

A Cartographic Analysis of Subject Status in Root SV(O) and VS(O) Orders in Algerian Arabic

Meymouna Bourzeg

Faculty of Foreign Languages, University of Jordan, Queen Rania Street, Amman, Jordan

Ayman Yasin

Faculty of Foreign Languages, Princess Sumaya University for Technology, Khalil Al-Saket Street, Amman, Jordan

Abstract—This paper investigates word order derivation in root clauses in Algerian Arabic (AA) with a focus on preverbal and postverbal constituents. The data is collected from audio typed recordings of natural ongoing speeches of 40 Algerian informants. Four cartographic frameworks are applied: Rizzi's (1997) Split-CP system, Frascarelli and Hinterhölzl's (2007) topic typology, Kiss's (1998) contrastive-information focus dichotomy and Belletti's (2004, 2005) model of the low periphery. Empirical evidence shows that preverbal elements can have three readings: genuine subject reading, topic reading, or focus reading. Unlike Rizzi (1997) who assumes that topic is a unique category, and in line with Frascarelli and Hinterhölzl's (2007), three kinds of topics are licensed in the AA left periphery: non-recursive aboutness topic, recursive familiar topics and non-recursive contrastive topic. AA left periphery hosts only contrastive focus, and informational focus occurs in lower positions. Empirical evidence also shows that AA manifest a low IP area containing low topic and low focus. Different arguments are used to support this view: the behavior of the copula '*ka:na*', floating quantifier and the behavior of the exclusive particle '*bark*'.

Index Terms—Algerian Arabic, topics typology, contrastive focus, information focus, low Ip area

I. INTRODUCTION

Rizzi (1997) is the first researcher who has assumed that information-structural entities such as topic and focus target projections above the IP area of the clause. Since then, a long and rich line of research has addressed the question of how information structure feeds syntactic computations. This line of research is known as the cartography of information structure (Rizzi, 1997; Cinque & Rizzi, 2009). A basic idea of the cartographic program is that pragmatic factors affect the derivation and the interpretation of word orders.

The present paper investigates this idea in the context of Algerian Arabic (AA). According to the Ethnologue, which is a research program directed by hundreds of linguists around the world to describe the world's living languages, AA belongs to the Maghrabi Arabic language chain and is the de facto national language in Algeria with more than 40 million speakers (Eberhard et al., 2022). Up to now (2022), only two research papers are conducted on the complementizer system of AA: Souag (2006) and Hammoudi (2019). This proves how scarce the research on the field of AA syntax is. This paper aims not only to enrich the field of AA syntax, but also to engage data from AA in the universal debate arguing for the view that information structure affects Arabic word order derivation.

Arabic is characterized by rich word order variation (see, e.g. Bakir, 1980; Ouhalla, 1994; Mohammad, 2000; Aoun et al., 2010). While VSO word order is the prominent order in standard Arabic (Fassi Fehri, 1993; Akkal & Gonegai, 2000), SVO is the common ordering in most Arabic varieties (Ouhalla, 1991; Shlonsky, 1997). Other permutations are allowed under certain pragmatic and/or syntactic constraints. Several proposals tackle the derivation of Arabic SVO and VSO word orders (Bakir, 1980; Benmamoun, 1992, 2000b; Shlonsky, 2000; Aoun et al., 1994, 2010; Ouhalla, 1991; Fassi Fehri, 1993; Mohammed, 2000; Soltan, 2007, 2011; Lewis, 2013; Andrason, 2016; Alatawi, 2016; Alshamari, 2017; Jarrah, 2017b, 2019b; Alazzawie, 2019; Albuhayri, 2019; Alsager & Mahzari, 2021, among many others). On the other hand, no detailed proposal addresses word order in AA. This paper attempts to fill this gap by applying a cartographic analysis. Accordingly, the following sections present the four adopted cartographic approaches.

II. CARTOGRAPHIC APPROACHES

A. Rizzi's (1997) Split-CP System

Rizzi (1997) assumes that the CP, or the left periphery as he calls it, does not only encode grammatical information, but also expresses discourse-related information. He postulates a split CP map containing four-layered projections restricted by a rigid order. According to Rizzi (1997), the CP hierarchy takes the form presented in (1).

(1) [ForceP [TopP* [FocP [TopP* [FinP [IP]]]]]] (Rizzi, 1997, p. 297)

ForceP serves to mark the clause type. TopP, in Rizzi's view, is recursive. Top can have either an overt or a null phonological realization. Topicalized elements are optional and are hosted by Spec-TopP. FocP is non-recursive and could be either overt or covert. Its specifier position lodges focalized expressions and wh-expression in main clauses. Hence, they are in complementary distribution as they compete for the same syntactic position. FinP describes the inflectional properties of TP. Fin coalesces with Force into one single head, much more like traditional C constituent, in clauses with no focalized or topicalized constituents, and constructs one single head (Radford, 2009). Rizzi postulates that the movement of syntactic constituents from an IP-internal position to the left periphery of the sentence is triggered by features on functional heads "Such features have an interpretive import" (Rizzi, 1997, p. 282). Movement, as such, has interpretive effects. Rizzi (1997) claims that the number and order of his projections are universal. Frascarelli and Hinterhölzl (2007) question Rizzi's (1997) treatment of topics and provide an alternative analysis which is presented in the next section.

B. Frascarelli and Hinterhölzl's (2007) Topic Typology

Contrary to Rizzi (1997), who sees topic as a unique recursive entity, Frascarelli and Hinterhölzl (2007) argue that topics are not full. They have conducted a systematic analysis of the prosodic and interpretive properties of topics, which, consequently, result in classifying topics into three types: aboutness topics, contrastive topics, and familiar topics. Aboutness topic represents "what the sentence is about" (Reinhart, 1981). One might notice that this definition fits the notion of subject; however, Lambrecht (1994) clarifies that "even though this topic definition is derived from the traditional definition of 'subject' (p.118), the two notions 'topic' and 'subject' cannot be conflated. Topics are not necessarily grammatical subjects, and grammatical subjects are not necessarily topics". Aboutness topic is the constituent that is "newly introduced, newly changed or newly returned to" (cf. Givón, 1983, p. 8). Only one aboutness topic is permitted per sentence and it occupies the highest position in a clause. A contrastive topic, on the other hand, is a constituent that provokes alternatives and produces oppositional pairs with respect to other topics (Kuno, 1975; Büring, 1999). A sentence can have only one contrastive topic. Familiar topics are defined as 'elements which are part of the already established familiar information. They are introduced at some point of the conversation and then repeated for topic continuity or as an afterthought (Frascarelli & Hinterhölzl, 2007, p. 93). The structural positions occupied by Frascarelli and Hinterhölzl's (2007) topics with respect to focus is presented in (2) below.

(2) [aboutness topic P [Contrastive topic P [FocP [Familiar topic P [IP]]]]].

C. Belletti's (2004, 2005) Low IP Area

While Frascarelli and Hinterhölzl's (2007) topic typology can to a great extent develop our understanding of the AA left periphery, Belletti's (2004, 2005) model can provide useful explanations to the AA low IP area. Belletti (2004, 2005) proposes that the area below IP and above vP can have an internal periphery containing discourse-related positions: focus and topic. She calls this area low periphery or the IP-internal periphery, and structures it as shown in (3).

(3) [IP [Top P [FocP[Top P [vP]]]]]

Few recent studies argue that Arabic varieties have low periphery. Ouwayda and Shlonsky (2016), and Helal (2019) mention, without detailed explanation, that Standard Arabic and Lebanese Arabic, respectively, manifest a low IP area. While Jarrah and Abusalim (2021), and Alshamari and Jarrah (2022) argue extensively for the presence of low periphery in Jordanian Arabic and Najdi Arabic, respectively.

D. Contrastive-Information Focus Dichotomy (Kiss 1998)

Kiss (1998) differentiates between Contrastive focus (CF) and Information focus (IF). Contrastive focus expresses exhaustive interpretation and occupies the specifier of functional projection; whereas information focus cannot explain exhaustivity and stays in its low area, lower than TP. Also, IF cannot iterate while CF can. Kiss's (1998) conclusions are based on Hungarian and English. Standard Arabic displays a similar behavior in that a sentence can have two foci: contrastive focus and new focus. Contrastive focus appears in ex situ position, while new focus remains in situ (Moutouakil, 1989). Ouhalla (1999) agrees with Moutouakil (1989) in that CF are proposed to the left periphery while IF is in situ, as exemplified in (4).

(4) a. RIWAAYAT-an ʔallaf-at Zaynab-u
 novel-ACC wrote-she Zaynab-NOM

 'It was a novel that Zaynab wrote.'

 b. ʔallaf-at Zaynab-u RIWAAYAT-an
 wrote-she Zaynab-NOM novel-ACC

 'Zaynab wrote a novel.' [arb] (Ouhalla 1999, p. 337)

RIWAAYAT-an in (4a) is analyzed as contrastive focus, while in (4b) it is analyzed as IF. After presenting the basic cartographic approaches that can account for information structure in AA, the following section highlights the process of data collection.

III. DATA COLLECTION

The researchers used audio typed recordings of natural ongoing speeches of 40 Algerian gender-balanced informants during period of a month with an average of one hour per day. Conversations were held between friends or family members of the first researcher herself. The topics of these conversations were mainly about family relations, sport, social media, and life in general. Informants' age ranges between 18 and 80 years. 17 informants hold a PhD degree, 12 informants were with no formal education, 11 participants hold a BA degree. Analyzing the impact of social factors e.g. gender, age, education, and the like on syntactic structure is far beyond the aim of the present paper. Data gathered from informants have been transcribed through the International Phonetic Alphabet, (IPA).

IV. THE DERIVATION OF ROOT SV(O) WORD ORDER

This section explores the derivation of SV(O). The collected data shows that the preverbal position is ambiguous between three readings: a genuine subject reading (section A), different topic readings (sections B, C, and D), and a focus reading (section E).

A. *Thetic Interpretation of SV(O)*

In this section, we examine the status of preverbal free-discourse subjects. We assume that subjects in this situation occupy Spec-TP, a position associated with a thetic interpretation, i.e. the event or the situation itself is stressed not the participants (Basilico, 1998). Thetic sentences, in AA¹, are appropriate answers to questions of the style: "What happened?", "What's up?", "What's the problem?" (G  seg, 2006), as exemplified in (5).

- (5) a. Ka:ʃ xba:r?
 What news?
 'What's the news?'
- b. Hiba ʃra:t roba
 Hiba bought. 3SG.F dress
 'Hiba bought a dress.'

Following Aoun et al. (2010), the canonical position of the subject *Hiba* (5b) is Spec, vP from where it is assigned a nominative case² fulfilled within Chomsky's (2000, 2001) Agree operation; the T probe agrees in ϕ feature with the C-commanded nominal goal *Hiba*. The verb, then, attaches to T via v. A-Movement motivated by the rich subject-verb agreement morphology of AA (see Vikner, 1995; Radford, 2009; Holmberg & Roberts, 2013). Verb raising in AA can be demonstrated by the fact that both the subject *Hiba* and the verb 'ʃra:t' occurs to the left of the VP adverb 'bzarba' *rapidly*, but not to its right. The verb and the subject are, therefore, outside VP, as demonstrated in (6).

- (6) a. Hiba ʃra:t roba
 Hiba bought. 3SG.F dress
 'Hiba bought a dress.'
- b. *Hiba bzarba ʃra:t roba
 Hiba quickly bought. 3SG.F dress
 'Hiba quickly bought a dress.'
- c. Hiba ʃ ra:t roba bzarba
 Hiba bought. 3SG.F dress quickly
 'Hiba bought a dress quickly.'

Subsequently, the EPP features on T triggers the movement of the subject to Spec-TP. The fact that the subject occurs to the left of the past tense copula 'kaan' that lexicalizes T in Arabic lends support to the view that a preverbal subject occupies Spec-TP in an SVO clause (Baker, 2003; Benmamoun, 2008).

That the subject in thetic situations occupies Spec-TP is not a novel idea. Rizzi and Bocci (2016) suppose that whenever the preverbal subject is felicitously used in an out of the blue "all new" context, it occupies a discourse free position, a Spec-TP position. Preverbal subjects in AA can also occupy a discourse related position in the left periphery where they have either a topic or focus reading.

B. *Familiar Topic Reading of Preverbal Constituents*

In this section, we present cases where that preverbal element occupies A'-position associated with topic reading, consider the following example (7).

- (7) ʔ  t  fla fahmet ʔel.hadra
 The child understood. 3SG.F The.speech
 'The child understood the speech.'

At first glance, it seems that the definite preverbal DP ʔ  t  fla is ambiguous between two readings: a topic reading(8a) or a subject reading (8b).

¹ All examples in this article are from AA, unless otherwise stated.

² In this case, the subject has an abstract case which is not morphologically realized.

- (8) a. [CP $\text{ʔ}\text{ə}\text{t}^{\circ}\text{ofla}$ [c' [c] [TP pro [T' [T fahmet] [vP pro [v' [v fahmet] VP [V' [V fahmet] [ʔel.hadra]]]]]]]]]
 b. [CP [c' [c] [TP $\text{ʔ}\text{ə}\text{t}^{\circ}\text{ofla}$ [T' [T fahmet] [vP $\text{ʔ}\text{ə}\text{t}^{\circ}\text{ofla}$ [v' [v fahmet] VP [V' [V fahmet] [ʔel.hadra]]]]]]]]]

It is only through certain structural and contextual cues that we can decide which reading is more appropriate. For this purpose, let us identify the context from which (7) was extracted. It is extracted from a conversation between two friends discussing the teacher behavior with one of her students, as shown in (9).

- (9) A: l.prof qa:let le. t^tofla ma. texr ʒi.ʃ ʔatta
 t.heli tamri:n el.ma:t
 The. Teacher said. 3SG.F to. The. child NEG. go. 3SG.F. NEG until (you)
 solve exercise the.maths
 'the teacher said to the child you will not go out until you solve the math exercise.'
 B: $\text{ʔ}\text{ə}\text{t}^{\circ}\text{ofla}$ fahmet elhadra ma.xarjet.ʃ ʔatta ʔala:to
 DEF.child understood. 3SG.F DEF.speech. NEG. go.3SG.F.NEG until solve. 3SG.F.it
 'The child understood the speech, she did not go out until she solved it'

The preverbal subject ' $\text{ʔ}\text{ə}\text{t}^{\circ}\text{ofla}$ ' is a constituent of the already-established information background and is reintroduced in B's answer as a background element to keep the conversation on track. Elements displaying this feature are classified by Frascarelli and Hinterhölzl's (2007) as familiar topics. It cannot be analyzed as a genuine subject; this observation is supported by a variety of empirical evidence. First, the preverbal constituent can be dropped without affecting the grammaticality of the sentence as indicated in (10).

- (10) a. fahmet ʔelhadra
 understood. 3SG.F The.speech
 'understood the speech.'

So, if ' $\text{ʔ}\text{ə}\text{t}^{\circ}\text{ofla}$ ' occupies Spec.TP position, a subject position, (10) should be ungrammatical but this is not the case. Following Soltan (2007), the grammaticality of (10) can be accounted for by proposing that the Spec/TP is occupied by pro and ' $\text{ʔ}\text{ə}\text{t}^{\circ}\text{ofla}$ ' occupies an A'-position. Notice that in a sentence havingthetic interpretation, omitting the preverbal subject renders the sentence ungrammatical because the element occupying Spec/TP is omitted, as shown below.

- (11) A: Ka:ʃ xba:r?
 What news?
 'What's the news?'
 B: *ʃra:t roba
 bought. 3SG.F dress
 'bought a dress'

A useful argument that lands support for the view that preverbal constituent can be analysed as topic is the fact that it can be separated from the verb by a PP which is itself a topic, as shown below (12):

- (12) a.Hazer fi dzayer nsa:t ʔka :jet Mohammad, ka:net mafyo:la beza:f
 Hazer in Algeria forgot. 3SG.F. The. Story Mohammad, was busy too
 'Hazer in Algeria forgot the story of Mohammad, she was too busy.'

Evidence that the pp 'fi dzayer' in *Algeria* is interpreted as a topic comes from the observation that it is already mentioned in the previous discourse. Consider (13).

- (13) A: Mohammad ʃa:f Hazer fi. Lordon we was'a:ha
 tʃajaf.lo kitkoun fi dzayer.
 Mohamad saw. 3SG.M. Hazer in. Jordan and
 asked.3SG.M.her calls.3SG.F.him when will-be in Algeria.
 'Mohammad saw Hazer in Jordan, and asked her to call him when she will be in Algeria'
 B: Hazer fi dzayer nsa:t ʔka :jet Mohammad, ka :net mafyo:la beza:f
 Hazer in Algeria forgot. 3SG.F. The. Story. Mohammad Was busy too.
 'Hazer in Algeria forgot the story of Mohammad, she was too busy.'

According to Frascarelli and Hinterhölzl (2007), *Hazer* and the pp 'fi dzayer' are interpreted as familiar topics, because they are already mentioned in the previous discourse. Accordingly, familiar topics are recursive in AA. As for the issue of topic referentiality, notice that in SV(O) no overt resumption is manifested in the verb. Recall that referentiality is a defining characteristic of topicality (Reinhart, 1981). Following the views of Frascarelli and Hinterhölzl (2007), Soltan(2007), and Rizzi (2018), among many others, we will assume that the preverbal element is coreferenced with a null resumptive pronominal that is located in the A-domain of the clause. Frascarelli and Hinterhölzl (2007) assume that each topic head is merged with particular topic feature. Accordingly, the preverbal subject *Hazer* is merged with [+Familiar] feature in Spec F.Top position and it acts as a probe which agrees with the goal *pro* through matching (Agree) operation where both [+Familiar] and ϕ features (singular and feminine in this case) are transmitted (copied) to the null pronoun, henceforth the familiar topic determines the referential value of the *pro*. In

(8b) we have assumed that topics in AA have a base-generated analysis rather than a movement analysis. One empirical evidence for this view comes from the syntax of *wh*-island. Data bearing on this situation are presented in (14):

- (14) a. \int ko:n tzawaʒ Ahlam?
Who. Married.3SG.M Ahlam?
'who has married Ahlam?'
b. tba: nli beli Ahlam ʕarfo \int ko:n tzawaʒ.ha
see.1s that Ahlam know.3p. who married.3SG.M.her
'I see that they know who has married Ahlam.'

Ahlam is extracted out of a *wh*-island and the sentence is still grammatical. A relation between the pronominal clitic 'ha' and the left peripheral NP Ahlam is attested, a fact that shows evident violation of *island* condition in Arabic. This violation proves that topic in AA is base-generated, a finding that is in line with Aoun et al. (2010).

Having demonstrated that AA allows topic reading for preverbal constituents, and that this topic could be a recursive familiar topic, we will see in the next two sections whether AA allows for aboutness topic and contrastive topics in preverbal positions and whether they are recursive.

C. Aboutness Topic Reading of Preverbal Constituents

Reinhart (1981) argues that in the response to a request as *tell me about X*, X must be interpreted as an aboutness topic. However, this test does not yield topichood in AA. This is shown in (15).

- (15) A: eħkili ʕla l.ʕeres
Tell 2S.me about the.wedding
'tell me about the wedding.'
B: fa:t mli:ħ
Went.3SG nice
'was nice.'

Speaker B does not introduce his answer by the constituent which is supposed to be the aboutness topic: l.ʕeres, but rather he introduces his answer by a null-preverbal element. Henceforth, this test fails to yield aboutness topic in AA.

'What about X' question is another test which is used to qualify a constituent X to have an aboutness topic interpretation (Stede & Mamprin, 2016).

- (16) A: jadra et⁶bi:ba ntaʕak ?
What.about. the.doctor your.
'what about your doctor'
B: maqatli: wa:lo we ʕt⁶a:tni rendivo waxdoxar
not.said.3SG.me noting and gave.3SG.me appointment another.
'said nothing, and she gave me another appointment'

Again, B's answer is introduced by a null-preverbal element, and no linguistic constituent is used to represent the constituent which is supposed to be the aboutness topic: et⁶bi:ba ntaʕak.

Perhaps the only working test in AA to decipher aboutness topic is 'Concerning X' test. According to this test if a constituent can be introduced by or paraphrased as "Concerning X, ...", then X is an aboutness topic (Stede & Mamprin, 2016). (17) shows an extraction from the audio taped conversations.

- (17) A: ħabi:t nsaqsi:k i ċa ħdarti mʕa l.xayat⁶a ew θani byi:t
Like.1S ask. 1s. if speak.2s. with The.tailor. and also want. 1s
nʕo :f elmoda:l ili xajarti :ħ
see.1s the. model that chosen.2SG.F. it

'I would like to ask if you have spoken with the tailor and also I want to see the model that you have chosen'

- B: l.xayat⁶a ħdart mʕaha besah ma ċanitef belli raħ
The.tailor. spoke.1S with.her but NEG.think 1S.NEG that will
tkamalak lexjat⁶a ha: ð simana, konsarno elmoda:l ċarwak nabʕaθlak elfot⁶o
finish.3SG the. tailoring this week, concerning the.model now send.1S.you the.picture.

'the tailor, I spoke with her, but I don't think that she will finish this week, concerning the model I will send you the picture now.'

(17) shows that 'elmoda:l' *the modal* is introduced by 'konsarno'³ *as for*, henceforth it is interpreted as an aboutness topic. Frascarelli and Hinterhdzl (2007) postulate that aboutness topic is a non-recursive phenomenon, an assumption that is supported by data from AA context as shown below (18).

- (18) a. konsarno elmoda:l l.xayat⁶a ċarwak twari:ħlak
Concerning The. model The.tailor now show.3SG.F.you
'Concerning the model, the tailor will show it to you now'

³ The word *konsarno* is a French word that is adopted by Algerians. Notice that Algerians are highly influenced by French, a fact that is attributed, among many other reasons, to the French colonization of Algeria for more than 130 years. The French language has had massive impacts on the Algerian speech community. French is used in daily life conversation, media, press, administration, and higher education.

No single instance has been observed for recursive aboutness topic in AA, 'l.xayat'a' *The tailor* cannot have an aboutness topic interpretation, but rather it can be interpreted as a contrastive topic: a notion that is examined in the following section.

D. Contrastive Preverbal Topics

Contrastive Topics can be seen as constituents that display “a combined effect of topicality and focusing” (Molnár, 1998, p. 135). That is, a Contrastive Topic “is topical in the sense that it comes from a potential Topic and somewhat focal in the sense that the choice of the particular part is not known to the hearer” (Chungmin, 2003a, p. 155). An instance of a contrastive topic is given in (20) where speaker B picks out Hiba out of the other sisters, who are all known to both the speaker and the hearer.

- (20) A: Wa:ʃ yaqra:w xwata:tak?
 What study.3P sisters.your
 ‘what are your sisters studying?’
 B: Hiba taqra midsin ew Sara esna tfawat elba:k
 HIBA⁴ Study.3SG.F medicine and Sara this.year will.have the. Baccalaureate
 ‘Hiba is studying medicine and Sara, this year, will have the Baccalaureate exam.’

Most elements occupying a position lower than contrastive topic in Algerian Arabic are more likely to be interpreted either as familiar topics or focalized elements. Consider C’s interaction with the above A and B speakers.

- (21) C: Hiba elba:k ʒabto b 18.
 Hiba The. Baccalaureate exam pass.3SG.F.it with 18
 ‘Hiba passed her Baccalaureate exam with 18.’

‘elba:k’ *The Baccalaureate exam* is already mentioned in B’s sentence and is reintroduced by the speaker C. Accordingly, it is interpreted as a familiar topic. This finding is in line with Frascarelli and Hinterhzl (2007) who argue that familiar topics occupy a position lower than contrastive topics. As is mentioned at the start of this section, raising a set of alternatives and contrastive stress are not properties that define contrastive topics only, but they can be shared by contrastive focus too. This point and some related issues are tested in the next section.

E. Preverbal Subjects: Contrastive Focus or Information Focus?

Like standard Arabic and many other languages, focus in AA is found either in situ or in the left periphery of the clause. Informational focus in AA cannot occur in preverbal position. Wh-questions and their answers are used as tests for new information focus (Sabel, 2000; Sabel & Zeller, 2006; Buell, 2009). A felicitous answer to the question ‘ʃko:n tʻaybat alqahwa?’ *who made the coffee?*, as demonstrated in (20), is VS word order.

- (22) A: ʃko:n tʻaybat alqahwa?
 Who made. 3SG.F The. Coffee
 ‘who made the coffee?’
 B: tʻaybatha Wiam
 made.3SG.F. it Wiam
 ‘made it Wiam’

SV word order is an infelicitous answer in this context, but it is accepted in a quite different context:

- (23) A: ʃko:n tʻaybat alqahwa Wiam wala Hiba?
 Who made. 3SG.F The. Coffee Wiam or Hiba?
 ‘who made the coffee Wiam or Hiba?’
 B: WIAM tʻaybatha miʃ Hiba.
 WIAM made.3SG.F. it not Hiba
 ‘WIAM made it not Hiba.’

While *Wiam* is analyzed as a new IF in (22), it is analyzed as a CF in (23) where *Wiam* stands in contrast with *Hiba*. The speaker responds with a corrective tone asserting that *Wiam* is the one who made coffee not *Hiba*. Here the function of focus is exhaustiveness which is used as exclusion mechanism, that is “the focus denotation is the only one that leads to a true proposition, or rather more generally: that the focus denotation is the logically strongest that does so” (Krifka, 2008, p. 259). Evidence that *Wiam* is assigned CF comes from the ‘la + term’ sentence expansion that is used in Arabic literature as a test that specifies the type of focus assigned to one of the constituents of the clause. It only occurs in sentences containing CF, not IF (Moutaouakil, 1989). This test works in AA in that the construction ‘miʃ+ DP’ specifies the preverbal subject as CF, see (23b) above.

Corrective situation, too, can be used as a test that specifies the nature of the focalized constituent as contrastive (Lang, 1984; Moutaouakil, 1989; Steube, 2001). This test yields CF in AA as shown below (22)

- (24) A: Hiba tʻaybat alqahwa
 Hiba made.3SG.F. tThe.coffee
 ‘Hiba made the coffee.’
 B: WIAM tʻaybat alqahwa

⁴ Throughout the article elements bearing contrastive stress will be written in capital letters.

WIAM made.3SG.F. The.coffee
 ‘WIAM made the coffee.’

At this stage, it is evident that the preverbal subject can have a CF reading and that IF is banned in preverbal position. Preverbal subjects in AA cannot have IF reading, IF only occurs in a lower position.

V. LOW IP AREA IN AA

Researchers have never examined the existence of low periphery in AA, a gap that is addressed in the present paper. We will first prove that the syntactic position is occupied by *ka:na* in T. Then, we will show that discourse related notions: topic and focus may occur lower than T. In this relation, negation provides useful insights. (25) shows that *ka:na* is sandwiched between the negative proclitic *ma* and the negative enclitic *f*.⁵

(25) a. maka:net f lepro:f tahdar mʕaya
 NEG.was.NEG the.teacher speaking. 3SG.F with.me
 ‘the teacher was not speaking with me’

It is evident from (25) that the subject does not occupy Spec/Tp position, as it appears in post-*ka:n* position. Another argument that T is not too high in the structure is that it follows base-generated and left dislocated elements as shown below (26).

(26) a. elkaji elbareh ʔətʔofla ka:net thawas ʕli:h
 the. copybook DEF.yesterday The.girl was searching. 3SG.F for.it
 ‘the copybook, yesterday the girl was searching for it’

Postverbal- *ka:na* constituents can have a topic reading. Following Belletti (2004, 2005) we call this type of topic a low topic: a position situated between TP and vP, wherein Spec/TP is filled with an expletive pro.

(27) A: Ahlam maza:let mri: ʕa
 Ahlam still.3SG.F. sick
 ‘Ahlam is still sick.’
 B: besaħ ʔla:f maraħetf l.ətʔbi:b ʔajatʕelha fi li:l ba:f
 But why NEG.went.3SG.F.NEG to. the. doctor called.1S.F.her at night to
 nqolha nedik l. ətʔbi:b maradetli:f
 say.1SG.F. her take.1SG.you to. the doctor NEG.answer.3SG.F.me. NEG
 ‘but why didn’t she go to the doctor, I called her at night to say that I will take her to the doctor, but she did not answer’
 A: ka:net Ahlam taqra ʔlabi:ha maradetlakef
 Was Ahlam studying. 3SG.F that.is.why NEG.answer.3SG.F.you. NEG
 ‘Ahlam was studying that is why she did not answer’

(27) shows that *Ahlam* is a familiar topic. Low familiar topics can be recursive as shown below (28).

(28) a. ka:net Ahlam fi l-li:l taqra
 Was Ahlam at night studying. 3SG.F
 Ahlam, at night, was studying’.

Evidence supporting the assumption that *Ahlam* and ‘fi-l-li:l’ *at night* are interpreted as familiar topics is the fact that they are already mentioned in the previous discourse as shown above (27b).

The distribution of floating quantifiers in AA constitutes a valid argument in favor of the existence of a lower discourse related area. The researchers adopt Cinque’s (1999) universal hierarchy which shows that floating quantifiers such as ‘tutto’ in Italian, ‘kolef’ in Algerian occupy a lower position, lower than the one occupied by low adverbs. Notice that in (29), the subject occupies a low position in the clause structure, lower than the lowest Spec hosting the AA floating quantifier ‘kolef’.

(29) a. tafehmi kolef enti
 understand. 2SG.F everything you
 ‘you understand everything.’
 b. *tafehmi enti kolef
 understand. 2SG.F you everything
 ‘understand everything you’

Part of the evidence that AA manifest a low focus comes from the syntax of focus particles. The following section examines this notion and its syntactic behavior in AA.

The Focus particle barek

A particle, in general, denotes “an invariable item with grammatical function, especially one which does not readily fit into a standard classification of parts of speech” (Crystal, 2011, p. 352). A Focus particle (FP), in particular, is a particle which interacts with the focus of the sentence. It is used synonymously with a variety of other terms, the most common of which are ‘focus adverbs’, ‘focus sensitive particles’, ‘focus inducers’, and ‘scalar particles’ (Sudhoff,

⁵ Here we adopt the High-Neg Negation. The proponents of this approach are Fassi Fehri, 1993; Shlonsky, 1997; Soltan, 2006, 2011; Benmamoun et al. 2013.

2010). FPs are useful means to study the syntax to discourse relation as they relate the propositional content to the context of utterance (Fischer, 2006; Coniglio & Zegrean, 2010). FPs have long been known to establish a relation between the focused item and the other focus-relevant alternatives. This relation takes the form of one of the following three options: addition, exclusion, or scalar ordering (König, 1991; Fooken et al., 2009).

Exclusive, also called restrictive, particles are used to exclude “elements distinct from the focus from the set of elements that yield a true proposition” (Sudhoff, 2010, p. 53). That is, FPs denote an exclusive contrast in that no other candidate from a given alternative sets share a property assigned to the focus set (Kim, 2012). *Only* and *nur* are instances of exclusive FPs in English and German, respectively. *Barək* has all exclusive FP characteristics. Thus, it is considered as an AA focus particle. The following conversation (30) shows the function of *barək* in discourse. The conversation is held between a grandmother and her grandson. The grandmother was sick, and she is blaming her grandson for not calling to ask about her.

- (30) A: ra:ki tbani mli:ħa xi:r min layamat illi fa:to
 are.you look. 2SG.F fine better than The.days that passed.3PL
 ‘you look fine, better than the passing days’
 B: i:h besah ʔla:f maʔajtni:fʔ
 Yes but why NEG.come2.SG.M.me.NEG
 ‘yes, but why you did not come to me’
 A :kont di:ma nsaqsi ʔli:k
 was always asking.1.SG about.you
 ‘I was always asking about you’
 B: ka:n Mohammad barek ysaqsi ʔlija
 Was Mohammad only ask.3.SG.M about. Me
 ‘only Mohammad was asking about me.’

The grandmother has chosen Mohammad among other alternatives (grandsons or relatives) as the only person who was asking about her. This interpretation is obtained from the use of the exclusive FP *barək*. If the grandmother’s second answer was uttered without *barək*, exclusion of other alternatives cannot be conveyed to the hearer. It is only through the use of *barək* that exclusion is asserted. *Mohammad* is uttered with a contrastive stress and is followed by a short pause before uttering *barək*. *Barək* is more likely to be analyzed as a head based on the observation that it is non-referential constituent which cannot be assigned a θ -role. These findings support the assumption that AA has a lower discourse related area.

VI. CONCLUSION

This paper presented a cartographic analysis of two root word orders in AA: SV(O) and VS(O), with a particular focus on preverbal and postverbal elements. The findings show that preverbal elements can have three different interpretations. First, it has discourse-free interpretation which is obtained inthetic situations. Second, it can have a topic interpretation: a recursive familiar topic, a non-recursive aboutness topic, or a non-recursive contrastive topic. Third, subjects can have a focus interpretation, only contrastive focus is allowed to occupy the preverbal element; information focus stays in its situ position. Regarding VS(O), this paper proved the existence of a lower periphery encoding discourse-related entities: topic and focus. Different arguments were used to support this view: the behavior of the copula ‘*ka:na*’, floating quantifier and the behavior of the exclusive particle ‘*barek*’. Future research in AA can test the workability of other cartographic models such as the model of Benincà and Poletto (2004). It can also examine the position of contrastive topic in relation to Frascarelli and Hinterhölzl’s (2007) Topic Typology. It can also study the cartography of embedded topic and focus elements.

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Meymouna Bourzeg is a PhD candidate at the University of Jordan, Faculty of Foreign Languages, Amman-Jordan. Her research focuses on syntax, phonology and language acquisition. She has published two articles 'On the Moraic weight representation of geminates in Taguinian Algerian Arabic' and 'An Optimality Analysis of the Phonological Processes in the Speech of Autistic Algerian Children: A case study'.

Ayman Yasin is currently the head of the Coordination Unit for Service Courses at Princess Sumaya University for Technology in Jordan. He studied linguistics at Purdue University in Indiana, USA (2008-2012). He is interested in social sciences in general and in linguistics in particular. He has published a number of papers in syntax, phonology, translation, and prosody. Dr. Yasin has also taught MA and PhD courses in linguistics and translation at the University of Jordan (part timer). He is supervisor and an external examiner for many MA and PhD theses in various Jordanian universities. He has experience in IELTS tests, and he serves as a reviewer in several journals.