.

2. Minimalism

Minimalism as maintained by many linguists (e.g. Ouhalla, 1999, p. 404f) "takes the language to consist of [two modules, namely] the lexicon and a computational system" and hence, eliminating DS and SS levels of representation, which leads to minimizing the load placed on language faculty. The basic tenet of minimalism, in fact, is that "linguistic theory should make use of as few primitive notions as possible" (Kremers, 2003, p. 41) in describing language. In minimalism, the computational system (C_{HL}) merges structural objects and thus creates larger structural ones.

The operation *Select* selects lexes (words) inflected for ϕ-features from the lexicon as Lexical Arrays (LAs) and maps them onto the syntax, constituting structural representations. Chomsky (1999) argues that it is the C_{HL} which is responsible for mapping lexical arrays (i.e. numerating them) from the lexicon, introducing them into the derivation to generate pieces of language, which are translated after that into linguistic expressions. In other words, and according to Chomsky (1999), what C_{HL} does is select these LAs *only once* via the operation *Select*, mapping them onto the syntax. This operation prevents new lexical items and/or features to be introduced once again into the derivation, and hence, satisfying the Inclusiveness Condition (IC) (Chomsky, 1999). In recent minimalist assumptions, the operation *Merge* merges LAs, resulting in unordered sets rather than ordered pairs and, finally, generating larger objects translated after that into linguistic expressions. In *Move α*, we move anything anywhere. After *Move α* takes place, then *Agree* comes to play. *Agree* is a relation established between two matching active categories (referred to as *Probe* and *Goal*) in their local search space, which eliminates the unvalued/uninterpretable features that activate such categories (Chomsky, 1999).

As a final syntactic operation, *Spell-Out* operates after these four operations, viz. *Select*, *Merge, Move* α and *Agree* (Chomsky, 1999, 2000, 2005, 2008). In *Spell-Out*, the derived pieces of language are sent to the semantic and phonological components for processing, where they are assigned their PF and LF representations. Thus, each derived structure must satisfy the LF and PF interface conditions so as not to crash at either (i.e. for the derivation to converge). Structural ambiguity lies within LF, (i.e. the conceptual-intentional level), where pieces of language, be they phrases or sentences, are interpreted.

In the literature, Arabic DPs have thoroughly been studied, coming up with different approaches of analysis. One of these approaches is the classical head movement (=HHM, what has been called N^0-to-D^0 movement, in the nominal domain). However, in minimalism, and especially with the emergence of Kayne's (1994) *Linearization Theory*, head movement has been criticized. In other words, certain antisymmetric analyses, which claim that the only type of movement that exists is XP-movement, and not head movement, are maintained in this approach. The criticism directed towards head movement has been in favor of the N^0-to-Spec movement advocated by (Matushansky, 2006; Vicente, 2007), remnant movement (see e.g. Shlonsky, 2004; Sichel, 2002, 2003), reprojection (see Suranyi, 2005; Georgi&Müller, 2010), and recursive PF linearization, (see Kremers, 2003, 2009). These studies view head movement as violating the Extension Condition (EC) and the Extended Projection Principle (EPP) (see e.g. Boeckx & Stjepanovic, 2001; Harley, 2004; Chomsky, 1999, 2000, 2008; Bardeas, 2008, 2009; Matushansky, 2006). Thus, I propose N^0-to-Spec movement for deriving Arabic DPs and disambiguating them. In the N-to-Spec approach, the head N movement to Spec-DP is followed by *M-merger* (morphological-merger), which merges the moved lexical head N and the (In)def article, and hence, the former is syntactic, and the latter morphological. The *M-merger* operation takes place after transfer, i.e. after *Spell-Out*, as a PF operation. When the moved lexical head N and the (In)def article are merged, they form a complex head (see Matushansky, 2006; Vicente, 2007).

3. Types of Ambiguity
As stated above, a word, phrase or sentence is said to be ambiguous if it renders more than one meaning. In general, ambiguity has several

types the most important of which are phonological, lexical and structural (syntactic) (see e.g. Hurford & Heasley, 1983; Elghamry, 2004; Al Daimi & Abdel-Amir, 2001). In this section, I provide a brief account of the three types in Arabic.

3.1. Phonological Ambiguity
Phonological ambiguity can be simply defined as that type of ambiguity which involves two or more words sounding the same. Phonological ambiguity derives some source of ambivalence (Mielke, 2005). In English, for instance, /aiskri:m/ can be understood as *Ice-cream* which is a compound noun or *I scream* which is a sentence. However, phonological ambiguity occurs only in spoken language. This makes it different from the other two types. An example of phonological ambiguity in Arabic is given in (1a).

(1a) *albaskuut*

In (1a), *albaskuut* has two meanings, viz. *baskawiit* which is kind of (biscuit) and *?ana ?albas kuut* (from Yemeni Arabic(YA)), which is a sentence (meaning *I wear a coat*).

3.2. Lexical ambiguity
Based on the class of a particular word, lexical ambiguity results from more than one usage of such a word (Hurford & Heasley, 1983, p. 128). For instance, the word *bank* in the sentence *I will meet you near the bank* has two meanings: *a financial institution where money is kept*, and *an edge of a river*. In fact, lexical ambiguity is one of the most extensively researched topics in the study of language comprehension. Several linguists (e.g. Seidenberg, 1980; Chomsky, 2002) consider it a linguistic universal. However, what seems ambiguous in one language may not be so in another language. Lexical ambiguity in Arabic can be exemplified in (2) below:

(1b) *qara?tu-hu fi l-faşl-i*　　　　　　　　قرأته في الفصل
(Lit: I read it in the chapter)

The ambiguity in (1b) lies in the fact that in Arabic, the noun *l-faşl* (Lit: the chapter) has several meanings including *faşl-u l-kitaab-i* (chapter of a book), *faşl-u l-masraħiat-i* (a scene of a play), *faşl-u l-madrasat-i* (a school class), *faşl-u t-taalib-i min l-madrasat-i* (a

document of dismissing a student from school) *faşl-u l-miiraaθ-i* (a paper of patrimony), *faşl-u š-šitaa?-i* (the winter season) among others.

There are also other types of ambiguity like *referential ambiguity,* where a referring expression is used to anaphorically refer to a referent in the context, where, for instance, a sentence including this referring expression is used. Such kind of ambiguity arises from either specifying a particular referent or not. For instance, in the English sentence *Alia is a good student,* the hearer may think that the NP *Alia* refers to someone outside the context. In other words, the hearer may associate the proper noun *Alia* with a specific girl, i.e. someone else the speaker is not talking about. It also arises when the discourse does not specify a particular referent which a referring expression used refers to. In other words, there are different types of referring expressions such as attributive, generic, collective, etc. and when the speaker does not make it clear which person, thing or place a referring expression used refers to, referential ambiguity arises.

3.3. Structural Ambiguity

Compared to phonological and lexical ambiguities, structural ambiguity is less studied. This is due to the fact that it does not arise from the words themselves, but because of the way such words are structured in a phrase or sentence, which is not easy to come by (Elghamry, 2004; Al Daimi & Abdel-Amir, 2001; Othman et al, 2003; Hurford & Heasley, 1983). In fact, structural ambiguity is a matter of what goes with what in a phrase or sentence. Structural ambiguity occurs at two domains, viz. nominal and clausal. For instance, the English phrase *French history teacher* has two interpretations: i) *French teacher of history* and ii) *teacher of French history* (McCarthy, 2002, p. 71). A somewhat similar phrase in Arabic as in (1c) below has the same type of ambiguity, providing evidence of the universality of ambiguity (Chomsky, 2002). However, there is some kind of difference between the ambiguity in the English phrase and that of an Arabic similar one. Now, consider (1) which involves ambiguity at the nominal domain.

(1c) …*kitaab-i   tariix-in   qadiim-in*
    book-GEN   history-GEN   old-GEN
     'Lit: an old history teacher.'

In (1c), the DP *kitaab-i taariix-in qadiim-in* (literally: an old history book) has two interpretations: (i) where the AP *qadiim-in* (old) describes *tariix-in* (history), and (ii) where the AP *qadiim-in* (old) describes *kitaab-i* (book). In (i), the genitive DP complement *tariix-in* (history) is *qadiim-in* (old) whereas it is the head N *kitaab-i* (book) which *is qadiim-in* (old) in (ii), syntactically, such a DP has two derivations which will be looked at in details in subsequent sections of this paper.

Arabic also exhibits ambiguity in the clausal domain. Here, ambiguity arises due to the different relations existing among the predicate and its arguments. Now, consider (2) below:

(2) *ʔištarat-hu   ʕabd-an*
    bought-she-him   slave-ACC
    'She bought him a slave.'

Hurford & Heasley (1983, p. 128) argue that such sentences as (2) are ambiguous and their ambiguity "lies in duality of sentence pattern," adding that it is difficult for a reader to determine "which of two basic sentence patterns is represented by the words." Thus, the sentence in (2) has two meanings. The first meaning is *ʔištarat ʕabd-an la-hu* (she bought a slave for him), *i.e. to help him or so,* for instance. The second meaning is *ʔištarat-hu ʕindama kaan-a ʕabd-an* (she bought him when he was a slave). The former is understood as having the structure […Obj1 + Obj2] and the latter as […Obj+ (Obj Compl)]. In other words, the latter has a small clause (represented by *–hu ʕabd-an*) *while* the former does not.

4. Types of DPs in Arabic
Semitic DPs have long been studied and paid much attention to in different linguistic frameworks, specifically in the generative approach due to their complex and challenging nature. There are two types of DPs in MSA. The first is simple DPs and the second is complex. The former consists of Def article, usually, *al-* (the) or one of its assimilated variants and a noun (and may have one or more modifiers and of different syntactic categories). The latter, however, consists of two types: Free State and Construct State (also called Free Genitive (FG) and Synthetic Genitive (SG), respectively). In fact, this

kind of construction is one of the hallmarks which distinguish Semitic languages from other language families. FG DPs are those consisting of two members: a head N, a genitive DP complement (and one or more modifiers for each member). CS DPs, however, consist basically of a head N, genitive DP complement, and may have one or more modifiers (see e.g. Berman, 1978; Ritter, 1987, 1991, Fassi Fehri, 1999; Bardeas, 2008, 2009, inter alia). The difference between FG and SG is that in the former, genitiveness is expressed analytically, i.e. by a genitive marker (which varies from language to another, and even from dialect to another as in the case of modern Arabic dialects (see Footnote 20)), while in the latter it is expressed synthetically. Another difference is that in FG/FS each of the members has its own modifier, which is not the case in CS/SG. In fact, there are several substantial differences between both constructs, but this is beyond the scope of this paper. Now, consider (3a&b) and (4a&b). The former represents simple DPs and the latter complex ones.

(3a) *al-kitaabu*
  the-book
  'The book.'

(3b) *al-kitaab-u l-jadiid-u fauqa t-taawilat-i*
  the-book -NOM the-new-NOM on the-table-GEN
  'The new book on the table.'

(4a) *kitaab-u t-taalib-i*
  book-NOM the-student-GEN
  'The student's book.'

(4b) *al-kitaab l-jadiid ħaq t-taalib (YA)*[4]
  book the-new gen the-student
  'The student's new book.'

In (3a), we notice that the simple DP *al-kitaab-u* (the book) consists of the Def article *al-* (the) and the noun *kitaab* (book), having no genitive DP complement. (3b) is still a simple DP though having the AP *l-jadiid-u* (the-new) and the PP *fauq t-taawilat-i* (on the table) but as

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[4] This FS is from YA where the possessum is *ħaq*. YA does not exhibit inflections.

modifiers and not as complements. However, in (4a), *al-kitaab-u* (book) is the head N, and *t-taalib-i* (the student) is the genitive DP complement. The AP *l-jadiid-u* (the-new) modifies the head N alone and hence, no ambiguity involved. In fact, CS DPs can be more complex than this structure, having a nest of embedded DPs (cf. Fassi Fehri, 1999).

To conclude, CS DPs in Semitic languages consist of two mandatory elements, viz. a head N and a genitive DP complement, and may have one or more modifiers. In addition, in CS DPs, the modifiers, be they APs, CPs, etc. have to follow the whole construction and cannot be adjacent to the head N, and hence, being in bar with Dobrovie-Sorin's (2002) 'adjacency constraint.' This constraint does not allow the insertion of any constituent between the head N and the genitive DP complement which is not the case in FSs as in (4b).

5. Derivation of CS DPs

The derivation of DPs in Semitic languages like Hebrew and Arabic has been a fertile area of research, attracting so much of researchers and linguists' interest, and, sometimes, their challenge (Fassi Fehri, 1989, 1993, 1999, 2004, 2012; Bardeas, 2008, 2009; Travis, 1984; Ritter, 1987, 1991; Bardeas, 2008, 2009; Borer, 1999; Dobrovie-Sorin, 2002; Shlonsky, 2004; Siloni, 1991; Mohammad, 1990, 1999; Benmamoun, 2003, among many others). In fact, it has witnessed great developments especially under minimalism. Thus, deriving a simple DP in Arabic does not impose any difficulty. However, as far as CS DPs are concerned, their derivation imposes a considerable difficulty due to their complex nature. Linguists beginning with (Travis, 1984) and (Ritter, 1987) and ending in (Danon, 2013) and (Fassi Fehri, 2012) have extensively investigated the issue in question. Thus, a CS DP is a structure where an analysis employing N-to-D movement, has been the "standard" approach for decades (Fassi Fehri, 1993, 1999, 2004; Travis, 1984; Ritter, 1987, 1991; Bardeas, 2008, 2009; Borer, 1999; Dobrovie-Sorin, 2002; Shlonsky, 2004; Siloni, 1991; Mohammad, 1990, inter alia). These linguists hold that HHM was the starting point of understanding the nature of CSs and it "can be modified to fit more into recent theoretical developments" (Bardeas, 2009, p. 1), which goes in line with Chomsky's latest minimalist assumptions. In this approach, it is argued that the head N is base-generated as a head of an NP, and raises to D. This movement

is triggered by several factors (I return to this point below). As far as modifiers are concerned, it is argued that modifiers are base-generated to the left of the head N and stay in-situ (though sometimes have to move especially in nesting and complex CS DPs as will be seen below), and hence, the different word order realizations are assumed to be the result of the head N movement across its modifiers. Now, consider (6) below:

(6) *baab-u   l-bait-i*
   door-NOM   the-house-GEN
   'A door of the house.'

(6) represents a CS where *baab-u* (door) is the head N, and *l-bait-*i (the house) is the genitive DP complement which is overtly marked for Gen Case because in MSA, Gen Case is marked overtly by means of the Gen Case marker –*i(n),* a suffix suffixed to the genitive DP complement. Thus, employing the N-to-D approach, (7a) will be represented in (7b).

(7a) *kitaab-u   t-taalib-i*
    book-NOM   the-student-GEN
   'The student's book.'

(7b)
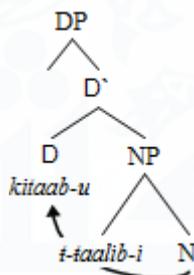
where the head N *kitaab-u* moves and is adjoined to D while the genitive DP complement *t-taalib-i* remains in-situ. Thus, such a movement renders the right word order in CS DPs, among other requirements. In fact, the claim that the genitive DP complement remains in-situ is not well defined especially in complex CSs, viz. those consisting of a head N, a genitive DP complement and one or more modifiers, and sometimes more than one CS (see Footnote 8). In such DPs, the genitive DP complement must undergo a movement,

again N-to-D. Hadn't this movement taken place, the derivation would have crashed at least at LF.

However, (7b) calls into question a serious issue, i.e. why does the genitive complement *t-taalib-i* (the student) appear to the left of the head N? If it is a complement, and assuming the *Linear Correspondence Axiom* (=LCA), it would be linearized to the right, which would mean that movement is not necessary in order to derive the correct word order. In fact, a plausible answer to this question has three facets: i) word order is not the only requirement for the head N movement, ii) if syntactic structures are linearly unordered (as has been a common assumption in minimalism since Kayne 1994 and Chomsky 1995, and later work), then there can be no such thing as base-generation to the left of the head as maintained by some linguists (Fassi Fehri, 1993, 1999; Ritter, 1991; Siloni, 1991; Borer, 1999; Benmamoun, 1998, 2000, 2003; Mohammad 1990). Unlike in X-bar theory, where the complement is a sister to a head X, in minimalism, it is more accurate to use the term *base-generated* in a position c-commanding the head, which is exactly what happens in (7b) above, and iii) in minimalism, complements are introduced in a first *Merge*. Thus, the first node to merge with a head is its complement. However, specifiers of the same head are introduced into the computation (numerating them) by another *Merge*. According to Bardeas (2009, p. 18), there is no such thing in the theory specifying that "complements are merged to the right of the head and specifiers to its left" because *Merge* generates unordered sets and not ordered pairs, as was assumed in previous approaches. According to her, "[l]inear Order is rather the result of PF processes."

This approach of derivation is also compatible with complex CS DPs as in (8a) which is derived in (8b).

(8a) ... *kitaab-i*   *t-taalib-i*   *l-jadiid-i*
     book-GEN   the-student-GEN   the-new-GEN
'The new student's book/The new book of the student.'

(8b)
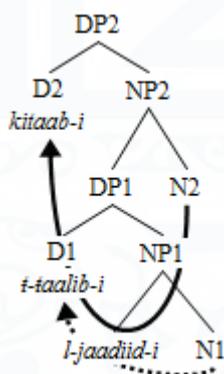
Here, N2 *kitaab-i* (book) moves and raises to D2. N1 *t-taalib-i* (the student) also moves and raises to D1. The movement of N-to-D is motivated by Case requirements (Fassi Fehri, 1999). Some researchers (e.g. Ritter, 1987, 1991; Fassi Fehri, 1991; Shlonsky, 2004) argue that such a movement is a result, among other things, of the absence of the Def feature on the head N. It is also maintained that D is null in CSs, and so, it targets the head to move and adjoin to it (Fassi Fehri, 1993). In fact, there are those (e.g. Borer, 1999; Benmamoun, 1998, 2000, 2003; Mohammad 1990; Ritter 1986; Siloni, 1991, inter alia) who advocate the head movement approach[5], and those who do not (Chomsky, 2004, 2005, 2007; Bardeas, 2009; Matushansky, 2006, among others) in both the nominal and clausal domains.

However, this approach has been criticized for violating some conditions and constraints on movement like the EC (see Boeckx & Stjepanovic, 2001; Chomsky, 1999; Harley, 2004; Bardeas, 2009), and the EPP (see Chomsky, 1999, 2000, 2005, 2008; Bardeas, 2009;

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[5] These scholars maintain that the approach to head movement (I have sketched here, merging with the root node followed by *M-merger*, rather than direct adjunction to the head) is just a way to implement head movement in a manner that does not violate the EC and EPP. To be fair enough, it is also true that one of the merits of head movement is that it has been the starting point which the recent developments stem from. It is also still employed in the verbal domain as in V-T-C movements. However, its validity in the nominal domain is not uncontroversial, specifically due to the fact that (in)definite article in Semitic languages is affixal, the merging of which with the head N is seen as a morphological property and not syntactic.

Matushansky, 2006, among others). Thus, due to such violations head movement is deemed to be characterized with, and under recent minimalist assumptions, to satisfy these violations, the head N will not move and adjoin to the head D, but will target the root of D (i.e. Spec-DP). For minimalist justifications of this approach, Chomsky (1993) maintains that there is no difference between a head and a phrase, or otherwise, a minimal projection and a maximal projection, respectively, once a moved constituent neither dominates nor is dominated by instance(s) of itself, and hence, the head N raising to Spec-DP, which in its landing site neither dominates nor is dominated by any instances of itself. [6] If this is true, however, we are confronted with structures like N-Def rather than the otherwise, which is impossible in Arabic. To solve this problem, it has been argued that the head N moving to Spec-DP is followed by *M-merger,* merging both the lexical moved N and the (in)definite article, in addition to postulating that (in)definite articles in Semitic languages are affixal in nature, and that affixing them to nouns takes place in morphology, and not in the narrow syntax (Danon, 2001, 2002; Siloni, 1991, 2001; Vicente, 2007; Contreras, 2003; Matushansky, 2006; Toyoshima, 2001, inter alia). According to this approach, what motivates the head N to move and target the root is its unvalued Case feature, EPP (of D), the unvalued (in)definiteness feature and ϕ-features on D. All these unvalued features make D active and probe for a *goal,* which, in this case, is the head N having the same features. As a result of this, an *Agree* relation is established between the lexical head N and D in their limited search space in which all unvalued features are valued, and hence, deleted.

Now, the question is that since feature valuation is a result of *Agree* relation established between a c-commanding probe and a c-commanded goal in their minimal search space, and since feature valuation could be done while the goal remains in-situ, why does the head N have to move and target the root? An answer to this question is provided by Chomsky (2000) who ascertains that some probes have

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[6]

  Thus, in a system eliminating the difference between a head position and a phrase position in the moved items' landing sites, but maintaining their categorial status as heads and phrases (Bardeas, 2008) makes it clear that the standard principle of structure preservation argued for in Edmond (1976), which prevents heads to move to Specs, seems to be invalid.

EPP feature which requires a constituent to be merged to their edges (Specs), and this is exactly what D as a probe (having an EPP feature) does, when triggering the head N movement to its Spec.

Thus, employing the N-to-Spec movement, (7) above will have the derivation in (7`):

(7`)
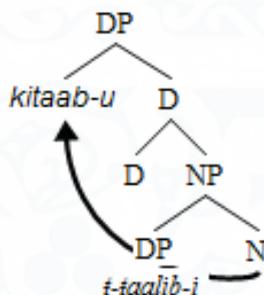
where the head N *kitaab-u* (book) first merges with the genitive DP complement *t-taalib-i* (the student), forming the NP which in turn merges with the null D. The head N then moves to target the Spec-DP, causing D to project once more (Bardeas, 2008). The movement of the head N is motivated by EPP (of D) and Def, which is unvalued, and hence, satisfying the EC alluded to above, which states that derivations are extended at the root. *Agree* operation then comes to play, where φ-features get checked/valued in their limited local search space, where D constitutes the *probe,* and the head N the *goal*. For the genitive DP complement *t-taalib-i* (the-student), it moves to a higher position (a functional phrase) for the reasons mentioned above, though apparently, it does not do so here due to the simplicity of the DP structure involved. If, however, the DP is complex, i.e. a CS with modifier(s), or a nesting one, it has to (see **section 7.2.2**).

Applying the N^0-to-Spec movement comprises two operations: a syntactic movement and a morphological merger, the latter of which merges the moved lexical head N and the (In)def article. However, the *M-merger* operation takes place after transfer, i.e. after Spell-Out, as a PF operation. When the moved lexical head N and (In)def article are merged, they form a complex head (see Matushansky, 2006; Vicente, 2007). Thus, I adopt this approach here, and the term DP will still be used for ease of exposition, however.

6. Nature of Ambiguity in Arabic DPs

A question to be addressed here is that where does ambiguity arise from, or what factors that contribute to the occurrence of ambiguity in Arabic DPs? For a plausible answer to this question, I claim that ambiguity lies in two syntactic criteria, viz. the structure of the DP itself, and agreement among its constituents. In this section, I will show how such grammatical criteria contribute in evoking ambiguity.

6.1. Structure

The structure of a DP plays a crucial role in imposing ambiguity. When one looks at simple DPs and FSs, for instance, one is likely to find that they do not (or their construction does not) evoke ambiguity simply because the former consist, in principle, only of a head N and one or more modifiers, and the latter consist of a head N and a genitive DP complement, where the genitiveness is expressed via a genitive particle (cf. (4b)).[7] However, if one considers CSs, they can be either simple or complex. The former consist of a head N and a genitive DP complement, and the latter consist of a head N, a genitive DP complement and one or more modifiers. The latter also include nesting CSs.[8] The nature of ambiguity lies in the latter type, where modifier(s), and the complexity of structure, in addition to agreement impose ambiguity and hence, partly, the answer to the question addressed above. Now, consider (9a), a simple DP and (9b), a CS one.

(9a) *kitaab-un   jadiid-un   ʕala   t-taawilat-i*

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[7] This does not, however, mean that FSs do not include modifiers, they may involve ambiguity but because each constituent has its own modifier(s), ambiguity is rarely expected. Consider (i) below:
(i) *kitaab-un   jadiid-un   li-t-taalib-i   l-mujtahid-i*
    Book-NOM   new-NOM   Gen-the-student-GEN the-hardworking-GEN
  'A new book for the hardworking student.'
Here, the AP *jadiid-un* (new) modifies only the head N *kitaab-un* (book) and the AP *l-mujtahid-i* (the-hardworking) modifies only *t-taalib-i* (the-student).

[8] Nesting CSs are exemplified in (i) below.
(i) *sayaarat-u   mudiirat-i   madrasat-i   banaat-i   l-qaryat-i*
    Car-NOM   principal-GEN   school-GEN   girls-GEN   the-village-GEN
'The village's girls' school's principal's car.'
where *sayaarat-u* (car) is a head of the genitive DP complement *mudiirat-i* (principal) which, in turn, is a head of the genitive DP complement *madrasat-i* (school) and so on.

book-NOM big-NOM on the-table-GEN
'A big book on the table.'

(9b) …*kitaab-i   t-taalib-i   l-jadiid-i*
    book-GEN the-student-GEN   the-new-GEN
  'The student's new book/the new student's book.'

(9a) is a simple DP, where there is no ambiguity simply because the AP *jadiid-un* (new) modifies only the head N *kitaab-un* (book). However, in (9b), the AP *l-jadiid-i* (the new) can be interpreted as modifying either the head N *kitaab-i* (book) or *t-taalib-i* (the student), and here lies the ambiguity.[9]

6.2. Agreement[10]

Interestingly enough, it has been found that agreement among the D-internal constituents plays a crucial role in rendering ambiguity. Arabic DPs, be they simple or CSs, exhibit ambiguity iff the head, the genitive DP complement and the AP modifier(s) agree in all ϕ-features, Def and Case.[11] If, however, there is no agreement or partial agreement, there is no ambiguity.[12] Partial agreement, be it in Def, Case, or any of ϕ-features (i.e. either in gender, person or number) means that two or more constituents (i.e. either the head N, its genitive DP complement or both of them) agree with the modifier only in a

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[9] Note here that agreement plays a crucial role in ambiguity. In other words, the head N is genitivally marked (perhaps it is an object of a preposition) and the AP modifier is genitive as well.

[10] The term "agreement" is used in this paper in the sense made use of by (Baker, 2008), i.e. concord. In fact, Baker (2008) uses both terms interchangeably, though, he uses the former to refer to subject-verb agreement, and the latter to agreement involved among constituents constituting a DP.

[11] It is a fact of Arabic that there are no agreement constraints between the head N and the genitive DP complement in CSs. So, what I mean by agreement here is actually having the same features. However, agreement between the head N and the AP modifier(s) in its formal and technical sense is mandatory.

[12] However, it should be noted here that there are other types of CSs where agreement has nothing to do with evoking ambiguity. These include two types: i) when the CS is a deverbal construct, and ii) when the modifiers are CPs (though, agreement in ϕ-features is preserved), I return to this in **sections 7.2.4** and **7.2.5**, respectively.

subset of these features. This is discussed in details in the following sections.

6.2.1. Definiteness
As far as agreement in definiteness is concerned, (10) below shows how Def agreement among the DP-internal constituents plays a crucial role in rendering a CS DP ambiguous.

(10a) ...*baab-i*   *bait-in*   *kabiir-in*
    door-GEN.IND.M.SG.   house-GEN.IND.M.SG   big-GEN.IND.M.SG.
    'A big door of a house/ A door of a big house.'

(10b) ...**baab-i*   *l-bait-i*   *kabiir-in*
   door- GEN.IND.M.SG   the-house- GEN.DEF.M.SG   big- GEN.IND.M.SG   .

(10c) ...*baab-i*   *l-bait-i*   *l-kabiir-i*
    door-GEN.IND.M.SG   the-house-GEN.DEF.M.SG.   the-big-GEN.DEF.M.SG.
     'The big door of the house/The big house's door.'

(10d) ...**baab-i*   *bait-in*   *l-kabiir-i*
    door-IND.M.SG   house-IND.M.SG   big-DEF.M.SG.

In (10a), the head *baab-i* (door), the genitive DP complement *bait-in* (house) and the AP *kabiir-in* are Ind, M and Sg. So, there is, in fact, ambiguity here, because there is a complete agreement between the head and its genitive DP complement, and the AP modifier. In other words, the ambiguity lies in the fact that the AP *kabii*r-*in* (big) can be said to modify either *baab-i* (door) or *bait-in* (house), and here lies the ambiguity rendered by agreement. In (10b), there is partial agreement. As far as φ-features are concerned, there is full agreement. However, when we consider agreement in definiteness, it is not the case, i.e. the head N and the AP are Ind while the genitive DP complement is Def. Now, the question is why such a structure is ungrammatical. A plausible answer to this question, in fact, can be based on two perspectives: i) in CSs, it is held that when the genitive DP complement is Def, the head N is Def (on the ground that it acquires its definiteness from its genitive DP complement via *Definiteness Spread* (DS), (see Footnote 15), but the AP *kabiir-in* (big) is Ind, and

so, there is no agreement in (In)definiteness).[13] i) leads to ii) when the head N is Def and its AP modifier is Ind, the latter has a nominal function, i.e. it is not an adjective but rather a noun functioning as a predicate in a topic-comment structure, and it has to have a Nom Case marked with *–un* and not *-in*.[14] In (10c), the head N is Ind but its genitive DP complement and the modifier are Def. However, there is still ambiguity making (10c) run counter to our argument where the head *baab-i* (door) is Ind. In this case, as stated above, the head *baab-i* (door) is apparently Ind but it is Def acquiring its definiteness via DS.[15] (10d) is ungrammatical because the AP *l-kabiir-in* (the big) is Def while the CS head N *baab-i* (door) and its genitive DP complement, *bait-i* (house) is not, and this renders the whole DP ungrammatical, let alone ambiguous or not.[16]

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[13]
  Though, somewhere else, I have argued against this conception. That is, I do not agree with those who claim that there is DS in Arabic CSs.

[14] Many researchers   (see e.g. Fassi Fehri, 1993, 1999; Kremers, 2003; Benmamoun, 1998, 2000, 2003) consider (10b) to have a sentential reading, i.e. a verbless sentence, provided that it is in the form manifested in (i) below, taking into account the Case and Case markers (Nom *–u(n)*).

(i) *baab-u*   *l-bait-i*   *kabiir-un*
 door-Def.M.Sg.Nom   the-house-Def.M.Sg.Gen big-Ind.M.Sg. Nom
 'The door of the house is big.'

[15]
  In fact, the definiteness or indefiniteness of the CS head N has been of much controversy. Many linguists (e.g., Fassi Fehri, 1993; Mohammed, 1990; Benmamoun, 2003) argue that if the genitive DP complement is (in)definite, the head N of CSs is (in)definite. It acquires its (in)definiteness by being in genitive construction with its genitive DP complement. Moreover, Fassi Fehri (1993) ascertains that the head N has to raise to D in CSs because of being affixal in nature. In other words, the head N has to raise to D where its (in)definite feature is checked in D. A similar view (albeit not identical) is held by some others (e.g. Bardeas, 2009; Benmamoun, 2003) who claim that the head N with unvalued (in)definite feature results in the projection of D once again, which in turn results in (In)definiteness Spread to the head N from its genitive DP complement, making the whole DP (in)definite.

[16]
  Fassi Fehri (1993, 1999) considers such examples as (10d) ungrammatical due to DS violation.

6.2.2. Gender

Gender agreement has a crucial role to play in making a CS DP ambiguous or not. This is very clear in (13) below, where gender agreement between the three constituents constituting the whole DP is not full but partial, i.e. there is partial agreement between the head N and the AP modifier being M while the DP genitive complement is F.

(11) *...kitaab-i   t-talibat-i   l-jadiid-i*
     book-GEN.M   the-student-GEN.F   the-new-GEN.M
      'The student's(F) new book.'

In (11), there is no ambiguity because there is no full gender agreement between the DP head N *kitaab-i* (book) being M, the genitive DP complement *t-talibat-i* (the-student) being F and the AP modifier *l-jadiid-i* (the new), which is M. Thus, the AP modifier *l-jadiid-i* (the new) modifies the DP head N *per se,* and hence, no ambiguity exists.[17]

6.2.3. Number

Like gender agreement, number agreement plays a crucial role in making a CS ambiguous or not. This is very clear in (12) below, where number agreement between the three constituents constituting the whole DP is partial, viz. only the genitive DP complement and the AP modifier are plural while the head N is singular.

(12) *...mudarris-i   t-tulaab-i   l-judud-i*
     teacher-GEN.SG.   the-students-GEN.PL   the-new-GEN.PL
    'The new students' teacher.'

Thus, in (12), there is no ambiguity because there is no full number agreement among the head N *mudarris-i* (teacher) being S, the genitive DP complement *t-tulaab-i* (the-students), being Pl, and the AP modifier *l-judud-i* (the new), which is Pl. Thus, the AP modifier *l-judud-i* (the new) modifies the genitive DP complement *per se,* and hence, no ambiguity exists.

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[17] It should be noted here that the absence of gender agreement between the head N and the genitive DP complement does not render the whole DP ungrammatical. Such absence just renders the DP unambiguous.

6.2.4. Case
Agreement in Case plays an important role in rendering a DP ambiguous or not. Thus, I assume that the *head Ns of almost all the CSs in this paper have genitive Case, i.e. complements of prepositions, with no theoretical perspective and/or justification,* just for ease of analysis to show the possible ambiguity phenomenon in MSA DPs.[18]

7. Structural Ambiguity
So far, I have maintained that structural ambiguity, especially at the nominal domain, is a result of many factors such as modification, agreement, structure, etc. In what follows, I analyze and account for structural ambiguity in MSA DP constructions, both simple and complex.

7.1. Ambiguity in Simple DPs
To state it again, structural ambiguity is rarely found in simple DPs in MSA, merely because their structure is simple. However, if there is a conjunction, ambiguity may arise, leading to two meanings and sometimes even more as manifested in (13).

(13) *al-kilaab-u   wa   l-ʔausuud-u   l-muftarisat-u*
The-dogs-NOM and   the-lions-NOM the-wild-NOM

---

[18] In fact, if other than Gen Case is assigned to the head N in CSs (specifically when the modifier is an AP), then ambiguity is not expected simply because modifiers, specifically APs, will agree with such a head in Case, and hence, could not be interpreted as modifying the genitive DP complement, which is always assigned a Gen Case. Now, consider (i) and (ii):
(i) *raʔai-tu   mudarris-a   t-taalib-i   l-jadiid-a*
   saw-I   teacher-ACC   the-student-GEN   the-new-ACC
   'I saw the new teacher of the student/I saw the teacher of the new student.'
(ii) *marar-tu   bi -mudarris-i   t-taalib-i   l-jadiid-i*
   passed-I   by-teacher-GEN   the-student-GEN   the-new-GEN
  'I passed by the new teacher of the student/I passed by the teacher of the new student.'
Now, ambiguity is expected in (ii) but not in (i). The reason is that there is Case agreement in the former but not in the latter. In other words, in (ii), all the constituents constituting the CS have Gen Case because of which it is expected that the AP *l-jadiid-i* (the new) can be interpreted as modifying either the head N *mudarris-i* (teacher) or the genitive DP complement *t-taalib-i* (the student). Such ambiguity is not expected in (i), however, simply because, as can be seen, the head N and the AP modifier have an Acc Case both while the genitive DP complement has a Gen one, which means that AP merely modifies the head N.

'The wild dogs and lions.'

The DP in (13) is kind of conjunction. This DP has three meanings: (a) where the DP *al-kilaab-u* (the dogs) is described by the AP *l-muftarisat-u* (the wild), having the meaning *al-kilaab-u l-muftarisat-u wa l-ʔausuud-u*,[19] (b) where the DP *l-ʔusuud-u* (the lions) is described by the AP *l-muftarisat-u* (the wild), and (c), where both DPs *al-kilaab-u* (the dogs) and *l-ʔusuud-u* (the lions) are described by the AP *l-muftarisat-u* (the wild). These three meanings are schematized in (14a), (14b) and (14c), respectively.
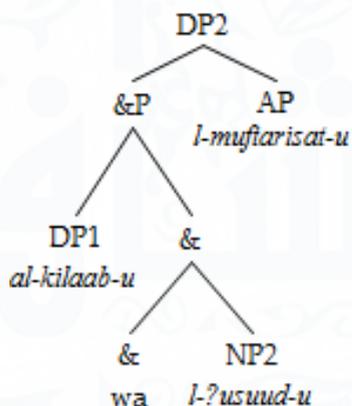
(14a)
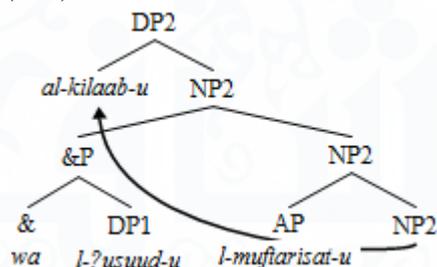
(14b)
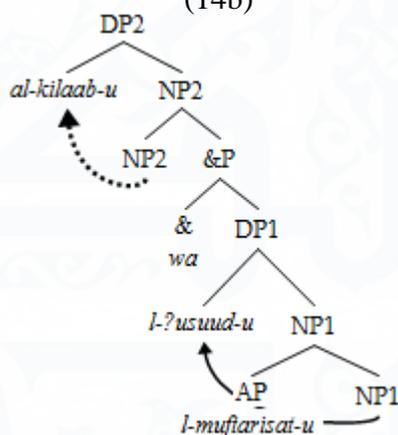
(14c)

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[19] This meaning might be unusual because of placing the AP *l-muftarisat-u* (the wild) immediately after the DP *kilaab-u* (the dogs), but there is no syntactic reason, to my knowledge, for such a structure to be ungrammatical.

As can be seen in (14a), it is the DP *al-kilaab-u* (the dogs) which is modified by the AP *l-muftarisat-u* (the wild), constituting the NP1, before the N-to-Spec movement, and hence, conveying the meaning (14a) stated above. We notice here also that the conjunction phrase &P originates in the Spec-NP2. However, in (14b), the DP *l-ʔusuud-u* (the lions) is described by the AP *l-muftarisat-u* (the wild), constituting the DP1. It is also noticed that the &P originates in the head position of NP1, and hence, representing the meaning (14b) expressed above. In (14c), nevertheless, and as maintained in the the third meaning, the AP *l-muftarisat-u* (the wild) modifies both DPs *al-kilaab-u* (the dogs) and *l-ʔusuud-u* (the lions), which means that both DPs constitute one constituent, viz. *al-kilaab-u wa l-ʔusuud-u* (the dogs and the lions). This, in fact, is structurally clear because the &P originates in Spec-DP2 as one constituent, and hence, wholly modified by the AP *l-muftarisat-u* (the wild).

7.2. Ambiguity in Arabic Constructs

Thus, so far, it is maintained that non-construct DPs rarely involve ambiguity. As far as constructs are concerned, FSs rarely involve ambiguity. However, the fact that CS DPs are a fertile field for ambiguity comes from the fact that their structure is highly complex. As stated above, consisting basically of a head N, a genitive DP complement, and there might be one or more modifiers, and sometimes a nest of embedded CSs, is the source of such ambiguity in CSs. For the purpose of clarity, I examine and analyze ambiguity in FS and CS DPs in the following subsections.

7.2.1 FS DPs

FS DPs do not or rarely involve ambiguity simply because they are simple in nature, i.e. each constituent in such a construct has its own modifiers. They consist only of a head N and a genitive DP complement, where the genitiveness is expressed via a genitive particle, as far as MSA is concerned, and to my knowledge, I have not come across an ambiguous FS structure, and so, I leave it open here.[20]

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[20]
One of the anonymous reviewers states that FS does not exist in MSA at all (or perhaps only marginally by means of *li-* (for/to). However, he/she maintains that FS exists in the modern dialects and is typically expressed by an analytic possessive marker such as *maal* in Iraqi, *ħag* in YA, *bitaaʕ* in Egyptian, *dayal* in Moroccan, and so on. However, I do not agree with him/her. He/she might be

7.2.2 Simple CS DPs

To state it again, CS DPs involve ambiguity due to the fact that their structure is complex in nature. They consist of a head N, a genitive DP complement and one or more modifiers of different syntactic categories, including APs, CPs, PPs, etc. Now, consider (15).

(15) ...*bait-i*   *ʔax-i*   *l-kabiir-i*
     house-GEN   brother-my   the-big-GEN
   'My brother's big house/My big brother's house.'

The DP in (15) is a CS one, where the head N is *bait-i* (house). Its complement is the genitive DP complement *ʔax-i* (my brother), and the AP modifier is *l-kabiir-i* (the-big). However, when one examines the meaning involved, one is likely to find two meanings, viz. (i) where *bait-i* (house) is described or modified by the AP *l-kabiir-i* (the-big) and (ii) where *ʔax-i* (my brother) is described as *l-kabiir-i* (the-big). These two meanings are represented in (16a) and (16b) respectively.

(16a)   (16b)
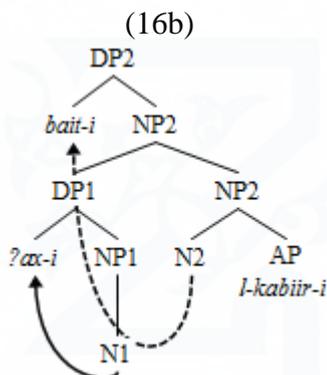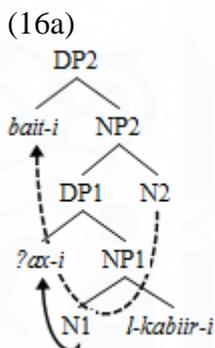
(16a) represents the meaning (i) where the head N *bait-u* (house) is modified by the AP *l-kabiir-i* (the big). These two components constitute one DP positioned under NP2 before *bait-i* (house) moves

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right regarding the modern dialects of Arabic (like YA), but regarding MSA, it seems that he/she is not aware of the word *ðu* (of) (*ðu*=Nom, *ða* = Acc and *ði*= Gen) in both classical Arabic and MSA. This is illustrated in (i)
(i) *rajul-un*   *ðu*   *maal-in*
   Man-NOM of   money-GEN
   'A rich man.'

and targets the Spec-DP1 necessitated by EPP and φ-features checking. However, in (16b), representing the meaning (ii), the genitive DP complement *Ɂax-i* (my brother) and the AP *l-kabiir-i* (the-big) constitute the NP1 *Ɂax-i l-kabiir-i* (my big brother) of which *Ɂax-i* (my brother), being the head N, moves and targets the Spec-DP1.[21]

7.2.3. Complex CS DPs

Now, the question is how about CSs having more than one modifier? In other words, there are CS DPs in MSA having more than one modifier (constituting a nest of embedded DPs), and hence, how is it that such ambiguity can be derived or represented structurally? However, it is a fact of Arabic that CS DPs can consist of a nest of DPs (see Fassi Fehri, 1993, 2004; Benmamoun, 1998, 2000, 2003; Mohammad, 1990, 1999; Bardeas, 2008, 2009, among many others) but none of them has discussed the ambiguity involved in them. Now, let's consider (17) below:

(17) ...*qalam-i   ħibr-in   Ɂinjliizi   kabiir-in*[22]

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[21]
    CSs like *Ɂax-i* (Lit: brother-my), where *Ɂax* (brother) is the head N and the clitic possessive pronoun *–i* (my) is its genitive DP complement, raise several questions as to how a noun appears with a possessive pronoun in the language, i.e. how is *Ɂax-i* derived in the syntax?, what happens to the heads of DPs in these structures?, do these heads exist?, if not, then how can we have a DP projection in the absence of a D head?, among others. This in itself is a very interesting and challenging area of investigation, and may be a research of its own; I leave it for future studies, however.

[22]
    According to the Mirror Image Order (=MIO) (cf. Fassi Fehri, 1993, 1999; Cinque, 2003; 2005), there is a rigid order of adjectives in relation to the head N they modify in Arabic. The MIO is hypothesized in relation to adjective order in English. In other words, Arabic exhibits adjective order opposite to that of English, which implies that *?injliizi* (English) should be positioned at the end of the DP in (17). However, I agree with some linguists (e.g. Peretlsviag, 2006; Sproat & Shih, 1991) that regarding color and origin, there seems to be no order constraint in Arabic adjective ordering as illustrated in (i&ii):
(i) *al-šaai-u   ṣ-ṣiini-u   l-llaðiið-u*
   the-tea-NOM   the-Chinese-NOM   the- delicious-NOM
'The delicious Chinese tea.'
(ii) *al-šaai-u   l-llaðiið-u   ṣ-ṣiini-u*
   the-tea-NOM   the-delicious-NOM   the-Chinese-NOM
   'The delicious Chinese tea.

pen-GEN ink-GEN English-GEN big-GEN
'A big ink English pen.'

The DP *qalam-i ħibr-in ʔinjliizi kabiir-in* (a big ink English pen) is a nesting DP, actually ambiguous, consisting of two AP modifiers, namely, *ʔinjliizi* (English) *kabiir-in* (big). In fact, the AP *kabiir-in* (big) evokes or imposes no problem, as far as ambiguity is concerned, simply because it cannot, in principle, modify the head N *ħibr-in* (ink). However, the N *ħibr-in* (ink) can be modified but by APs like *kaθiir* (much). However, there is still ambiguity and such ambiguity derives from the AP modifier *ʔinjliizi* (English) and lies in determining which constituent is *ʔinjliizi* (English). Is it *qalam-i* (pen) or *ħibr-in* (ink), and thus, imposing two meanings. Thus, the first meaning is *qalam-in ʔinjliizi* (an English pen), and the second is *ħibr-in ʔinjliizi* (English ink). Thus, when *qalam-i* (pen) is *ʔinjliizi* (English), the structure will be (18a), where the AP *ʔinjliizi* (English) modifies the head N *qalam-i* (pen). However, when *ħibr-in* (ink) is *ʔinjliizi* (English), the structure will be (18b).

(18a)
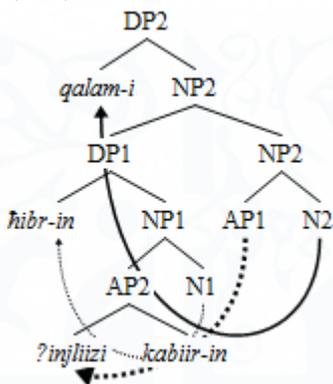
(18b)
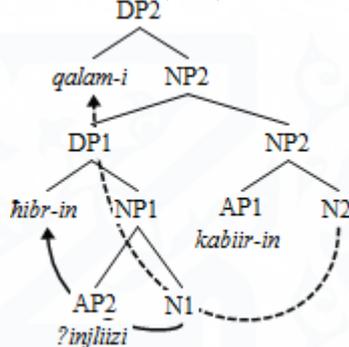
(18a) represents the first meaning, viz. *qalam-i* (pen) being *ʔinjliizi* (English). In other words, in (18a), the head N *qalam-i* (pen) originates under N2, constituting along with the AP1 *ʔinjliizi* (English) the NP2, and moves targeting itself into Spec-DP2. This movement is triggered by D (by virtue of having an EPP, cf. Fassi Fehri, 1999), and word order, and hence, causing the derivation not to crash at either LF or PF, and hence, the first meaning. The AP1

ʔinjliizi (English) originates in Spec-NP2, where its ɸ-features, Case and (in)defiantness are checked, and then moves to Spec-AP2 for word order requirement. Hadn't it moved, the derivation would have crashed (i.e. diverged).

In (18b), the head N *qalam-i* (pen), however, is modified first by its *mere* modifier, namely, the AP1 *kabiir-in* (big), which imposes no ambiguity as mentioned above. The head N *qalam-i* (pen) originates in N2, constituting, along with the AP1 *kabiir-in* (big), the NP2, and moves targeting itself into the Spec-DP2, again for the reasons stated above. As can be seen in (18b), the genitive DP *ħibr-in* (ink) originates in N1, constituting, along with the AP2 *ʔinjliizi* (English), which modifies it, the NP1, and moves to Spec-DP1 for the reasons stated above, and hence, representing the second meaning, i.e. where the AP2 *ʔinjliizi* (English) modifies the N *ħibr-in* (ink).[23] It shold also be noted here that in (18a), the movement of AP1 *kabiir-in* (big), and in nested CSs, in general, provides clear evidence in support of AP movement claimed by (Fsse Fehri, 1999).

7.2.4. Deverbal CS DPs
What is meant by this type of CS is those DPs whose head noun is a deverbal noun. The genitive DP complement, however, is any DP. Insofar as it can be claimed, the structure of such DPs is so complex especially when CSs involve modification. This type of CS DPs is shown in (19) below.

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[23]
    It should be pointed out here (and different from the view held above regarding complements) that the AP modifiers being base-generated in Spec-NPs, in the examples stated so far, raise a question, i.e. why do they have to do so? In other words, in our derivations so far, AP modifiers originate in Specs of NPs without justifying why they have to do so. In fact, Arabic, be it MSA, or any other dialect, is a prepositional and not a postpositional language. Greenberg (1963) maintains that prepositional languages are [A-N] (i.e. Adjectives precede the nouns they modify, the same thing like English NPs), and not postpositional ([N-A] as apparently manifested in Arabic DPs). Thus, AP modifiers originate in [A-N] word order in relation to the head nouns they modify. However, the resultant word order is accomplished by means of movement, where the head N moves and adjoins to a functional category higher in the derivation. In fact, I will not discuss such an issue here, and just refer the interested reader to studies done by (e.g. Fassi Fehri, 1993, 1999; Cinque, 2003, 2005).

(19) *ziaarat-u*   *l-ʔaṣdiqaaʔ-i*
      visiting-NOM   the-friends-GEN
      'visiting of friends.'

(19) has two meanings. These two meanings arise as a result of the structure of the DP *ziaarat-u l-ʔaṣdiqaaʔ-i* (visiting of friends). The first meaning is *ziaarat-u l-ʔaṣdiqaaʔ-i lii* meaning friends' visit to me. The second meaning is *ziaarat-i lil ʔaṣdiqaaʔ-i* (my visit to friends), i.e. it is me who does the visitation. In fact, the ambiguity lies in whether the head N *ziaarat-u* (visiting) is a deverbal noun or just a noun. The structure of the DP here determines the two meanings. Thus, (20a) and (20b) represent both meanings, respectively.
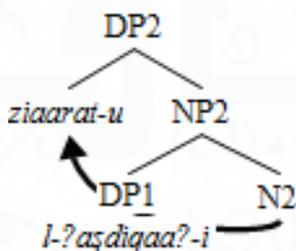
(20a)   (20b)
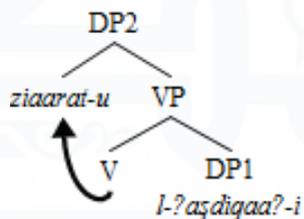
In (20a), the head N *ziaarat-u* (visiting) is not a deverbal noun, and hence, moves and targets Spec-DP2 from its original position, viz. N2. The movement of the head N here is necessitated by EPP of D (see (18) above). (20b) represents the second meaning (*ziaarat-i li-l-ʔaṣdiqaaʔ-i* (my visit to friends)), i.e. *it is me who does the visitation*. In such CS DPs, I propose there being a pseudo-VP which has to have an object constituting the configuration [V-DP], action-theme. This proposal entails that the pseudo-V be in a head-complement relation with the genitive DP complement *l-ʔasdiqaa-i* (the friends), and hence, the second meaning. In other words, *l-ʔasdiqaa-i* in (20b) is not a genitive DP complement in its actual sense as used to be argued for in the above examples. It is rather a complement of pseudo-V which assigns it a θ-role of a theme. I claim here that in such pseudo-VP constructions, there is no genetiveness, and so, in (20a), the second member of the deverbal construct *l-ʔasdiqaa-i* could be interpreted as the external argument of the head N *ziaarat-u* (visiting), and hence, it

is base-generated in its Spec. In (20b), however, *l-ʔasdiqaa-i* could be interpreted as the internal argument of the deverbal CS. Now, the question is why is it a pseudo-VP, and not a real VP? In fact, if it were a VP in its technical sense, where the verb is transitive, its complement (i.e. *l-ʔasdiqaa-i* (the friends)) would have an Acc Case, and in this case, it would have been marked with the Acc marker –*a*. Thus, this clarifies the purpose of calling my proposal a pseudo-VP in deverbals, which is due to the fact that the the second member (i.e. the nonhead) is assigned a Gen Case and not an Acc one.

Interestingly enough, ambiguity in deverbal CSs does not depend on agreement. In other words, in (20), for instance, there is no agreement between the head N *ziaarat-u* (visiting) and its DP complement *l-ʔaṣdiqaaʔ-i* (the friends), in Case, ϕ-features or even in (in)definiteness.[24] Another interesting point to be noticed is that in deverbals, ambiguity arises from an underlying ability of the structure of the deverbal itself. In other words, unlike other nondeverbal CSs, where ambiguity is evoked by modification and agreement, in deverbals, ambiguity arises between the head N and its genitive DP

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[24] Fassi Fehri (1999) maintains that deverbal CSs like (i) show no DS.
(i)*kitaabat-u   l-xabar-i   sariiʕ-an   xataʔ-un*
writing-NOM   the-news-GEN   fast-ACC   mistake-NOM
'Deliberately writing the news is a mistake.'
(ii)**kitaabat-u   l-xabar-i   l-mutasrriʔat-u   xataʔ-un*
writing-NOM   the-news-GEN   the-hasty-NOM   mistake-NOM
`deliberately writing the news is a mistake.'
(ii) is ungrammatical because *l-mutasrriʔat-u* (the hasty) is definite. However, when the head N *kitaabat-u* (writing) is modified by an adverb like *sariiʕ-an* (fast) in (25a), it is grammatical. This also seems true of Hebrew as shown in (iii&iv) where DS does not take place.
(iii) *ktivat ha-sefer*
     writing the-book
   'The writing of the book.'

(iv)**ktivat ha-sefer ha-tov*
     writing the-book the-good
In (iv), if we mean that it is the head N *ktivat* (writing) which is *ha-vot* (the good), it is ungrammatical, but when we mean that it is the genitive complement *ha-sefer* which is *ha-vot*, it is grammatical. I dare not discuss this further here, and so, I refer the interested reader to works done by (Engelhardt, 2000; Danon, 2001, 2002).

complement *per se*. This is very interesting aspect which needs a research on its own.[25]

7.2.5. Ambiguity in CP CS DPs

What is meant by this type of CSs is those DPs whose modifier is a Complementizer Phrase (CP). Thus, such DPs consist of a head N, a genitive DP complement and a CP modifier. (21) and (22) exemplify such DPs.

(21) *daftar-u   l-ɣulaam-i   l-llaði   ðaaʕ-a   ʔams-i*
    book-NOM   the-boy-GEN   which/who   (was)lost   yesterday-GEN
    'The boy's book which/who was lost yesterday.'

The CS presented in (22) is rather complex, the modifier is a CP, i.e. *l-llaði   ðaaʕ-a   ʔams-i* (which/who was lost yesterday). This CS is ambiguous, and the ambiguity lies in the fact that in MSA, the relative pronoun, i.e. *l-llaði* could be used to refer to human and nonhuman entities (i.e.it could mean either *which* or *who*), and in such a context, it evokes two meanings. The first meaning is *d-daftar-u l-llaði   ðaaʕ-a   ʔms-i* (the book which was lost yesterday), and the second is *l-ɣulaam-i   l-llaði   ðaaʕ-a   ʔams-i* (the boy who was lost yesterday). These are represented in (22a) and (22b), respectively.

(22a)

(22b)

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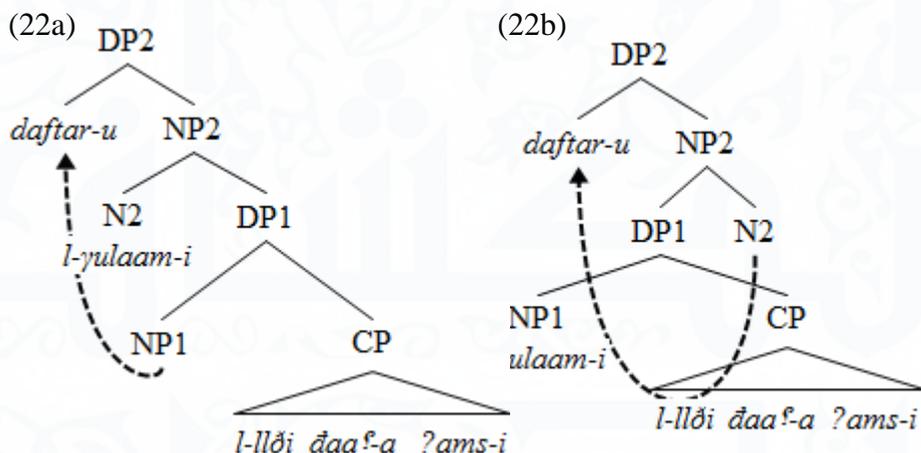
[25] I leave this for future studies.

In (22a), the head N *daftar-u* (book) originates in NP1, constituting along with the CP *l-llaði ðaaʕ-a ʔams-i* (which was lost yesterday) one constituent, namely, DP1, and hence, the CP modifies *daftar-u* (book) which then moves and targets the root of the DP2, hence, representing the first meaning.[26] In (22b), however, it is the genitive DP complement, viz. *l-ɣulaam-i* (the boy) which is modified by the CP *l-llaði ðaaʕ-a ʔams-i* (who was lost yesterday). In (22b), the genitive DP complement *l-ɣulaam-i* (the boy) originates in NP1, constituting along with the CP *l-llaði ðaaʕ-a ʔams-i* (which was lost yesterday) one constituent, namely, DP1, and hence, the CP modifies *daftar-u* (book) which then moves and targets the root of the DP2, hence, representing the first meaning.[27]

8. Conclusion

Examining and investigating ambiguity (specifically in Semitic CSs) is something very interesting but a challenging area of research, requiring syntactic and semantic awareness. Ambiguity is a universal phenomenon, manifesting itself in all languages and in all linguistic components, viz. phonology, lexicon, syntax, etc. What is more interesting is investigating and analyzing such a type of ambiguity under minimalism, because minimalism specifically the N^0-to-Spec approach accounts adequately and accurately for ambiguity in Arabic DPs, constructs and non-constructs. Thus, in this paper, I have analyzed the structural ambiguity in MSA DPs, probing its possible types and levels, providing empirical evidence for how it is accounted for, and how ambiguous DPs are structurally disambiguated. However, this paper excludes numeral and clitic DPs because such DPs are much complex, and hence, can be topics of investigation on their own. I have provided a descriptive analysis to MSA ambiguous DPs both simple and CS, deriving and representing the possible ambiguity involved, starting with examining their types, accounting

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[26]
  This movement is triggered by EPP of the head D, Case checking among other syntactic requirements (see **section 7.2.3**.).

[27]
  It is worth pointing out here that when the modifier is a CP in CSs, agreement in Case and person has nothing to do with ambiguity involvement. However, agreement in gender and number is crucial in evoking ambiguity. This is actually due to the fact that relative pronouns in Arabic exhibit strong agreement in gender and number with the nouns they modify. Structure also plays the same role in evoking ambiguity in the case of CP modifiers like that in AP ones.

for the syntactic factors, which evoke ambiguity, and ending in representing the possible meanings. In so doing, I have proposed a minimalist N-to-Spec movement advocated in (Matushansky, 2006; Vicente, 2007). This approach is minimalist in nature because it moves the least amount of material, which is not the case in N-to-D movement. In the course of this paper, I have proposed a pseudo-VP underlying the ambiguity involved in deverbal CS DPs. I have argued that ambiguity in MSA DPs, be they simple, FS or CS, depends on two main syntactic criteria, namely, structure and agreement. As far as this paper is concerned, the N-to-Spec approach is adequate to accounting for ambiguity in MSA DPs. However, whether or not such an approach is compatible to accounting for ambiguity in other types of MSA DPs such as numeral, clitic, etc. *does* need in-depth analyses to determine such an adequacy, and whether or not it could be applied to account for ambiguity in the MSA clausal domain is still not clear. Moreover, the pseudo-VP structure proposed to analyze ambiguity in deverbal constructs, though promising, still has to be examined in relation to different and various data to examine whether there being counterexamples to it; I leave all these for future research.

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