

Functional Structure in Standard Arabic and How It Is Derived

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Abstract

The role played by the interpretability of features in the derivation and representation of sentences is a cornerstone of generative analyses of sentence structure. The most important structural aspect of such interpretability is the role played by the requirement that sentences have some representation of subjecthood in syntactic structure – namely, the EPP (Chomsky 1981) or the requirement that the subject of predication be somehow represented in the functional structure of the sentence. The emphasis on such a requirement in syntactic theory has brought forth a more basic characteristic of the derivation of sentences and their representation at the interface – namely, structural relations whereby elements in the grammar are interpreted have to be strictly local and are based on the licensing of functional features (mainly, categorial). The very Merge and movement processes involved in this feature licensing bring elements (probe and goal) closer to each other. The effect of this ‘Probe-Goal Union’ (Miyagawa 2010, p. 35) is that head-head and Spec-head agreement configurations become the basis of the derivation and representation of the functional structure of a language in terms of functional features for the expression of such discourse properties as topic-comment, interrogation, negation, the expression of focus and relativization. Topic-comment constructions, wh-questions, negative contrastive focus constructions, and relative clauses will form the testing ground for the working of such features in the derivation of functional structure of standard Arabic, in both SVO and VSO word orderings.

Keywords: Functional, Interpretability, Features, Subj(P), Categorial, Licensing, Agreement

1. Introduction: Basic Structures and Methodology

1.1 Basic Structures

The question of how the locality of subject-verb agreement in the grammar of a language arises does not have a straightforward answer. By reference to general principles of economy of derivation and representation and conditions on the form of sentences, generative linguistics assumes that strict structural relations (subject-verb agreement being the most fundamental one) exist. Thus, it is by looking at the licensing and locality conditions that enter into the derivation and representation of structural agreement for its interpretation at the interface that a vital clue can be provided as to which rudimentary elements lie at the basis of the derivation and representation of agreement configurations (subject-verb agreement, in particular).

To a first approximation, the locality of agreement configurations is the result of the interaction of the features of the syntactic objects that are selected for the computation. Once these elements are introduced into syntactic structure they have to meet some licensing conditions so that they are fully interpretable at the interface. In this paper, I will be concerned with the nature of the features that enter into the derivation and representation of agreement configurations in Standard Arabic (SA) and their role in the interpretation of such configurations by focusing on the functional relations obtaining thereby.

The derivation of simple declarative sentences in a language like English and counterpart examples in SA (both in the VSO and SVO word orderings) provides a testing ground for understanding how the licensing of features within a local domain gives rise to agreement configurations, as in (1) (adapted from Rizzi, 2006: 119):

(1) a. John has [[John] come].

b. There [came a man].

In (1a), the DP *John* moves to the structural subject position i.e., the specifier (Spec) position of Inflectional Phrase (IP) or TenseP/TP (see below in relation to the Arabic sentences in (2)). The EPP is satisfied when all features are licensed, i.e. the valuation of ϕ -agreement on T and the valuation of the Case feature on the raised DP. According to Roberts' (2010a; b) and Biberauer & Roberts' (2010) T also has T-features, which are VP-related and attract verbs overtly to T in such languages as Romance languages with rich inflectional morphology on verbs. A similar assumption can be maintained for a verb-raising language like Arabic. In (1b), the DP *a man* (which is construed as a subject DP, but in object position see Chomsky 2001: 21) stays *in situ* post-verbally and cannot move to the structural subject position i.e., [Spec, IP/TP]. Similar configurations obtain in SA, though with important parametric differences in how they are derived:

(2) a. ?ar-rijaal-u qad jaa?-uu. (SVO word order)

the-men-nom mod perf.come-3mp

'Indeed, the men came.'

b. jaaʔ-a ʔar-rijaal-u. (VSO word order)

perf.come-3ms the-men-nom

'The men came.'

Following Fassi Fehri (1993), Akkal & Gonegai (2000) and Demirdache (1989/2013), Jouini (2014; 2018) postulates that the DP *ʔar-rijaal-u* 'the men' in the SA SVO sentence in the initial position in (2a) is a left-dislocated Topic DP base-generated to the left of the structural subject position of the sentence (i.e., [Spec, IP]). I will follow the assumption made in Jouini (2018) about the Inflectional node IP in DP-initial word ordering (SVO) in SA. IP is construed as a **Subj**(ect) node, which maximally projects to **SubjP** and selects TP as complement in sentence structure (Note 1 & Note 2). In such instances of SVO word ordering, the insertion of a referential null pronominal element (namely, *pro*) in [Spec, **SubjP**] satisfies the EPP. The functional category **Subj** bears a D-feature, distinct from the EPP, which accounts for the rich subject morphology on raised verbs in such SVO sentences in SA.

According to Biberauer and Roberts (2010, p. 265), T's tense properties are distinct from its agreement ϕ -properties in that the former properties are verbal or V-related, whereas the latter are nominal or D-related. This suggestion about the connectedness between the thematic domain and the functional domain of sentence structure in terms of V-related and D-related properties of items highlights the importance of a feature valuation model where probe-goal-Agree (see 2.2 below) would depend on the structural dependency relations established in the process of the derivation of a particular sentence. The same is true of the derivation of wh-dependencies (interrogative sentences and relative clauses) and sentences involving contrastive focus, as in some negation contexts in SA (see section 3).

According to this view, the grammar will set different parametric restrictions on what could be derived and what could not be derived in the language. Licensing conditions on the derivation of such sentences will work accordingly. In a V-raising language like SA, the process of verb raising to the inflectional domain of sentence structure concerns primarily the relation between T and V: rich tense features on V are attracted to T's T-features prompting the verb to overtly raise in the syntax. Nevertheless, this process of the valuation of T-features on V arises concomitantly with the process whereby ϕ -agreement between the subject DP and the raised verb is established.

Sentence (3) below is the ungrammatical counterpart of sentence (2a). It shows clearly that the sentence-initial DP in (2a) is a Topic DP:

(3) *qad ʔar-rijaal-u jaaʔ-uu.
 mod the-men-nom perf.come-3MP

'Indeed, the men came.'

By reference to Rizzi's (1997) split-CP system, the topicalized/clitic left-dislocated nature of the initial DP in (2a) is accounted for on the basis of the finiteness or temporal and/or modal properties encoded in the Force-Finiteness system on the left periphery of the sentence

(IP/SubjP). The Force-Finiteness system includes a Finiteness (Fin) node expressing a specification of finiteness, generally reflecting “inflectional properties” linking it to Inflection in the IP domain (Rizzi 1997: 284). In Rizzi's (1997) system, there is a Topic node (Top) higher than Fin and another one higher than Focus (Foc), which is higher than the lower Top position (in Rizzi's 1997 system) above Fin, as represented in (4) below:

(4) [ForceP ... (Top) (Foc) (Top) (Fin) [IP ...]]

ForceP is conceived as the traditional CP, which signals clause type (i.e., wh-question, yes/no question, negative sentence, declarative sentence, and so on). The Top node that is relevant in the account of topicalized/clitic left-dislocated initial DPs, in an SA SVO sentence like (2a), is the Top node that is higher than Foc in (4). Thus, in (2a) (vs. the ungrammatical (3)), the modal particle *qad* is presumably merged in a node to the left of the IP domain, on the assumption that the inflected verb raised out of vP/VP is under T (itself raised to the Subj node above TP) (Note 3).

Jouini (2014; 2018) puts forward the hypothesis that in an SA VSO sentence, such as (2b) above, the Subj node is absent and the verb moves to T as an intermediate position before moving further up to a super-ordinate node above TP (namely, Fin) thus giving rise to the VSO word ordering in SA. Jouini's (2014; 2018) analysis of the VSO phenomenology in SA departs from previous analyses on the derivation of such sentences. The subject DP lands in [Spec, TP] for EPP satisfaction. The licensing of ϕ -agreement on T and the Case feature on the raised DP occurs concomitantly with EPP satisfaction. In the process of the derivation of the VSO sentence (2b), the T-features of the T-node are themselves attracted to similar T-features on the Fin node accounting for why V ultimately raises to Fin in such VSO instances.

Besides topic-comment constructions in English as in (5a), other typical instances of agreement configurations for the establishment of functional relations involve wh-questions, contrastive focus constructions, and relative clauses as in (5b-d) for English (Rizzi 2006: 101):

- (5) a. This book, you should read.
 b. Which book should you read?
 c. THIS BOOK you should read (rather than something else).
 d. The book which you should read

Similar constructions to those in (5b-d) obtain in SA as in (6a-c). In (6a-b), a Topic

DP is freely included to clearly show the status of the topicalized/clitic left-dislocated DP *ʔal-awlaad-u* under Top to the left of focalized elements. In (6c) the topicalized/clitic left-dislocated DP *ʔal-awlaad-u* is realized to the right of the relative pronoun:

- (6) a. ʔal-awlaad-u maadhaa qaraʔ-uu?
 the-boys-nom what perf.read-3mp

'The boys, what did they read?'

b. ʔal-awlaad-u	maa jariidat-an	qaraʔ-uu	bal (qaraʔ-uu)
the-boys- nom	neg newspaper.indef-acc	perf.read-3 mp	but (read-3mp)
kitaab-an.			
book. indef-acc			

'The boys, it is not a newspaper that they read, but (it is) a book (that they read).'

c. l- kitaab-u	ʔa-lladhii	ʔal-awlaad-u	qaraʔ-uu
the-book-nom	which	the boys- nom	perf.read-3mp

'The book, which the boys read'

I return to the feature structure of such structural dependencies and the functional relations thereby established in section 3. According to Ouhalla (1993), feature identification in the left-periphery of the sentence applies in terms of a head F specified with a [+F] feature. The head F's functional feature is different from Fin in the lower part of the split-CP domain (see (4) above), but is still related to it for an adequate construal, at the interface, of the particular structure being derived. Ouhalla's (1993) [+F] feature is encoded on elements, such as negation particles in SA, or a moved wh-word in the Focus sublayer just above Finiteness (Poletto, 2000; Benincà & Poletto, 2004). The feature licensing process (involving either 'identification' and/or 'valuation' of features) relates functional elements bearing the modal and/or focus properties to the tense/finiteness properties of sentences to satisfy what Rizzi (1996; 2006) calls Criteria. Such a process of feature licensing also interacts with Force in the higher part of the split-CP domain, which signals clause-type. In this connection, Rizzi (1997: 298) maintains that only question operators can occupy the Spec of FocP, whereas other wh-elements (namely, relative operators) occupy [Spec, ForceP] thus signaling clause-type (relative clause, in this case).

The present analysis departs from Ouhalla (1993) as far as the feature composition of the head F is concerned. Ouhalla (1993: 282-283) assumes that the head F is "specified for both the feature [+wh] which characterizes wh-phrases (and wh-questions), and the feature [+F] which characterizes f-phrases (and sentences with focus)". In the present analysis, the [+F] feature of the functional head F is conceived as an intrinsic property of the nodes that project in the Focus sublayer of the split-CP domain of SA which relates to the inflectional feature(s) on Fin. It seems that Ouhalla's (1993: 282-283) [+F] and [+WH] features on the head F (Foc(us) as in Aoun et al. 's 2010 analysis of focused and wh-elements) are actually one and the same focus feature on the Foc head projecting maximally as FocP in the derivation of wh-dependencies. This focus [+F] feature is uninterpretable on Foc (i.e., [*u*F]) in the wh-dependency relating the interrogative wh-word and the Foc head. In other focus structures as in negation contexts, however, this focus feature is interpretable on Neg (i.e., [*i*F]). Thus, the present analysis seeks to identify the two separate but, nonetheless, interrelated licensing processes involving the [*u*F] feature on the Foc head. On the one hand, a Spec-head

agreement process involves the valuation of the uninterpretable [μ F] feature on Foc in relation to the interpretable wh-feature of the raised wh-element (which values it). On the other hand, a head-head agreement process involves the identification of the C-T dependency linking Foc to the finiteness/tense features of the Fin head (i.e., [i T] on Fin), projecting in the lower part of the split-CP domain. A similar identification process is carried out between [i T] on T and [i T] on Fin expressing the structural connectedness within the CP-IP continuum in terms of the “inflectional properties” of sentences (Rizzi 1997: 284).

1.2 Methodology

The structures reviewed in section 1.1 above are important insofar as they support the central hypothesis about the structural role functional categorial features play in the derivation and representation of Topic-comment constructions, wh-questions, negative contrastive focus constructions, and relative clauses either in the SVO or VSO word orderings.

In section 2, I introduce the theoretical framework. Of main concern within this framework is the paramount role played by functional categorial features in structural relations in the grammar. Apart from the importance of functional features that are not categorial in the representation of sentences at LF (which concern features of the case-agreement system of natural language including the EPP, and the wh-features of wh-elements in A'-movement processes), a number of categorial features interact for yielding well-formed structural configurations. Among such categorial features are the Tense features (henceforth, T-features) of T and Fin, which are verb-related and the NP-related Definiteness features (D-features, for short) of syntactic objects parametrically linked to subject-verb agreement. There are also dedicated F-features that play a significant role in the derivation of functional phrase structure in the CP-IP continuum, where C splits into differing specifier and head positions (Rizzi 1997). As introduced in 1.1 above, the name of ‘F-features’ has been given in the literature to signal the process of ‘identification’ these features undergo (Ouhalla's 1993 [+F], or simply F in Aoun et al. 's 2010 account; see also Rizzi 2006).

As in Chomsky's (2001; 2004) feature-valuation framework, the role of the functional categories projected into syntactic structure is to mediate the ‘functional relation’ that exists between verbs (or other head categories), and the DPs (or other XP categories) they associate with. According to Miyagawa (2010), ‘functional relations’ are generated in syntactic structure to establish head-head and Spec-head agreement relations bringing selected items closely together within the functional IP and CP domains. To this effect, section 3 deals with the functional structure of sentences in standard Arabic and the central role played by T-features, D-features and F-features, in its derivation.

Section 4 concludes the paper. Functional categorial features play a central role in the derivation of agreement configurations in the A-system (subject-verb agreement *par excellence*) and the A'-system (Topic-comment constructions, wh-questions, negative contrastive focus constructions, and relative clauses). The local Spec-head and head-head licensing conditions of the grammar ensure that these features are ultimately structurally represented at the interface for the full interpretation of sentences.

2. Background: The Theoretical Framework

2.1 *The Role of Functional Categorical Features in Structural Relations in the Grammar*

When looking at the licensing conditions that enter in the representation of structural agreement for their interpretation at the interface, two complementary assumptions must first be envisaged:

- One is about the compositionality of syntactic structure, i.e., the derivation of phrase structure by merging syntactic elements.
- The other one is about the nature of structural relations both thematic within vP/VP and functional, i.e., at the point where the thematic domain is merged with the functional domain for the representation of subject-verb agreement and functional relations in general. In all such configurations, the main concern of the grammar is the expression of discourse properties, such as topic-comment, interrogation, negation, the expression of focus and relativization. Thus, these two corollaries follow from the general observation, alluded to above, about the local character of agreement/functional relations within phrase structure and how this general structural characteristic links the discourse properties of sentences to their syntactic counterparts, which provides the basis of sentence interpretation.

As far as the backbone of this clausal build-up is concerned, a number of fundamental functional categorical features interact. Taking into account the necessary amount of parametric variation Universal Grammar (as the syntactic component of natural language) allows, the interaction of T-features and D-features is important insofar as such an interaction is responsible for rich inflectional paradigms mainly involving person and number features, and giving rise to rich subject-verb agreement, as is certainly the case in SA. When speaking of agreement relations in a broad sense, i.e., as 'functional relations', the main concern of the analysis of agreement configurations in the functional structure of a language shifts from a mere 'feature-checking' / 'feature-valuation' view to a more structurally significant approach to such relations. This is particularly the case of Rizzi's (2004b; 2006) feature identification approach where economy, locality, and licensing principles operate to bring a wide range of items in the grammar of a language for the expression of discourse properties, such as topic-comment, interrogation, the expression of focus and relativization. As Rizzi (2006) maintains, the structural format via which such functional relations are expressed takes the general form of a chain, which he calls 'criterion'. The format is the following (Rizzi 2006: 102):

(7) XP_F and X_F must be in a specifier-head configuration, for $F = Q, \text{Top}, \text{Foc}, R, \dots$

2.2 *The Complementariness of Phase-Theoretic and Criterial Explanations*

Chomsky's (2001; 2004) new Phase-theoretic agreement framework narrows down the scope of agreement configurations and functional projections to the bare minimum in that Spec-head agreement relations do not exist and are in reality just head-head relations operating under c-command in terms of identity (or, more accurately, non-distinctness of features). However, in light of the insights the Cartographic approach (see, among others,

Guasti & Rizzi 2002; Rizzi 2004a; 2004b; 2006) has brought to syntactic structure, Chomsky (2004: 126, note 44) does not deny that Spec-head agreement may play an important role in the realization of ‘surface phrase structure’ (Chomsky 2004: 114) (Note 4).

The Cartographic approach to syntactic structure puts forward the working hypothesis that ‘interpretability’ in the grammar does not merely arise as the outcome of the checking/valuation of uninterpretable features on functional heads (as in Chomsky’s 1995a; b; c; 2001; 2004 Minimalist agreement framework). ‘Interpretability’ in the grammar could also be the outcome of ‘criterial’ conditions, whereby agreement configurations arise from the necessity of ‘criterial satisfaction’ (Rizzi 2006: 97-98) between a head and a category moved to the Spec of that head. It is this conception of how feature licensing works in syntactic structure that presented compelling evidence that Spec-head agreement relations and head-head agreement relations are equally important in syntactic derivation and representation (Guasti & Rizzi 2002; Rizzi 2004b; 2006; Rizzi & Shlonsky 2007).

As far as subject-verb agreement is concerned, agreement in ϕ -features is the prototype manifestation of the functional relation between argument DPs and verbal predicates. In this respect, the functional node T has a certain set of uninterpretable ϕ -features in addition to its intrinsic set of interpretable T-features. Thus, in subject-verb agreement the ‘functional relation’ would be established between the verb and the subject DP via the set of features that T is endowed with (cf. Chomsky 1995b: 377) so that the derivation can converge at the interface. Chomsky’s (2001; 2004) Phase-theoretic framework makes it a requirement that all functional heads, including C, have a certain set of such features.

In view of the paramount role functional relations play in movement and agreement processes (cf. Miyagawa 2010: 9), the Derivation-by-Phase framework establishes a direct relation between the core system of formal features (ϕ -features, structural case, the EPP), the structural mechanism of A-movement, and the system of core functional categories v, T, and C. This structural connectedness is the cornerstone of the derivation of agreement configurations and the functional relations thereby established. Such a connectedness will also include the structural mechanism of A'-movement for the establishment of A'-dependencies. The operation Agree has the task of linking a feature of a probe with a feature of a ‘matching goal’ within the local ‘search’ domain of the probe (i.e., the head the probe selects as its complement and the Spec of that head). This ‘matching’ relation is what induces the uninterpretable feature of the probe to be ‘valued’ (*inter alias* ‘checked’ if Spec-head agreement is accepted as a major licensing process as in criterial satisfaction) by the interpretable feature of the goal. Probe and goal match if features are ‘valued’ for the goal and ‘unvalued’ for the probe.

The thrust of Chomsky’s (2001; 2004) valuation mechanism, via which Agree operates, is that if uninterpretable features entered the derivation already valued, there would be no motivation for movement to apply to bring the probe and the matching goal into an Agree structural relation. The values themselves would be redundant and there would be no justification as to why they should delete.

Given the important role played by the probe-goal-Agree mechanism in the derivation of functional structure in terms of the interaction of categorial features projecting in the syntax, I would like to bring Roberts' (2010a;b) and Biberauer & Robert's (2010) copy deletion theory to bear on raising structures in English and cases of subject-verb agreement in Arabic. It is argued that such movement/Agree configurations are manifestations of a categorial D-feature and T-feature in interaction with the concomitant EPP feature for subject-verb agreement. I will adopt the feature composition of T as shown in Table 1 (according to a conception of feature valuation as found in Chomsky's 2008 feature-inheritance theory, and, in particular, in Roberts' 2010a;b and Biberauer & Roberts' 2010 copy deletion theory):

Table 1. The feature composition of the T node

Features on T	Inherent to T	Inherited by T from C (Fin in a split-CP model)
(a) [+interpretable]	T-features (= [<i>i</i> T])	–
(b) [-interpretable]	- V-features - a D-feature (= [<i>u</i> D])	- ϕ -/Agree features (= [<i>u</i> ϕ]) - an EPP feature

As Table 1 shows, only the T-features on T are [+interpretable] (i.e., [*i*T] on T), and there are no [+interpretable] features that T inherits from C. As for [-interpretable] features, these are either inherent to T – namely, T's unvalued V-features (Biberauer & Roberts 2010: 265) and the D-feature that Roberts (2010a: 108, 113) posits on T to account for the parametric availability of *pro* in [Spec, TP] in a variety of null-subject languages. T also inherits [-interpretable] features from C – namely, ϕ -/Agree-features (Chomsky 2008: 144-149) and, possibly, its EPP-feature (Chomsky 2008: 157). C (Fin in a split-CP model) has its own set of 'inflectional' or Tense features [*i*T] structurally linking it to T in the IP domain.

Roberts' (2010a; b) and Biberauer & Roberts' (2010) assumptions about an additional D-feature on T in null-subject languages may now find a broader range of applicability as this D-feature compares to the [person] feature of *there* in English in Chomsky's (2001; 2004) case-agreement Phase-theoretic system. In the present account, the D-feature of *there* is comparable to the D-feature of *pro* elements in null-subject languages. It has the effect of relating D on T (or, as discussed in Jouini 2018, on the **Subj** node to which T raises giving rise to the relevant structural configurations in varieties of Arabic) to ϕ -feature specification and ultimately to EPP satisfaction at the interface. For the purpose of the discussion that follows, I will be maintaining that the [person] feature on *there*, in Chomsky's (2001; 2004) account, is actually an interpretable D-feature that is the counterpart of an unvalued D feature of T (i.e., [*u*D]), rather than an uninterpretable [person] feature. Of particular importance is the contrast in structures (8b) and (9b), which are the structural representations for sentences (8a) and (9a), respectively:

(8) a. There are likely to arrive three men.

b. [_{CP} C [_{TP} There_i are likely [_{TP} t_i [_{Tdef} to arrive three men]]]]

(9) a. *Three men are likely there to arrive.

b. *[[_{CP} C [_{TP} Three men_i are likely [_{TP} there [_{Tdef} to arrive t_i]]]]]

These are instances of merging *there* in clause structure, i.e., whether T is T_{DEFECTIVE} (as in the embedded clauses in (8b) and (9b)) or T_{COMPLETE} (as in the matrix clauses in (8b) and (9b)). Structure (8b) is grammatical because after *there* is first inserted in the embedded [Spec, TP] in satisfaction of the EPP in that position, the computation is only interested in raising an element close enough that satisfies the needs of the derivation –namely, satisfaction of the EPP in matrix [Spec, TP]. In Chomsky's (2001, 2004) Phase-theoretic framework, Long Distance Agreement (LDA) between the DP *three men* and T in the embedded clause operates to guarantee that T_{DEF}'s feature in (8b) (whether it be [person] as in Chomsky's 2001, 2004 account or a D-feature in the present account) is appropriately valued and deleted at the interface. EPP features on both T nodes and the ϕ -features of T_{COMPLETE} in the matrix clause are all equally valued and deleted. Thus, the licensing and locality conditions of the grammar are satisfied and the structure converges at the interface.

In this conception, EXPL elements need not enter the derivation with an uninterpretable [person] feature that would survive deletion in the embedded clause, in such raising contexts as (8b), to be deleted only afterwards in the matrix [Spec, TP] position by LDA once all other features are appropriately valued and deleted. In other words, it is not because [person]/D on EXPL is not valued and 'erased' that EXPL is able to further raise to matrix [Spec, TP], but it is because this feature, being interpretable on EXPL, does not need valuation in the first place. The driving force for the DP raising process is the satisfaction of the EPP in the matrix subject position whereby interpretability of all concomitant features obtains at the interface.

What is important in this account is that, besides the D-feature on T that EXPL values, the ultimate purpose of the insertion process and/or raising process, in the structures at hand, is to satisfy the EPP at the 'strong' Phase in the derivation. It is perhaps this close relationship that exists between the D-feature on EXPL (matching the D-feature of T) and the EPP that makes the status of EXPL elements cross-linguistically quite peculiar among other D-categories. The Merge of these elements does not seem to be driven by their own feature structure. Rather, it is the feature structure of the target that requires their presence – namely, the satisfaction of the EPP at the level where T (or T's feature complex) is introduced. This is indeed the conclusion that such an approach as Miyagawa's (2010) EPP-triggered movement analysis of agreement or that of Roberts & Roussou's (2002) T-criterion would also have us reach.

The same logic works pretty well for an explanatory account of the ungrammaticality of (9b). Although both the lexical subject *three men* and *there* are equally able to satisfy the EPP, the derivation seeks to raise the closest element to matrix [Spec, TP]. Thus in (9b), raising *three men* over *there* violates the licensing and locality conditions of the grammar.

3. Functional Structure in Standard Arabic and the Role of T-Features, D-Features and F-Features in Its Derivation

3.1 Introduction

In the previous section, I have adopted the idea that the interaction of functional categorial features (namely, T-features and D-features) in instances of subject-verb agreement where expletive insertion is operative is what basically distinguishes such subject-raising structures in English making the language closer to null-subject languages of the French type. By and large, the satisfaction of the EPP is what drives computations. EXPL-insertion (*pro* in null-subject languages as in Roberts 2010a; b and Biberauer & Roberts 2010 and *there* in English) applies in response to this structural requirement, and the necessity of feature valuation and/or feature identification of the core functional nodes of sentence structure. This concerns the functional categorial features of both the T node and the C node that selects IP/TP as complement in sentence structure, and the parametrically available D-feature in rich subject-verb agreement instances. When dealing with the derivation of functional structure in SA, it is important to keep in mind that the C node is essentially represented in its split form (Rizzi 1997; 2004a; b; 2006). Such an account is essential in the derivation and interpretation of subject-initial sentences involving a topicalized/clitic left-dislocated DP, as well as of V-initial structural configurations. It is also essential for an adequate description of wh-dependencies and other sentences involving focus in terms of the valuation and/or identification of F-features.

In what follows, I will be concerned with feature valuation and/or identification in wh-dependency structures and in negative contexts (whether a focus feature is involved or not). For the particular account involving the valuation/identification of T-features and the parametrically available D-feature responsible for rich subject-verb agreement in SA, the reader is referred to Jouini (2014; 2018).

Feature identification applies not only to focused/assertive and interrogative elements, but also to negation elements either directly merged in or moved to the position in the ‘Focus sublayer’ of Poletto (2000) and Benincà & Poletto (2004) where they are spelled out at PF. Although Ouhalla (1993; 1994), and Roberts & Roussou (2002) differ in their formulation of the identification requirement on features, such as [wh]/[focus] in the case of question formation or focalization processes, this requirement is a licensing process akin to the cartographic notion of criterial satisfaction applying to the head nodes projected within the split-CP domain, and not a ‘feature-checking’ requirement (Note 5). The identification of F-features, as in yes/no or wh-questions or negation contexts, interacts with the identification of [*i*T] features encoded on Fin at the lower part of the split-CP domain (the ‘Focus’ sublayer). It also interacts with the identification of clause-type features on Force at the higher part of the split-CP domain for singling out the sentence as interrogative as opposed to negative.

3.2 The Negation Elements *Laa*, *Laysa* and *Maa* and the Position of NegP in Functional Structure in SA

There is no consensus in the literature of the negation elements *laa* (together with its two variants *lam* and *lan*), *laysa* and *maa* as to which structural position(s) these functional elements occupy in a VSO language like SA. The question of the existence of a Neg head position in the functional structure of sentences, cross-linguistically, is undisputed in generative grammar particularly under minimalist assumptions. The rather different question of the legitimacy of a NegP projection for the SA NEG elements *laa/lam/lan*, as against *laysa*, on the one hand, and *maa* on the other does not seem to have found a reasonable answer. In addition to that, none of the previous proposals the author is aware of attempted dealing with this issue in terms of systematic Cartographic split-CP assumptions, though some of these proposals have similarities with Cartographic assumptions about negation in SA.

An important idea of the system of assumptions adopted by Ouhalla (1993) is that the negative particle (NEG) *maa* is located in a higher projection in the functional structure of negative sentences in SA. Ouhalla (1993: 297) is primarily interested in the 'focus' properties of *maa* vs. the absence of such properties in relation to the SA 'temporal' NEG element *laa* and its variants *lam* and *lan*:

The system of identification ... on the basis of the distribution of *maa* and focus elements in general also seems to account for the distribution and properties of *laa* and the way it interacts with V-movement. The underlying idea is that the Identification Requirement motivates movement of the verb complex in much the same way ... [it] motivate[s] movement of *f-/wh*-phrases to Spec-FP.

Although Ouhalla's (1993) analysis of NEG *maa* and other focus elements has much in common with the analysis developed here, it still fails to take into account the important issue of whether a NegP projection is needed for the SA NEG element *maa*, as against *laa/lam/lan* and *laysa*.

Bahloul's (2008: 155) analysis of the 'temporal' NEG elements *laa/lam/lan* is similar to Ouhalla's (1993) and Benmamoun's (1992; 2000) in that such elements are merged in their own Neg head position below T and are then raised to T. However, in relation to the NEG element *maa*, Bahloul's (2008) analysis is rather peculiar in that the NEG element *maa* is merged in a position outside IP/TP, which he calls Asrt head. Nevertheless, Bahloul (2008: 164-165), also assumes that the same Asrt head is also the Merge position for such elements as the modal element *qad* and the complementizer element *?inna*.

As for Soltan (2007), he maintains that the NegP projection that harbours the NEG elements *laa/lam/lan* is higher than TP. Nevertheless, this projection is still positioned within the IP domain, since according to Soltan's (2007) assumptions, Neg has a tense feature that attracts the tense feature on the verb, and ends up being spelled out on the negative element.

As far as the present analysis is concerned, what seems to be important in the first place are the structural properties of the NEG element *laa* (and its two variants *lam* and *lan*) as against *maa* and *laysa*. This issue is also tied up to whether NegP is higher than IP in the functional

structure of SA or in a lower position. This is an important question for the derivation of such elements in terms of Merge and/or Move operations in a probe-goal-Agree system, and in terms of the criterial satisfaction model of representation adopted here, where Spec-head and head-head agreement is paramount at LF. A NEG element can be merged in a head position and then moved to another for the satisfaction of some criterion (see (7) above), or it can be directly merged where it is spelled out at PF, and by doing so it will still need to satisfy the requirement of identification by head-head agreement. This direct Merge option is particularly interesting as it signals the availability of a dedicated position in which the element surfaces for the expression of its paramount discourse-scope and/or information-focus properties in the left-periphery of the sentence.

As far as the two variants of the NEG element *laa* are concerned (*lam*, and *lan*) they are merged in the head position Neg, maximally projecting as NegP. They overtly carry temporal information, which is morphologically realized on them, and structurally relates them to T. As in Jouini (2014; 2018), the present analysis maintains that whatever temporal 'inflectional' information T incorporates is actually a consequence of 'feature inheritance' (Chomsky 2001; 2004; 2008) or some kind of feature sharing whereby the head that selects T in sentence structure (i.e., Fin in the split-CP model) passes over its 'inflectional' features to that head (see Table 1). As a consequence of head-head agreement for feature identification, the 'inflectional' feature(s) Fin incorporates will also be shared by the head (or heads) that project(s) in this inflectional domain above TP (what is called in the Cartographic studies of Poletto 2000; Benincà & Poletto 2004 and Joutteau 2005 the Focus sublayer).

Thus, the structure of the split-CP domain can be conceptualized as in (10) (adapted from Poletto 2000; Benincà & Poletto 2004 and Joutteau 2005), but would incorporate in SA two separate functional projections above FinP: Neg(P) projecting above FinP, and Mod(P) projecting above NegP, as represented in (11):

(10) [ForceP [...] [Force [TopP Topic [FocP Focus [Mod(al)P Neg [FinP ...]]]]]]

(11) [ForceP [Force [TopP Topic [FocP Focus [ModP Mod [NegP Neg [FinP ...]]]]]]]]

In (11), the Neg node that projects above FinP in SA is just one instantiation of a number of similar nodes (i.e., besides Focus, the Modal head projection, see note 6) forming the lower Focus sublayer for elements bearing some modal and/or focus properties in relation to the tense/finiteness properties of sentences. For example, in (12) below, the NEG element *lam* is merged in the Neg head node maximally projecting as NegP just above the FinP projection, the head of which harbours the verb *yaʔti* 'come' (EV = Emphatic Vowel):

(12) ʔinna-hu	lam	ya-ʔt-i	ʔal-ʔawlaad-u.
that-it	neg.past	3-imperf.come-ms.juss-ev	the-boys-nom

'Indeed, the boys did not come.'

The functional structure of (12) would be as in Figure 1:

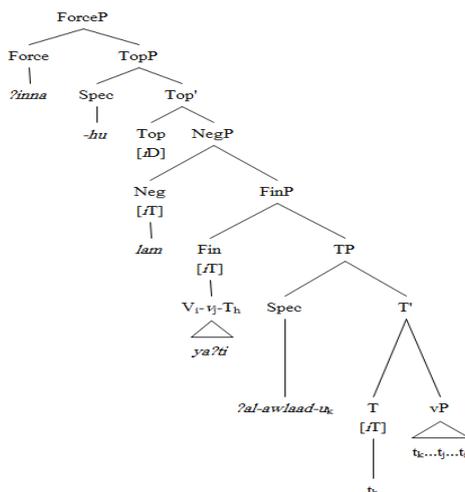


Figure 1. The higher NegP projection in SA (VSO)

The temporal properties of the SA NEG element *lam*, in (12), where the verb *yaʔti* 'come' is in the jussive, is a consequence of the close relationship (head-head agreement) that such a NEG element has with Fin in the split-CP domain of SA. The same agreement configuration arises for *lan* where the verb is in the subjunctive. Whether *lam* and *lan* in SA are generated with T-features (i.e. interpretable tense features [*i*T]) on Neg) of their own remains questionable (Note 6). The tense properties of such elements may simply be the outcome of their interaction with the Fin projection, which is itself generated with such features in addition to ϕ -features, and shared between Fin and T.

In the SVO counterpart of (12), the [*u*D] feature on the Subj node has to be valued by the [*i*D] feature on the D element *pro* in [Spec, SubjP] to account for the rich subject-verb agreement pattern found in such SVO structural configurations in SA (see Jouini 2014; 2018):

- (13) ʔinna ʔal-ʔawlaad-a lam ya-ʔt-uu.
 that the-boys-acc neg.past 3-imperf.come-3mp.juss
 Lit.: 'As for the boys, they indeed did not come.'

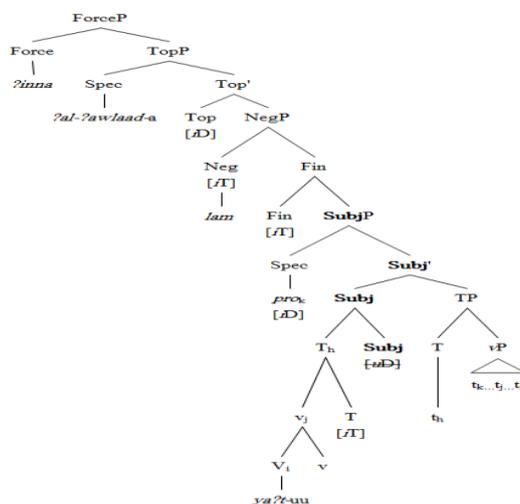


Figure 2. The higher NegP projection in SA (SVO)

In Figure 2, the [iD] feature on the Top node signals the kind of higher predication Rizzi's (1997; 2006) system accounts for, though this [iD] feature is not directly linked to subject-verb agreement in the lower predicational domain in IP/SubjP.

I come now to the other two NEG elements *maa* and *laysa* in SA. The NEG element *maa*, unlike *laysa*, always encodes a focus feature. As already noted above, Bahloul (2008: 164-165) assumes that *maa* is merged in a head node Asrt in the left-periphery of IP. What is interesting in relation to the licensing conditions applying to such a functional element is that it patterns like the assertive emphatic element *la*, both of which would be merged in the head node Asrt. In the framework of assumptions about the split-CP in SA adopted here, *la* and *maa* would be merged in the Foc head projection at the highest level of the 'focus sublayer' above Fin, in structure (11) above. In such a position, the [iF] feature of *maa* (similarly for the assertive element *la*) would be structurally identified (via non-distinctness of features) in relation to the [iT] feature of Fin in the lower part of the split-CP domain, and in relation to the [iT] feature of T in the IP domain.

For example, the representation in Figure 3 below shows how verb movement in the VSO word ordering in SA interacts with *maa* in the derivation of sentence (14), giving the interpretation of a negative Focus structure. The same is true for sentence (15), as represented in Figure 4, where the structure is interpreted as positive Focus:

- (14) ?inna-hu maa jaa?-a yusuf.
 that-it neg perf.come-3ms Joseph
 'Joseph (certainly) did NOT come.'

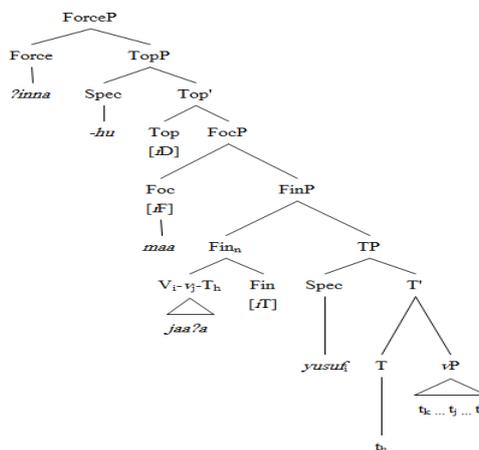


Figure 3. Negative focus structure with *maa*

- (15) ?inna-hu la jaa?-a yusuf.
 that-it foc perf.come-3ms Joseph
 'Joseph (certainly) DID come.'

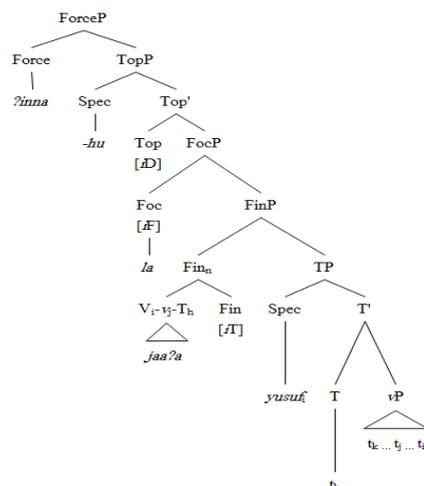


Figure 4. Positive focus structure with *la*

The assumption entertained here is that the Agree relation between *maa* in Foc in Figure 3 (or *la* in the same position in Figure 4) and T raised to Fin (along with V-*v*) is actually not a relation of feature valuation à la Chomsky (2001; 2004). Rather, this head-head Agree relation is assumed to take place to simply 'identify' the features that enter into a 'non-distinctness' 'matching' relation in terms of criterial satisfaction à la Rizzi (1996; 1997; 2006). In this process, the [*i*F] feature of the negative Focus element *maa* in Figure 3 and the [*i*F] feature of the positive Focus element *la* in Figure 4 are 'matched' against the [*i*T] feature of Fin.

As for the subject-agreement inflected NEG element *laysa*, it is used as a negative auxiliary to deny a property in someone or some other entity, or to deny a certain behavior, or course of action in the present time. As such, the use of the NEG element *laysa* in such instances is similar to the use of auxiliary *kaana* (be.PAST) in past contexts, but without the negative interpretation (Note 7). In functional structure, both *laysa* and *kaana* have a verb-like behaviour in relation to their subject agreement properties in SA, which is obvious from their sensitivity to the agreement asymmetry between VSO and SVO structural configurations, as in VSO (16a) and (17a) vs. SVO (16b) and (17b) below (Note 8):

- (16) a. *laysa* ʔal-ʔawlaad-u fii l-bayt-i.
 neg-3ms the-boys-nom in the-house-gen

‘The boys are not in the house.’

- b. ʔal-ʔawlaad-u lays-uu fii l-bayt-i.
 the-boys- nom neg-3mp in the-house-gen

‘The boys are not in the house.’

- (17) a. *kaana* ʔal-ʔawlaad-u fii l-bayt-i.
 Be.past-3ms the-boys-nom in the-house-gen

‘The boys were in the house.’

b. ʔal-ʔawlaad-u kaan-uu fii l-bayt-i.
the-boys-nom Be. past-3mp in the-house-gen

‘The boys were in the house.’

The negative interpretation of *kaana* (be.PAST) is rendered in SA by the use of the negative marker *lam* co-occurring with the imperfective form of the auxiliary verb in the jussive, as in (18a) for the VSO word order, and (18b) for the SVO word order (EV = Epenthetic Vowel):

(18) a. lam ya-kun-i ʔal-ʔawlaad-u fii l-bayt-i.
neg. past 3-imperf.BE-3 mp.juss-ev the-boys-nom in the-house-gen

‘The boys were not in the house.’

b. ʔal-ʔawlaad-u lam ya-kuu-nuu fii l-bayt-i.
the-boys- nom neg. past 3-imperf.BE-3 mp. juss in the-house-gen

‘The boys were not in the house.’

The fact that the NEG element *laysa* inflects for subject-verb agreement just like auxiliary *kaana* suggests that these two elements occupy the same structural position in the functional part of the sentence. The figures in Table 2a, Table 2b and Table 2c structurally represent the positions of NEG elements in SA in the process of the derivation of the functional structure within which these elements project:

Table 2a. The derivation of NEG elements *laa/lam/lan* in SA functional structure

NEG elements	IP/TP level	Split-CP level
<i>laa/lam/lan</i>		
For a sentence like (12) above		

Table 2b. The derivation of the NEG elements *maa* in SA functional structure

NEG element	IP/TP level	Split-CP level
<i>Maa</i>		
For a sentence like (14) above		

Table 2c. The derivation of the NEG element *laysa* in SA functional structure

NEG element	IP/TP level	Split-CP level
Subject-agreement inflected <i>laysa</i> : - In the VSO word order, for a sentence like (16a) above		
- In the SVO word order for a sentence like (16b) above		

Tables 2a,b,c are interesting in that they show the distribution of NEG elements in the sentence structure of SA on the basis of their location and their feature properties. According to the assumptions adopted here about the structure of the split-CP system (see (11) above), there is a Neg head projection (maximally projecting as NegP) projecting higher than the head Fin node. As shown in Table 2a, this higher Neg node is the Merge site for the ‘temporal’ negation elements *lam* and *lan* (as ‘temporal’ variants of the NEG element *laa*; cf. Ouhalla 1993: 276).

There is a second Neg(P) in the functional structure of SA, which projects in between TP and ν P/VP (Note 9). This lower Neg head is the Merge site for the NEG subject-agreement inflected negation marker *laysa* (as shown in Table 2c). This NEG element is phonetically realized in IP in sentences with the SVO word order where the ‘subject’ DP is a Topic. In the VSO word order, *laysa* raises to Fin, as already noted in relation to a sentence like (16a) above.

As for the NEG element *maa* (as shown in Table 2b), I have already discussed the assumption that it does not project as a Neg node, but has the same distribution as the affirmative emphatic element *la*.

In comparison to the NEG element *maa* in SA, *laysa* can interchangeably be used instead of *maa* in sentences implying a contrastively focused reading, as in (20b) for sentence (19b):

- | | | | | |
|--------|--|--------------------|--------------------|---------------------|
| (19)a. | <i>maa</i> | ?allafa-t | <i>zaynab-u</i> | <i>riwaayat-an.</i> |
| | neg | perf.write.3fs | Zaynab-nom | novel-acc |
| | ‘Zaynab did NOT write a novel.’ | | | |
| b. | <i>maa</i> | <i>riwaayat-an</i> | ?allafa-t | <i>zaynab-u.</i> |
| | neg | novel-acc | perf.write.3 fs | Zaynab-nom |
| | ‘It is NOT a novel that Zaynab wrote.’ | | | |
| (20)a. | * <i>laysa-</i> | ?allafa-t | <i>zaynab-u</i> | <i>riwaayat-an.</i> |
| | neg.3fs | perf.write.3fs | Zaynab-nom | novel-acc |
| | ‘Zaynab did NOT write a novel.’ | | | |
| b. | <i>laysa-t</i> | <i>riwaayat-an</i> | ?allafa-t | <i>zayanb-u.</i> |
| | neg.3fs | novel-acc | perf.write.3fs | Zaynab-nom |
| | ‘It is NOT a novel that Zaynab wrote.’ | | | |

Sentences (19a, b) are adapted from Ouhalla (1993: 287). Whereas the NEG marker *laysa-t* in (20b) can be used instead of *maa* in (19b), *laysa-t* in (20a) cannot replace *maa* in (19a). This is accounted for on the assumption that *laysa* is incompatible with verbs used in the past tense because *laysa* and its subject-agreement inflected variants (as listed in note 7) already carry a ‘tense’ morpheme which encodes a pure agreement relation. Thus, in (20a), *laysat* cannot

negate the verbal event *ʔallafa-t zaynab-u riwaayat-an* ‘Zaynab wrote a novel’. In terms of syntactic structure, the co-occurrence of a ‘past-tense’ inflected verb and *laysat* would be ruled out on the basis that both elements would occupy the T node as a consequence of the necessity of raising *laysat* to that position after it is merged in Neg below T.

For ease of exposition, I will not represent the structures corresponding to (19b) and (20b), but see Figure 5 and Figure 6 below. Table 2a and Table 2c give representative tree structures for both NEG elements with the only exception that in cases like (20b), the NEG element *laysa* encodes an [iF] feature, not just an [iT] feature. Thus, merging *maa* in Foc (in the split-CP) and raising *laysa* to T (at the IP level) and then to Fin (at the split-CP level) in such instances, contribute to the scope properties (19b) and (20b) encode. By virtue of the contrastive focus function the Merge of *maa* and the raising of *laysa* brings about in functional structure at the interface between syntax and discourse, the identification requirement (which modal and negation elements in the ‘focus field’ above Fin have to meet) is satisfied.

As Benmamoun (2000: 105) points out, *laysa* is not compatible with future tense, as in (21a). This is also true of *maa* as exemplified in sentence (21b) (example (21a) is adapted from Benmamoun 2000: 109):

- (21) a. **laysa* sa-yu-saafir-u zayd-un.
 neg.3ms mod(fut)-3-imperf.travel- ms.ind Zayd-nom
 ‘Zayd is not going to travel.’
- b. **maa* sa-yu-saafir-u zayd-un.
 neg mod(fut)-3-imperf.travel- ms.ind Zayd-nom
 ‘Zayd is not going to travel.’

Similarly, the *laysa* and *maa* NEG elements cannot be used in conjunction with the Modal particle *qad*, which when co-occurring with an imperfective verb expresses the future tense, as in (22a,b):

- (22) a. **qad* *laysa* yu-saafir-u zayd-un.
 mod neg.3ms 3-imperf.travel- ms.ind Zayd-nom
 ‘Zayd will probably not travel.’
- b. **qad* *maa* yu-saafir-u zayd-un.
 mod neg 3-imperf.travel- ms.ind Zayd-nom
 ‘Zayd will probably not travel.’

In (22a,b), the NEG elements *laysa* and *maa* are not compatible with the modal element *qad* for the expression of the non-occurrence of a future event. The only grammatical output is to use modal *qad* with the NEG element *laa* as in (23a), to express the probable non-completion

Figure 5. Contrastive negative focus structure with *laysa*

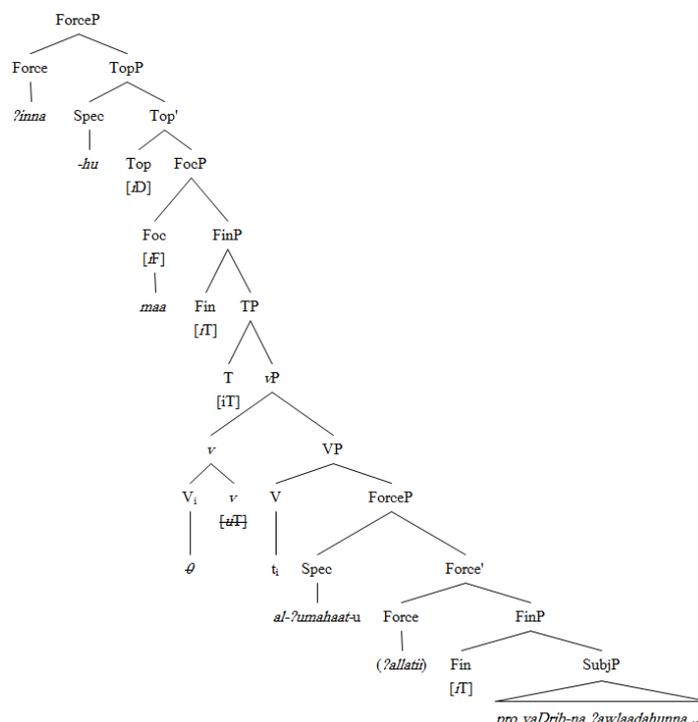


Figure 6. Contrastive negative focus structure with *maa*

The structures in Figure 5 and Figure 6 are bi-clausal with two separate IP domains (Akkal & Gonegai 2000; Demirdache 1989/2013 for the claim of a bi-clausal architecture in such configurations) (Note 10). These bi-clausal structures involve two ForceP structures where the lower ForceP is selected by the V in the higher clause. Both these ForceP structures involve a lower IP domain, which projects as SubjP (with a direct left-periphery involving the projection of FinP). Since *laysa* is verb-like and functions as an auxiliary verb, the IP domain in the higher ForceP projects as TP involving a matrix VSO sentence. In addition, in both the higher clauses in Figure 5 and Figure 6, no lexical verb is generated in the higher clause. Thus, the V head of the VP projection in that clause is not lexicalized and is left empty as a null V (i.e., \emptyset). V raises to v whereby the dependency relation between T and V- v applies in terms of the head-head agreement configuration linking $[uT]$ on v to $[iT]$ on T: $[uT]$ is valued and gets deleted, i.e., $[\cancel{uT}]$. The relation between v and T in terms of the valuation of the T-feature on v remains essential within IP for Full Interpretation at the interface of syntax with systems of language use (Chomsky, 1986).

In Figure 5, the higher IP domain involves the raising of NEG to T and the NEG-T complex to Fin in the left periphery. The raising of NEG-T to Fin operates just like ‘partially’ inflected verbs raise to Fin in SA VSO sentences. In Figure 6, *maa* is merged under the Foc head. In both structures, interpretability of the $[iF]$ focus feature of *laysa* and *maa* operates with the interpretable $[iT]$ features on Fin and T via the identification of non-distinct interpretable features.

As for the DP *ʔal-ʔumahaat-u* ‘the mothers’ in both representations, it has the status of a focused DP merged in [Spec, ForceP] where it is base-generated (see section 3.3 below on question wh-operators and relative operators in SA). Base-generating the DP *ʔal-ʔumahaat-u* in the Spec of Force in these structures is supported by the optionality of having the relative complementizer *ʔallaatii* merged in Force and agreeing in gender and number with the DP in [Spec, ForceP]. Thus, being base-generated in the left periphery of IP (represented as SubjP, i.e., the lower clause in Figure 5 and Figure 6), the DP *ʔal-ʔumahaat-u* is co-referential with a resumptive pronoun *pro*_{referential} in the Spec position of the inflectional complex [V-*v*-T-Subj] (not represented in Figure 5 and Figure 6 for reasons of space). In the lower clause, subject-verb agreement is established at the level of SubjP (i.e., the strong Phase, at the level where *v/V*-to-T and T-to-Subj apply) accounting for the fully realized agreement inflection *-na* on the verb *yaDrib-na* ‘they hit’.

Given the anaphoric relation between T in the lower clause and T in the higher clause (cf. Akkal & Gonegai 2000), the subject-agreement inflected NEG element *laysa-t* ‘partially’ agrees in 3rd person and feminine gender features with the feminine plural noun *ʔal-ʔumahaat-u* to its right in [Spec, ForceP] in the higher part of the split-CP of the lower clause. As discussed above, the DP *ʔal-ʔumahaat-u* is itself resumed in the lower clause by the resumptive *pro* in the Spec position of the inflectional complex V-*v*-T-Subj. The ‘partial’ agreement configuration between the subject-agreement inflected NEG element *laysa-t* in Figure 5 and the DP *ʔal-ʔumahaat-u* is reminiscent of the agreement configuration that obtains between the verb raised to Fin and a subject DP in [Spec, TP] in SA VSO sentences, as in (25) below:

- (25) *ʔinna-hu* *jaaʔa-t* *ʔal-bannat-u*.
 that-it perf.come-3fs the-girls-nom
 ‘The girls came.’

In (25), the verb *jaaʔa-t* ‘came’ ‘partially’ agrees with the feminine plural noun *ʔal-bannat-u* ‘the girls’ in this VSO sentence. Thus, in (24a) and (25), both the ‘partially’ subject-agreement inflected NEG particle *laysat* and the subject-agreement inflected verb *jaaʔat* ‘came’ agree with their respective DP elements to their right (i.e. *ʔal-ʔumahaat-u* in the higher part of the split-CP domain of the lower clause in (24a) and the ‘post-verbal’ subject DP *ʔal-bannat-u* ‘the girls’ in (25)).

This section has shown that the derivation of structural configurations (whether exhibiting VSO or SVO word order) in SA, whereby Focus and Topic elements interact with tense/modality properties of sentences, satisfies the requirement that uninterpretable features have to be valued and/or the requirement that the relevant interpretable features be identified. In the derivation of the sentences in question, the morphological manifestation of Tense and subject-verb agreement is thus determined via the head-head and/or Spec-head agreement relations involved in the Merge and raising processes linking the IP domain to the split-CP domain.

In this respect, I have assumed that the derivation of VSO sentences, in SA, involves the raising of the verb to the Fin node projecting at the lower part of the split-CP domain (see also Jouini 2014; 2018). In SA VSO word order, Fin selects a TP that does not further project to SubjP. In the absence of the functional Subj node in SA VSO word order, the verb, raised to T and partially agreeing with the subject DP raised out of [Spec, vP/VP] to [Spec, TP], further raises to Fin. The head-head agreement configuration, which arises as the outcome of the selectional relation that links T to Fin, satisfies the requirement that [*i*T] features be identified. The possibility of merging tense/modal particles such as the modal *qad* (see Jouini 2018) or the NEG elements *lam* and *lan* under the relevant functional nodes that project above FinP is further evidence that the verb does not raise further than the Fin head projection in the structure of the split-CP domain (*contra* Aoun et al. 2010).

As for the derivation of SVO structural configurations in SA, I have assumed that it involves the base-generation of ‘subject’ DPs as Topics in the left-periphery. In this case, full subject-verb agreement and the satisfaction of the EPP in the IP domain follow from the presence of a referential *pro* with an intrinsic [*i*D] feature in [Spec, SubjP]. Referential *pro* not only links the uninterpretable D-feature on Subj (i.e., [*u*D] on Subj) to ϕ -feature valuation and the satisfaction of the EPP at the IP domain, but also links [*i*D] on the Top node projected in the split-CP domain to the V-v-T-Subj complex in IP whereby all features are licensed at the interface.

A similar account has been shown to hold of sentences where NEG elements are merged in the split-CP domain whereby the identification of negation markers not only accounts for clause type (i.e., interpreting such sentences as [+negative]), but also for negative assertiveness as the sentence gets such an interpretation at the interface. An additional contrastive focus interpretation is brought about in sentence structure by the Merge of the NEG element *maa*, merged in Foc, and the raising of the NEG element *laysa* to Fin – in the VSO case discussed in relation to sentence (24a).

3.3 The Derivation of Wh-Dependencies in SA: Wh-Questions and Relatives

The evidence discussed in this section suggests that the derivation of wh-dependencies in SA exploits the different specifier and head positions provided by the splitting of the CP domain (Rizzi 1997). Contrary to Ouhalla’s (1993) ‘morphological’ identification analysis, I capitalize on the assumption that there is only one feature involved in such wh-dependencies, which needs to be structurally licensed on Foc – namely the [WH]-feature, which takes the form of a [*u*F] uninterpretable feature on Foc, but which is encoded as an interpretable [*i*WH] feature on the moved wh-word. Nevertheless, the Spec-head agreement mode of licensing involved in the licensing of the [*u*F] feature on Foc represents one of two modes of licensing co-existing in the derivation of wh-dependencies (cf. Rizzi and Shlonsky 2007). The second mode of licensing applies between Foc and the Fin head in terms of a head-head agreement mode of licensing, which generalizes to any node that projects within the ‘focus sublayer’ of the SA split-CP domain relating Fin to the nodes that project therein.

The derivation of wh-dependencies in SA involves internal Merge of wh-elements in [Spec, FocP] whereby wh-movement occurs or their base-generation in [Spec, ForceP] (in some

cases of wh-question formation and in relativization where a complementizer element has to morphologically realize the Force head). The derivation of such dependencies in the grammar of languages involves the identification of features on the respective head projections (i.e., the interpretable [*i*T]-feature on Fin/T and the uninterpretable [*u*F]-feature on Foc) via head-head agreement. This process also involves the licensing of wh-features via the Spec-head agreement mechanism for the valuation of the [*u*F]-feature on Focus in relation to [*i*WH] on the wh-element (cf. Chomsky's 1995b traditional feature-checking analysis of wh-dependencies). On such an account, criterial satisfaction at the interface would be the result of the interaction of both modes of licensing conditions (cf. Rizzi & Shlonsky 2007).

There are cases of wh-dependencies within a matrix clause in SA where the order of constituents [wh-word] ... [Topic DP] seems to be allowed (Note 11), but which in reality involve a phonetically realized Force head, thus disrupting the ungrammatical word order found in wh-dependencies in SA. The wh-question in (26a) below is one such case. In (26b), I provide the VSO counterpart of (26a):

- (26) a. man *(ʔalladhii) ʔal-ʔabaaʔ-u yaDrib-uuna(-hu)?
 who (that.ms) the-parents-nom 3-imperf.hit-mp.ind(-him)
 Lit.: 'Who is it that parents are hitting (him)?'
- b. man (ʔalladhii) ya-Drib-u(-hu) ʔal-ʔabaaʔ-u?
 who (that. ms) 3-imperf.hit-3 ms.ind (-him) the-fathers- nom
 'Who is it that the fathers hit him?'

The obligatory presence of the complementizer *ʔalladhii* 'that' in (26a) suggests that the structure of the sentence is different from that of an ungrammatical wh-question with the constituent word ordering of [wh-word] ... [Topic DP]. In (26b), the DP *ʔal-ʔabaaʔ-u* is postverbal and does not occur in TopP. The derivation of (26a) can be represented as in Figure 7:

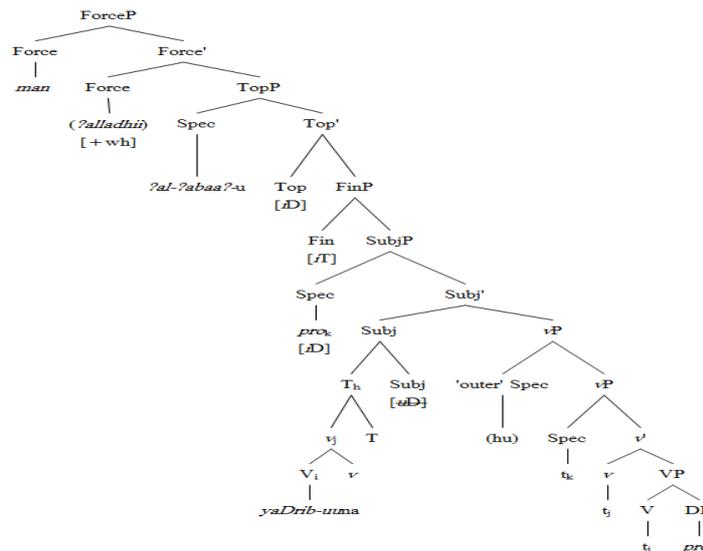


Figure 7. Wh-Question with obligatory complementizer ʔalladhii

To understand the processes involved in the derivation of such a structure, let us consider the structure of relative clauses, which is comparable to that of the wh-question in (26a). For that purpose, I will structurally represent in Figure 8 the first example listed in (27) below:

- (27) a. ʔal-walad-u *(ʔalladhii) ʔal-ʔabaaʔ-u ya-Drib-uuna(-hu) ...
the-boy- nom (that. ms) the-parents- nom 3- imperf.hit- mp.ind(-him)
‘The boy that parents are hitting him ...’
- b. ʔal-bint-u *(ʔallatii) ʔal-ʔabaaʔ-u ya-Drib-uuna(-haa) ...
the-girl-nom (that.fs) the-parents-nom 3- imperf.hit- mp.ind (-her)
‘The girl that parents are hitting her ...’
- c. ʔal-ʔawlaad-u *(ʔalladhiina) ʔal-ʔabaaʔ-u ya-Drib-uuna(-hum) ...
the-boys-nom (that.mp) the-parents-nom 3-imperf.hit-mp.ind(-them.m)
‘The boys that parents are hitting them ...’
- d. ʔal-banaat-u *(ʔallaatii) ʔal-ʔabaaʔ-u ya-Drib-uuna(-hunna) ...
the-girls-nom (that.fp) the-parents- nom 3-imperf.hit-mp.ind(-them.f)
‘The girl that parents are hitting her ...’

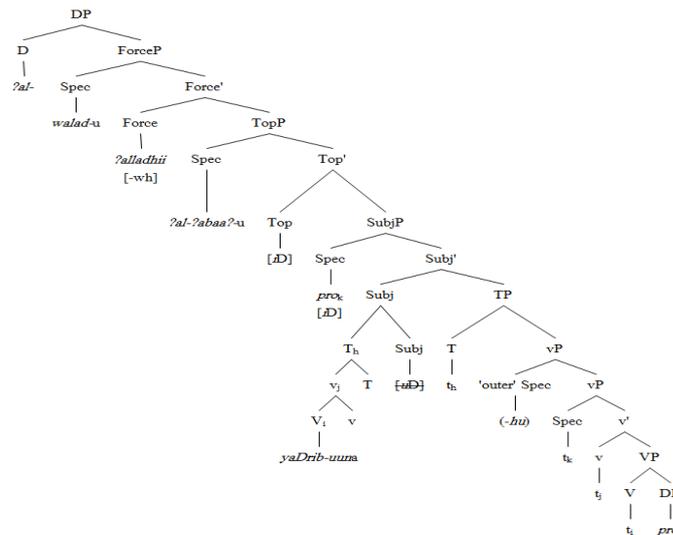


Figure 8. Relative clause with complementizer ?alladhii

In Figure 8, Force is realized as a relative complementizer *?alladhii* ‘who’, but no actual wh-movement takes place. Instead, a resumptive *pro* is inserted in object position to account for the optionality of the object clitic *-hu* in ‘outer’ [Spec, vP] from where the clitic attaches to the raised verb under the inflectional complex V-v-T-Subj. The relative complementizer *?alladhii* in Figure 8 signals a [-wh] clause type, and the function of the D element selecting ForceP ensures that this is the interpretation the structure gets at the interface. Coming back to Figure 7, the wh-word *man* ‘who’ is assumed to be base-generated in [Spec, ForceP], similarly to the base-generation of the relative NP *walad-u* in the structural representation Figure 8. The structures in Figure 7 and Figure 8 show the same characteristics in terms of the merge of the wh-word *man* ‘who’, in Figure 7, and of the head of the relative clause i.e., the relativized NP *walad-u* ‘boy’ in Figure 8. Both elements are assumed to be base-generated in [Spec, ForceP], suggesting that no wh-movement is involved in Figure 8. Thus, the wh-dependency in such a relative clause is formed on the basis of a resumptive link between the relativized NP *walad-u* and the object resumptive pronominal *pro* complement to V (which is also resumed by the optional pronominal clitic *-hu* in ‘outer’ [Spec, vP] in Figure 8). The same is true of the wh-dependency in Figure 7 where the wh-dependency applies between the wh-word *man*, the object resumptive pronominal *pro* and the optional pronominal clitic *-hu*. My assumption is that there is no [uF] feature on the Force head that would trigger wh-movement in the first place in such structures.

As for the structure of (26b) (repeated below as (28), it is represented as in Figure 9:

- (28) *man* (*?alladhii*) *ya-Drib-u(-hu)* *?al-?abaa?-u?*
 who (that. ms) 3- imperf.hit-3ms.ind(-him) the-fathers- nom
 ‘Who is it that the fathers hit him?’

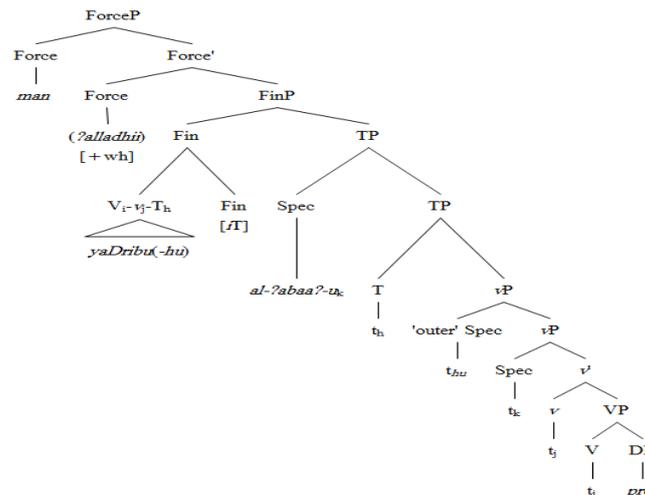


Figure 9. Wh-Question with optional complementizer ?alladhii

The optionality of the complementizer *?alladhii* realizing the head Force in Figure 9 is concomitant with the fact that no Topic DP is generated in such a sentence. The assumption here is that, whenever the raising process of the inflectional verbal complex V-v-T to Fin applies in VSO structural configurations in SA, the ‘subject’ DP cannot be a Topic, but is a subject DP in [Spec, TP] in the IP domain. Thus, no topic DP is merged in the split-CP domain of a wh-construction like (28) in contrast to the ungrammatical wh-construction in (29) below where *?al-?abaa?-u* functions as a Topic DP following the wh-word *man* in [Spec, ForceP] (see Jouini 2018):

- (29) *man ?al-?abaa?-u ya-Drib-uuna?
 who the-parents-nom 3-imperf.hit-mp.ind
 Lit.: ‘Who, parents, do they hit?’

The grammar of SA provides two other alternatives to (26a). One alternative is to have the type of wh-constructions shown in (30a-d) below:

- (30) a. man huwa (?al-walad-u) ?alladhii ?al-?abaa?-u ya-Drib-uuna(-hu)?
 who he (the-boy-nom) that.ms the-parents-nom 3-imperf.hit-mp.ind(-him)
 Lit.: ‘Who is he (the boy) that parents are hitting (him)?’
- b. man hum (?al-?awlaad-u) ?alladhiina ?al-?abaa?-u
 who they(m) (the-boys-nom) that.mp the-parents-nom
 ya-Drib-uuna(-hum)?
 3-imperf.hit-mp.ind(-them)
 Lit.: ‘Who are they (the boys) that parents are hitting (them)?’

c. man hiya (ʔal-bint-u) ʔallatii ʔal-ʔabaaʔ-u ya-Drib-uuna(-haa)?
 who she (the-girl-nom) that.FS the-parents-nom 3-imperf.hit-mp.ind(-her)

Lit: ‘Who is she (the girl) that parents are hitting (her)?’

d. man hunna (ʔal-banaat-u) ʔallaatii ʔal-ʔabaaʔ-u
 who they(f) (the-girls-nom) that.fp the-parents-nom
 ya-Drib-uuna(-hunna)?

3-imperf.hit-mp.ind(-them.f)

Lit: ‘Who are they (the girls) that parents are hitting (them)?’

The wh-constructions (30a-d) show the sequence of a wh-word, a pronoun and a relative clause, in which the DP *ʔal-walad-u* ..., coming before the complementizer *ʔalladhii* or one of its variants is optional. These constructions are reminiscent of what Ouhalla (1999: 336, 341) designates as the counterpart of English clefts in SA. Thus, for example, substituting the wh-word *man* in (30c) with a proper noun like *Zaynab* yields a sentence like (31) below (adapted from Ouhalla 1999: 341):

(31) Zaynab-u hiya (ʔal-bint-u) ʔallatii ʔal-ʔabaaʔ-u ya-Drib-uuna-haa.

Zaynab-nom she (the-girl-nom) that.fs the-parents-nom 3- imperf.hit-mp.ind-her

Lit: ‘Zaynab is she (the girl) that parents are hitting.’

‘It is Zayab who parents are hitting (her).’

According to Ouhalla (1999: 341), the structure of such sentences as (31) in SA is [F(ocus)-DP PRON RC], which “involves a structure close, but not identical, to the structure of clefts in English”.

Exploiting Rizzi’s (1990) [\pm wh]; [\pm predicative] feature system, as given in Table 3 below, clause type in the wh-structures in Figure 7 and Figure 9 above can be distinguished from clause type in the relative clause structure in Figure 8 on the basis of the [\pm predicative] feature:

Table 3. The feature structure of complementizer elements (Note 12)

Complementizer types in English	Feature structure	Example
Declarative C	[-wh]; [-predicative]	‘I know that you saw it’
Interrogative C	[+wh]; [-predicative]	‘I wonder what you saw’
Relative C 1	[+wh]; [+predicative]	‘The thing which you saw’

Relative C 2	[-wh]; [+predicative]	‘The thing that you saw’
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Thus, on the basis of the feature structure of complementizer types in Table 3, what seems to be important in the derivation of Figure 7 and Figure 9 is not only the value given to clause type in terms of the feature system [\pm wh] *per se*, but also its characterization in terms of the [\pm predicative] feature system. According to Rizzi (1990), the [+predicative] feature specification is a distinctive property of relatives (in conjunction with the [\pm wh] feature specification) as against both declarative clauses, which are [-predicative] (and [-wh]), and interrogatives, which are [-predicative] (and [+wh]). Thus, if Rizzi’s characterization of the feature structure of relatives cross-linguistically is correct, whereas the complementizer *ʔalladhii* in the interrogative structure in Figure 7 and Figure 9 is [+wh] and, essentially, [-predicative] – namely, a wh-question, the complementizer *ʔalladhii* in the relative structure Figure 8 is [-wh] and [+predicative] – namely a relative clause.

Another alternative to the wh-question in (26a) is to use a wh-phrase as in English *which boy*, *which girl* and so on. In the structural representation in Figure 10 for the wh-question in (32a), I represent the wh-phrase as a QP, the head position of which realizes the Q-head element *ʔayyu/ʔayyatu*:

- (32) a. ʔayyu walad-in (*? ʔalladhii) ʔal-ʔabaaʔ-u ya-Drib-uuna(-hu)?
 which(m) boy-gen that.ms the-parents-nom 3-imper.hit-mp.ind(-him)
 ‘Which boy do parents hit?’
- b. ʔayyatu bint-in (*? ʔallatii) ʔal-ʔabaaʔ-u ya-Drib-uuna(-ha)?
 which(f) girl- gen that. fs the-parents- nom 3-imper.hit-mp.ind(-her)
 ‘Which girl do parents hit?’
- c. ʔayyu ʔawlaad-in (*? ʔalladhiina) ʔal-ʔabaaʔ-u ya-Drib-uuna(-hum)?
 which(m) boys- gen that. mp the-parents-nom 3-imper.hit-mp.ind(-them. m)
 ‘Which boys do parents hit?’
- d. ʔayyatu banaat-in (*? ʔallaatii) ʔal-ʔabaaʔ-u ya-Drib-uuna(-hunna)?
 which(f) girls- gen that. fs the-parents- nom 3-imper.hit-mp.ind(-them. f)
 ‘Which girls do parents hit?’

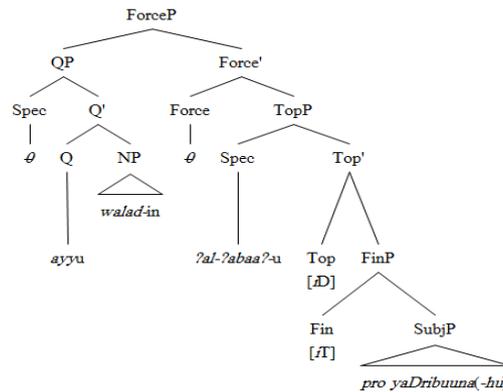


Figure 10. Wh-Question with a QP in [Spec, ForceP]

The wh-constructions in (32) are ‘grammatical’ with no need of merging the complementizer *?alladhii* (or one of its variants) in Force (Note 13). The non-realization of the complementizer *?alladhii* in a structure like Figure 10 can be accounted for by assuming that some kind of agreement (morphologically encoded on the head *?ayyu/ayyatu* in (32a–d)) has already been established within the QP *?ayyu walad-in* in [Spec, ForceP]. The head status of the element *?ayyu/?ayyatu* is suggested by the morphological composition of this element – namely, an initial syllable *?a* that is synonymous with the Q-head marker *?a* for asking Yes/No questions in SA and some gender morpheme *-yu/-yatu* (Note 14).

Thus, in Figure 10, the Q-head marker *?ayyu* agrees in either masculine or feminine gender with its sister NP. Apart from gender agreement (see note 14), the head-complement relation established within the QP [Q NP] in [Spec, ForceP] in Figure 10 is akin to the relation of a head D and its complement DP [D NP]. The only difference between the Q-NP head-complement relation in Figure 10 and the relation of D to its NP complement is that, whereas the Q-head *?ayyu/?ayyatu* in Figure 10 ‘assigns’ Case – namely, GEN(itive) Case – to its complement, no such Case-marking relation exists between D and its complement NP. Thus, in Figure 10, this morphologically marked head-complement agreement relationship (marked for gender agreement on the Q-head and for GEN Case on the complement NP) between the head *?ayyu/?ayyatu* and its complement NP *waladin* is a sufficient licensing condition for the wh-phrase *?ayyu waladin* with no need of lexically realizing Force as *?alladhii* in such a case (Note 15).

The reverse ordering of the Topic DP *?al-?abaa?-u* ‘parents’ and the QP *?ayyu walad-in* is also allowed. Thus, sentence (33) would have a structure as in Figure 11:

- (33) *?al-?abaa?-u* *?ayyu walad-in* (*? *?alladhii*) *yaDrib-uuna(-hu)?*
the-parents-nom which(m) boy-gen that.ms 3-imper.hit-mp.ind(-him)
‘Which boy do parents hit?’

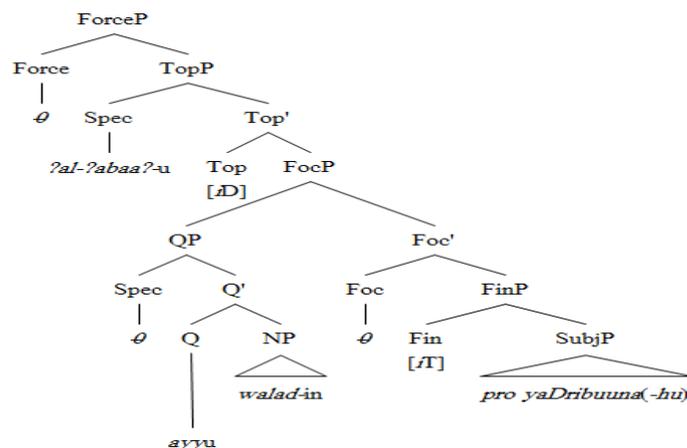


Figure 11. Wh-Question with a QP in [Spec, FocP] following the topic DP

In Figure 11, the Topic DP *?al-?abaa?-u* base-generated in [Spec, TopP], and resumed by a resumptive *pro* in [Spec, SubjP], precedes the QP *?ayyu walad-in* wh-moved to [Spec, FocP]. Force remains empty.

This section has shown that a [+wh] element in [Spec, FocP] can only be preceded by a Topic and cannot be followed by it. As far as wh-interrogatives are concerned, the derivation of such dependencies in SA is not necessarily a process of wh-extraction. In the cases where wh-extraction takes place, the trigger of wh-movement is assumed to be a [*uF*] feature of the Foc head, valued by the moved wh-element in [Spec, FocP]. In the cases where a resumptive strategy replaces wh-extraction, the wh-element is spelled out in [Spec, ForceP], with the complementizer *?alladhii* merged in Force (i.e., the head that determines clause type). Only in the cases where a Topic DP is not involved in such wh-dependencies is the Merge of *?alladhii* optional. In the cases where *?alladhii* is obligatory, what differentiates a relative complementizer type from an interrogative complementizer type is the [\pm predicative] feature in conjunction with the [\pm wh] feature. My assumption has been that, irrespective of whether the Force head is realized or left empty in such instances of interrogative sentences, no [*uF*] feature needs to be valued.

4. Conclusion

The study of the derivation and representation of the functional structure of SA has shown the importance of functional categorial features in movement and agreement processes. Within the probe-goal-Agree framework basically adopted here, D-features and T-features play an essential role in the licensing of null subjects and the satisfaction of the EPP at the level of IP (= SubjP, in the present analysis). Thus, it is in terms of the valuation and/or identification of D-features that both Top and the [V-v-T-Subj] inflectional complex configurationally connect a DP to syntactic predication. The split-CP analysis of SA functional structure shows that it is by virtue of the licensing requirement of criterial satisfaction (building on the assumptions of Rizzi and Shlonsky 2007) that both Spec-head agreement and head-head agreement operate

essentially in the cases where an additional ‘focus’ [μ F]feature is involved in the derivation of interrogative sentences. In this conception, both the head of FocP and the head TopP would be involved in some kind of criterial satisfaction. However, whereas Focus could be licensed via a Spec-head agreement relation involving an *wh*-word and the Focus feature on the Foc head, or via a strict head-head agreement relation between Focus and Finiteness (and Tense) in negation contexts, Topic could only be licensed via a strict head-head agreement relation. This head-head agreement relation is essential in the structural connectedness that exists between the [i D] feature on the Topic head and the V- ν -T-Subj complex in IP where the valuation of [μ D] on Subj via *pro*-insertion satisfies interpretability at the interface.

The general character of the [i F]feature within the functional structure of SA as a property of functional head elements in the so-called ‘focus sub-layer’ field of the split-CP domain (Poletto 2000b and Benincà & Poletto 2004) has been a cornerstone of the analysis of *wh*-dependencies and negative constructions (either involving contrastive focus or not). The [i F]feature has the property of linking [i F] to clause type in the higher portion of the split-CP domain and, at the same time, to the [i T] feature of Fin at the lower end of the split-CP domain. In the Agree feature-based account of the data presented here, the *raison d’être* of the element endowed with such an [i F] feature is to phonetically realize some X head within the split-CP domain of SA for the expression of some information-related property of the element, such as ‘focus’ or (negative) assertiveness. On this account, the processes involved in the derivation of functional structure in SA concern some additional functional feature of a more general character. Besides the [$\underline{\mu}$ F] feature that needs valuation in *wh*-contexts, the [i F] feature can be linked to ‘focus’ or (negative) assertiveness either contrastive or not. As far as Topic DPs are concerned, the [i D] feature of the Top node in the split-CP domain is indirectly identified in relation to the valuation of [μ D] on Subj in the IP domain.

Ultimately, whether the licensing of the relevant features (either interpretable or uninterpretable) involves identification or valuation within the relevant domains where they are being merged, this licensing process is conducive to the general purpose of the derivation of sentences in the grammar of a particular language, i.e., the generation of agreement configurations in the broad sense of the term. Thus, the identification of [i D] on Top represents a different process from the ‘checking’/valuation of [μ D] on SubjP by *pro* in [Spec, SubjP] for the kind of rich subject-verb agreement that arises in SA SVO sentences. The same is true of the identification of [i F] on Neg elements involving contrastive focus in relation to [i T] on Fin, as against the ‘checking’/valuation of the [μ F] feature on Foc by [i Wh] on Wh-elements in relation to discourse-scope and/or information-focus properties arising at the interface as the sentence is being interpreted.

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Notes

Note 1. Benmamoun (2017) considers the claims for and against the legitimacy of postulating subject DPs as actually being Topic DPs, mainly as expounded in Soltan (2007). However, Benmamoun's (2017) concerns are restricted to the issue of the nature of the element occupying the structural subject position i.e., [Spec, IP/TP], and not the issue of whether the initial DP is left-dislocated or not.

Note 2. The following are the technical abbreviations used in the glossed examples or elsewhere in the paper:

3 = third person of the verbal agreement system. A' = non-argument. ACC = accusative. AgrSP = Subject Agreement Phrase. Asrt^o = Assertive head. [D] = Definiteness feature. DEF = Defective. D(P) = Determiner (Phrase). CL = clitic. C(P) = Complementizer (Phrase). EPP = Extended Projection Principle. EXPL = expletive

F = feminine. [F] = focus. FIN = finiteness. Foc = focus element. Foc(P) = Focus (Phrase). FUT = future. GEN = genitive. i = interpretable. IMPERF = imperfective. IND = indicative mood. INDEF = indefinite. JUSS = jussive mood. LF = Logical Form. M = masculine. MOD = modal. NEG/Neg = negation. NegP = Negation Phrase. NOM = nominative. P = plural. PERF = perfective. PF = Phonetic Form. Q = question morpheme. QP = Quantifier Phrase. S = singular. SA: Standard Arabic. SVO = subject-verb-object word order. Subj = subject node. SubjP = Subject Phrase. SUBJ = subjunctive mood. T(P) = Tense (Phrase). [T] = Tense feature. Top = topic node. TopP = Topic Phrase. V = lexical verb. VP = Verb Phrase. VSO = verb-subject-object word order

v = functional verb element. vP = functional verb Phrase. wh-/ WH- = question word. u = uninterpretable

φ-features = agreement/Agree features

Note 3. I will not make the usual difference between v and v* as in Chomsky (2001; 2004; 2008).

Note 4. See also Chomsky (2004: 126, note 45) in relation to McCloskey's (2001) work on the distribution of subject properties in Irish and the possibility that expletive pro could be 'externally merged' in [Spec, CP].

Note 5. However, as will be discussed in section 3.2, the identification process involved in the derivation of wh-dependencies seems to involve the 'checking' or valuation of an uninterpretable [uF]-feature on Foc, both in relation to the interpretable wh-feature of the raised focalized wh-element (which values it), and in relation to the finiteness/tense features of the Fin head projecting in the lower part of the split-CP domain (cf. Roberts & Roussou 2002: 141).

Note 6. This is also the case for the modal element qad merged in the Mod head position of ModP in structure (11) above. Thus, whatever temporal properties qad has (cf. Bahloul 2008), they may simply be the outcome of the interaction of such a modal element with the temporal properties encoded on Fin and the head Fin selects as complement in sentence structure i.e., T.

Note 7. Laysa inflects for φ-features in relation to initial subjects in negative sentences. In this case, laysa inflects for subject person, number and gender agreement features of the imperfective/past tense paradigm (i.e., (anna) las-tu 'I am not', (anta) las-ta 'you.MS are not', (anti) las-ti 'you.FS are not' (huwa) laysa 'he is not', (hiya) laysa-t 'she is not', (naHnu) las-naa 'we are not', (antum) las-tum 'you.MP are not', (antunna) las-tunna 'you.FP are not' (hum) lays-uu 'they.M are not' (hunna) las-na 'they.F are not'). In this respect, laysa is different from maa, which does not inflect for either subject-verb agreement nor for tense (which is a property of the NEG elements lam/lan as already noted).

Note 8. I note in passing here that the PP fii l-bayt-i 'in the house' is part of the internal structure of vP/VP, which includes a Small Clause (see Jouini 2014).

Note 9. As already noted, Ouhalla (1993) and Bemamoun (2000) assume that, in SA, Neg is projected lower than TP. As for Fassi Fehri (1993), he assumes that NegP is higher than TP/AgrSP in sentence structure. The account provided here differs from these previous analyses of negation in that I assume that there are two Neg(P) projections in the sentence structure of SA. Bahloul (2008), also allows two structural positions for the Merge of NEG elements (i.e., the Merge of maa in Aser^o in CP and the Merge of laa/lam/lan in a Neg position within IP). Bahloul (2008) does not provide a particular analysis for the subject-agreement inflected NEG element laysa.

Note 10. For reasons of space, I will not be able to delve deeper in the bi-clausal analysis of sentences with both an auxiliary and a lexical verb. I will leave this issue for a future publication. For a mono-clausal analysis of such instances where both the auxiliary and the lexical verb are assumed to be in the same clause see Aoun et al. (2010).

Note 11. I refer the reader to Jouini 2018, where the author deals with examples of the strict '[Topic DP], [wh-element]' word order in SA, whereby such wh-dependencies necessitate that a wh-word follow a Topic DP in SA (as in other languages; see Rizzi 1997). In the text above, I provide some apparent counterexamples, which do not actually violate this restriction.

Note 12. Table 3 is adapted from Rizzi (1990: 67–68). The difference between Relative C1 and Relative C2 in English is that only Relative C2 is phonetically realized as that. As for the Spec position of these two kinds of relatives in English, both are assumed to be filled up by some operator element. While the Spec of Relative C1 is occupied by an overt operator, i.e., a wh element like which in the sample example given above, the Spec of Relative C2 is occupied by a covert operator Op. Thus, a partial structure for these relatives would be as in (ia) and ib):

- (i) a. The thing [CP which [c \emptyset [IP you saw]]]
 b. The thing [CP Op [c that [IP you saw]]]

Note 13. I had qualms about the sentences in (32a-d) with ?alladhii in Force. I thank Dr. Hassan Makhad (Caddi Ayyad University, Morocco) for confirming my grammaticality judgement. According to Dr. Makhad, some Moroccan professional teachers of Arabic, who were specifically asked about the grammaticality of such sentences, do not consider them ungrammatical. According to them, the best guess is that something seems to be wrong with the presence of the lexicalized complementizer in (32a-d).

Note 14. The characteristic of a head taking a gender morpheme is reminiscent of 'partially' inflected verbs in SA VSO word order as discussed above. We have seen that this is also the characteristic of the verb-like element *laysa*. Both the NEG element *laysa* and the Q-element ?ayyu inflect for gender in agreement with the NP/DP to their right in sentence structure.

Note 15. There are also such SA interrogative sentences as in (i) below where the *ayyu* element is morpho-phonologically spelled out as one constituent substitutable by the wh-word *man*, as the sentences in (i) below show. Not surprisingly, in this case the insertion of the complementizer ?alladhi under the Force head position becomes optional:

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|--------|---------------------------|----------------------|----------------|-----------------|------|
| (i) a. | <i>ayyu-kum</i> | (?alladhii) | <i>faʃal-a</i> | <i>haadhaa?</i> | (SA) |
| | who-you.ACC | that | PERF.do-3MS | this | |
| | 'Who among you did this?' | | | | |
| b. | <i>man</i> | (?alladhii) | <i>faʃal-a</i> | <i>haadhaa?</i> | |
| | who | that | PERF.do-3MS | this | |
| | 'Who did this?' | | | | |

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