

The complementizer layer in Standard Arabic revisited

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This paper revisits three issues related to the complementizer layer (CP) in Standard Arabic. We reexamine them against the backdrop of Shlonsky's 2000 analysis, and put forward a new proposal couched in Rizzi's 1997 split-CP hypothesis. First, we examine the apparent distributional and interpretive differences between *?inna* and *?anna*, and subsequently argue that the former is a lexical verum operator that projects a VerumP in the middle of the split-CP field, whereas *?anna* is an indicative force head. Second, the current work presents another view on the elements analyzed as agreement clitics by Shlonsky (2000). We argue that they are not for agreement but rather are expletive or resumptive pronouns. Evidence that they are not agreement derives primarily from contexts where they appear in coordinated structures with overt DPs. We then investigate extraction patterns for questions and focus in matrix clauses as well as embedded clauses and propose that the preverbal subject DP in SVO is externally merged in SpecTopP in the split CP while it binds a null *pro* in SpecvP. This analysis captures the ban on extraction across the subject in SVO in that it shows that this DP is already higher in the structural hierarchy than the positions dedicated for focus and wh-questions.

Keywords: left periphery, verum, complementizer agreement

1. Introduction

The left periphery in Standard Arabic (SA henceforth) has been the subject of many studies in the literature (e.g., Bakir, 1980; Ouhalla, 1994, 1997; Shlonsky, 2000; Aoun et al., 2010). This work takes in particular Shlonsky (2000) as a background for the investigation of various relevant phenomena. Among the issues Shlonsky attempts to account for is the complementizer position and agreement. He discusses *?anna* and *?inna*. Before we review his account, a precise description of the distribution of these two complementizers is in order. The literature shows that both appear in

embedded contexts, but they diverge in that *ʔinna* can also appear in unembedded contexts. In embedded contexts, the choice of the complementizer is determined by the matrix verb (Mohammad, 2000: 19). Among the predicates under which *ʔanna* appear are what traditional grammarians refer to as “verbs of hearts”,¹ as in (1a), and “verbs of perception”, as in (1b). *ʔinna* can appear unembedded as in (2a), or embedded under *qaala* ‘say’ as in (2b) and under “verbs of hearts” provided that its accompanied by the focus particle *la* as in (2c).²

- (1) a. ʕalim-tu ʔanna tʕ-tʕaalib-a muʕtahiḍ-un
learn.PERF-1SG that the-student-ACC assiduous-NOM
‘I learned that the student is assiduous.’
- b. samiʕ-tu ʔanna ʕaliʕj-an ʔiʕtaaz-a l-ixtibaar-a
hear.PERF-1SG that Ali-ACC pass.PREF-3SG.MASC the-exam-ACC
‘I heard that Ali passed the exam.’
- (2) a. ʔinna tʕ-tʕaalib-a qaraʔ-a l-kitaab-a
verily the-student-ACC read.PERF-3SG.MASC the-book-ACC
‘Verily, the student read the book.’
- b. qult-tu ʔinna ʕaliʕj-an qaraʔ-a l-kitaab-a
say.PERF-1SG verily Ali-ACC read.PERF-3SG.MASC the-book-ACC
‘I said that, verily, Ali read the book.’
- c. ʔa-ʕlam-u ʔinna-ka la-ta-quul-u l-ḥaqq-a
1SG-know.IMPERF-IND verily-you F-2SG-say.IMPERF-IND the-truth-ACC
‘I know that, verily, you are telling the truth.’

2. The left periphery in SA

2.1 Complementizer distribution

Cross-linguistic evidence shows that an array of elements appear in the left periphery, including subordinating and relative complementizers, *wh*-expressions, quantifiers, topics, scrambled arguments and focalized constituents. (3) is an example from English (Shlonsky, 2000: 326).

1. This is a set of verbs that relate to people’s mental states with regard to the veridicality of the proposition the verb embeds. They fall within the realm of what Fintel and Heim (2011: 19) call Propositional Attitudes, following Russell (1940) and Hintikka (1969).

2. All examples, including proper names, are transcribed using IPA and its associated diacritics as delineated in Ladefoged and Johnson (2015).

(3) She told me *that, in her class, this book*, students would never read.

The ordering of these constituents is constrained, and therefore several works (e.g., Brody, 1990; Culicover, 1992; Müller and Sternefeld, 1993; Shlonsky, 1994) have all pointed out that these ordering restrictions cannot be captured by the assumption of a single CP (the CP projection was first proposed by Chomsky (1986) in his extension of the relational notions of X-bar theory from lexical to functional categories).

The same problem was encountered before with the inflectional and verbal layers, IP and VP, respectively, which are cartographically decomposed into sub-layers so that they can assimilate various elements specific to each. The VP layer was broken down into two VP projections (VP-shell), one embedding the other, the motivation being the need to account for multi-argument predicates such as double object constructions (Larson, 1988). Shortly afterwards, Pollock (1989) argued for a similar dissection of the inflectional domain in which two projections are proposed: the higher encodes tense, and the lower encodes subject agreement. Following this cartographic approach, Rizzi (1997) puts forward the ‘Split-CP’ hypothesis, in which (4) below is proposed as a universal structure of the left periphery, whose parametric variation is confined to the absence of some projections, but not the way they are ordered. Under this proposal, each of the constituents in (3) is assigned to a designated position based on whether it is a topic or focus.

(4) ForceP > TopicP* > FocusP > TopicP* > FinP³

Rizzi argues that complementizers can figure as heads of ForceP or FinP in (4).

Adopting Rizzi’s proposal as well as the view that the presence of agreement in phi-features requires an agreement projection (AgrP) in the clausal hierarchy, Shlonsky (2000) proposes (5) as the structure of the left periphery in Standard Arabic. His proposal derives from the distributional permutations demonstrated by sentences like (6).⁴

(5) ForceP > TopicP > AgrκP > κP > TopicP* > FocusP...⁵

3. This hierarchy is refined in Rizzi (2001, 2004) and new functional heads are incorporated including Mod⁰ and Int⁰.

4. Note that (*) means that the projection is recursive, whereas caps stand for focused constituents.

5. For Shlonsky, κP is the projection where the complementizer originates before it moves to AgrP to check agreement as will be delineated in section (3); this projection is basically motivated by the need to account for agreement, and that the complementizer collects it as it rolls up to Force⁰.

- (6) a. *samiʕ-tu ʔanna ʕaliʒ-an ʔiztaaz-a l-ixtibaar-a*
 hear.PERF-1SG that Ali-ACC pass.PREF-3SG.MASC >the-exam-ACC
 'I heard that Ali passed the exam.'
- b. *samiʕ-tu ʔanna ʕaliʒ-an l-ixtibaar-a ʔiztaaz-a*
 hear.PERF-1SG that Ali-ACC the-exam-ACC pass.PREF-3SG.MASC
 'I heard that [as for] Ali, THE EXAM, he passed.'
- c. *samiʕ-tu ʔanna l-ixtibaar-a_i ʕaliʒ-un ʔiztaaz-a-hu_i*
 hear.PERF-1SG that the-exam-ACC Ali-NOM pass.PREF-3SG.MASC-it
 'I heard that, [as for] the exam, Ali passed it.'
- d. **samiʕ-tu ʔanna l-ixtibaar-a ʔiztaaz-a ʕaliʒ-un*
 hear.PERF-1SG that the-exam-ACC pass.PREF-3SG.MASC Ali-NOM
 'I heard that THE EXAM Ali passed.'

Shlonsky argues that *ʔanna*, and *ʔinna*, by extension, starts out as head of κP , then raises to $\text{Agr}\kappa P$ and eventually to ForceP. He associates *ʔanna* with a formal feature [+F], whose phonological exponent corresponds to the accusative case morphology on the DP that follows it as in (6). This feature is not checked when *ʔanna* is followed by a focused element as in (6d), resulting in ungrammaticality. $\text{Spec}\kappa P$ is the position of the DP with the [+F] that matches the feature on C.

Shlonsky's analysis predicts that neither complementizer can be preceded by Topics. While this is borne out in the case of *ʔanna* as shown by the ungrammaticality of the sentences in (7), *ʔinna* does not comply with this prediction, as it may be preceded by a topicalized DP as shown in (8a) and (8b), in main and embedded contexts respectively, although in embedded clauses the sentence is degraded.

- (7) a. **samiʕ-tu [l-ixtibaar-u ʔanna ʕaliʒ-an ʔiztaaz-a-hu_i]*
 hear.PERF-1SG the-exam-NOM that Ali-ACC pass.PREF-3SG.MASC-it
 'I heard that [as for] the exam, Ali passed it.'
- b. **samiʕ-tu [ʕaliʒ_i-un ʔanna-hu_i ʔiztaaz-a l-ixtibaar-a]*
 hear.PERF-1SG Ali-NOM that-him pass.PREF-3SG.MASC the-exam-ACC
 'I heard that [as for] Ali, he passed the exam.'
- (8) a. *ʔar-risaalat_j-u ʔinna ʕaliʒ-an ʔaʕt^caa-haa_j*
 the-letter-NOM verily Ali-ACC give.PERF.3SG.MASC-it
 li- muhammad-in
 to- Mohammed-GEN
 '[As for] the letter, verily, Ali gave it to Mohammed.'
- b. *?qult-tu [ʕaliʒ_i-un ʔinna-hu_i qara?-a l-kitaab-a]*
 say.PERF-1SG Ali-NOM that-him read.PERF-3SG.MASC the-book-ACC
 'I said that, [as for] Ali, verily, he read the book.'

(7) and (8) above coupled with the sentences below call into question the assumption that *?anna* and *?inna* share the same distribution. (9) illustrates constructions where *?inna* co-occurs with elements that are either in Force or in positions that separate *?inna* from Force⁰.

- (9) a. *?a ?inna-ka la-ta-quul-u l-ħaqq-a*
 Q verily-you F-2SG-say.IMPERF-IND the-truth-ACC
 ‘Do you, verily, say the truth?’
 b. *?alaa ?inna l-?amr-a la-ħaqq-un*
 CI verily the-thing-ACC F-truth-NOM
 ‘Verily, the matter is true.’

In (9a), *?inna* appears with the polar question particle *?a*, which either occupies Force⁰ or Int⁰ in (10), and gives the clause the force of a question.⁶ In either case, it is conspicuous that *?inna* itself is not a Force head since it is lower than *?a*. Rizzi (2001: 289) positions IntP between the upper topic projections as illustrated in the hierarchy in (10).

- (10) FORCE (TOP*) INT (TOP*) FOC (TOP*) FIN IP

In (9b), it is also preceded by the clause initiator *?alaa* (CI), which supposedly occupies Force⁰, marking the clause as declarative.⁷ This leads to the conclusion that *?inna* is not a force-expressing element. Therefore, based on the data in sentences (7) through (9), two questions arise: first, since *?inna* does not express force, what is its function? Second, what positions do *?anna* and *?inna* assume in the left periphery?

6. A reviewer raised a question about *?a* and whether it can be preceded by topics; *?a* can be preceded by topics as shown below, an observation that accords with the position Rizzi allocates for interrogative heads in (10).

- (i) *?ar-risaalat,-u ?a ?arsal-ta-haa,*
 the-letter-NOM Q give.PERF-2SG.MASC-it
 ‘As for the letter, did you send it?’

The point we are making is that regardless of whether *?a* is in IntP or ForceP, in a sentence like (9a), it is evidence that *?inna* itself is not in Force⁰. We are not as much concerned with committing ourselves to a specific view on where *?a* is as we are with the fact that its presence above *?inna* means that the latter itself is not in Force⁰.

7. This clause initiator is an interjection-like element, designated in traditional grammarians’ terms as “*?alaa ?al-istiftaahijja-tu*” (Omar et al., 1994). It is usually used to draw somebody’s attention to what is coming. In traditional grammar, its use is associated with emphasis on the proposition it embeds, and it does not appear in embedded clauses.

Based on Shlonsky (2000), they originate as heads of κP in (5), and then roll up the syntactic structure through head movement and join with Agr^0 in their way to $Force^0$. Agreement was a key factor in Shlonsky's analysis, as will be shown in section (3). With the new analysis of agreement we present there, Shlonsky's perspective is no longer warranted. Moreover, the evidence presented so far illustrates that there is a clear dichotomy between the two complementizers whose manifestation is the possibility of *?inna* appearing with another element, which either expresses force or at least shows that *?inna* does not reach $Force^0$. It follows from this that the assumption that *?anna* and *?inna* originate in the same position would have to shoulder the burden of coming up with a justification for why only *?anna* obligatorily moves to $Force^0$, whereas *?inna* moves there only optionally. In fact, there is a semantic difference between the two complementizers, alluded to in Shlonsky (2000), that might further justify an analysis that assumes a non-uniform base position. Shlonsky points out that *?inna* has the force of a strong affirmation or assertion translated by the English adverb *verily* or the French *certes* whereas *?anna* is neutral (p. 336). This offers a thread to reformulate the question on the functions of the two complementizers to be: how could these descriptive terms, *affirmation* and *emphasis*, be captured in a theory of the discourse layer of syntactic structure? To answer this question, let us take a short excursus into the notion of *verum*, which is dovetailed with *affirmation*. Gutzmann et al. (2017) indicate that this notion was first introduced by Höhle (1992) to designate cases where an accent is used to emphasize the truth of a proposition. (11) is an example from German.

- (11) Peter HAT den Hund getreten
 Peter has the dog kicked
 'Peter DID kick the dog' (Gutzmann et al., 2017: 4)

Several researchers give this phenomenon the designation "Verum Focus" (e.g., Höhle, 1992 (as cited in Gutzmann et al. (2017)), Lohnstein and Stommel, 2009; Krifka, 2008) and imply that it can only be realized by an accent on some expression in the sentence. However, Gutzmann et al. (2017) provide cross-linguistic evidence that the phenomenon is a case of a Verum Operator, which can either be realized by an accent or lexically. (12) shows examples from Spanish and Dutch, respectively.

- (12) a. Bien ha cantado la soprano
 indeed has sung the soprano
 'The soprano DID sing.'
 b. Ik heb het boek WEL gelezen
 1SG have the book PRT read
 'I DID read the book' (Gutzmann et al., 2017: 14)

In (12a), the verum operator is realized lexically by the clause-initial element *Bien* ‘indeed’, whereas in (12b) it is realized by the accented particle *WEL*.⁸ In SA, *?inna* usually figures in contexts where its use emphasizes the truth of the proposition it embeds; its use in an out of the blue context, where there is no contextual clue that the veracity of the proposition might be in dispute, is infelicitous. Therefore, following Gutzmann et al. (2017), we propose that *?inna* is a lexical verum operator whose function is to relate a proposition to a question under discussion (QUD), and is subject to the following felicity condition:

$$(13) \llbracket \text{VERUM} \rrbracket^c(p) = \vee, \text{ if } \{p, \neg p\} = \text{QUD}(c)^9 \quad (\text{Gutzmann et al., 2017: 9})$$

(13) means that a verum operator is only felicitous in a context where the veracity of the proposition given is at issue. The set $\{p, \neg p\}$, which simply includes a proposition and its negation, is the set of alternatives induced by the question ‘whether P?’ in the sense of alternative semantics developed in Rooth (1985, 1992) and Büring (1997). The contribution of the operator is to rule out the possibility of the proposition being false, i.e., it eliminates $\neg p$. This is how the notion of affirmation and emphasis associated with *?inna* is captured. What transpires from this approach to the function of *?inna* is that it is a lexicalization of verum. Therefore, we propose that the left periphery in SA houses a Verum Projection (VerumP) and that *?inna* is a lexicalization of the verum head. *?anna*, on the other hand, is assumed to originate in Force⁰. An analysis which assumes that *?anna* originates lower than Force⁰ would have to grapple with what the defining characteristics of this position are and what motivates *?anna* to always vacate it. Since *?anna* expresses indicative force and always appear clause-initially, it sounds more plausible to assume that it externally merges in Force.¹⁰

8. A reviewer questioned the position of verum crosslinguistically as it appears low in the structure in (12b) as opposed to its clause-initial position in (12a). Verum operates at the level of the proposition, but its correlated realization may appear anywhere in the clause, based on whether it is expressed lexically or by an accent, or by a combination of both. Lohnstein and Stommel (2009: 1) indicates that “the fronted finite verb can bear this accent (F-verum focus) or the complementizer (C-verum focus). In verb final clauses a similar effect can be achieved if an auxiliary bears the accent, but not a main verb.”

9. $\neg p$ denotes the negation of the proposition p .

10. Chomsky (1995, 1998) proposes that *Merge* should have preference over *Move* (*Merge over Move*) as an economy condition. Although this principle is primarily invoked to account for cases such as expletive-insertion to satisfy EPP and does not go without challenges (see Shima 2000 for a different view on *Merge over Move*), the basic principle can be extended to conceptually defend the view of *?anna* base-position in (15b). A derivation assuming that it originates lower and then moves obligatorily to Force⁰ would be less economical based on the lengthy path it

- (14) a. hind_k-un ?al-kitaab_j-u ?inna ?ahmad-a ?aft^caa-hu_j
 Hind-NOM the-book-NOM that Ahmed-ACC give.PERF.3SG.MASC-it
 la-haa_k
 to-her
 ‘Hind, the book, verily, Ahmed gave it to her.’
- b. ?ahmad_j-u hind_k-un ?inna-haa_k/(^{*}hu_j) ?aft^caat-hu_k
 Ahmed-NOM Hind-NOM that-her/(him) give.PERF.3SG.FEM-it
 l-kitaab-a
 the-book-ACC
 ‘Ahmed, Hind, verily, she gave him the book.’
- c. hind_k-un ?inna ?ahmad-a ?al-kitaab_j-u ?aft^caa-hu_j
 Hind-NOM that Ahmed-ACC the-book-NOM give.PERF.3SG.MASC-it
 la-haa_k
 to-her
 ‘Hind, the book, verily, Ahmed gave it to her.’

(14a) is a double object construction in which both objects are left-dislocated. Left dislocation targets SpecTopP, which means that *?inna* is preceded by two topic projections and followed by one if the preverbal subject is analyzed as a topic as well.¹¹ In (14b), the topic projection that follows *?inna* is shown to be recursive too. Therefore, we propose that the VerumP headed by *?inna* is situated between two recursive topic projections as in (15a), whereas *?anna* appears in Force⁰ as in (15b) since it cannot be preceded by any topic projection as shown above in (7).

- (15) a. ForceP>TopP*> VerumP ?inna >TopP*>FocP>FinP>TP
 b. ForceP ?anna>TopP*>FocP>FinP>TP

To summarize, as indicated, we propose that *?inna* can only appear in contexts where the question ‘whether P?’ is the question under discussion, and the question need not be stated explicitly; it might be implicit. Its function is to emphasize the truth of *p* over $\neg p$, the two alternatives induced by the polar question ‘whether P?’.

takes as opposed to the one proposed here, especially when we take into account that (15b) is further tenable based on the reanalysis we present for agreement in Section 3, since agreement is the main catalyst for Shlonsky’s argument for a lower base position for *?anna*. With the analysis we present for agreement along with the fact that *?anna* expresses force and always appears in Force⁰, Shlonsky’s argument becomes economically unwarranted.

11. In the last section, we propose that the preverbal subject in SVO is a topic externally merged in SpecTopP.

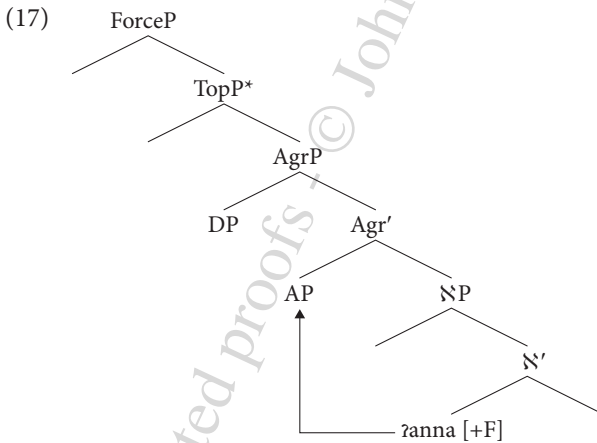
3. Complementizer agreement (CA)

3.1 Shlonsky's account

Shlonsky (2000: 334) illustrates that the formal feature [+F] on *ʔanna* can be satisfied by null nominal expressions whose presence is evident through agreement. In (16a), it is satisfied by a null referential pronoun, in (16b) by a null impersonal pronoun, and in (16c) by a subject wh-trace (glosses are maintained as they are in Shlonsky's work).

- (16) a. zaʔamtu ʔanna-hu kataba ʔal-risaalat-a
 (I) claimed that-[3MASC.SG] wrote the-letter-ACC
 'I claimed that he wrote the letter.'
- b. zaʔam-tu ʔanna-hu niima fi ʔal-sariir-i
 (I) claimed that-[3MASC.SG] slept in the-bed-GEN
 'I claimed that it was slept in the bed.'
- c. man zaʔamta ʔanna-hu dʕaraba zayd-an
 who (you) claimed that-[3MASC.SG] hit Zayd-ACC
 'Who did you claim that hit Zayd?' (Shlonsky, 2000: 334)

To explain the pattern in (16), Shlonsky assumes that the Comp System contains an AgrP above κP , to which κ^0 raises. SpecAgrP is an A-position, which is occupied by a nominal element (e.g., *pro*). The structure is given in (17).



For Shlonsky, the pronominal attached to *ʔanna* in every sentence in (16) is an agreement clitic that associates with *ʔanna* when it moves from κ^0 to Agr^0 . It marks agreement with a null nominal expression in SpecAgrP . His main argument for this account derives from the assumption that in all three cases the pronominal is not a topic by itself.

We argue that Shlonsky's account suffers from a number of theoretical and empirical shortcomings. First, the assumption of an agreement projection is theoretically undesirable in recent minimalist approaches. Chomsky (1995: 349) indicates that AgrPs have no semantic import whatsoever and are postulated for theory-internal reasons. Second, it is also theoretically undesirable to assume an A-position within the Comp System, as A-positions are usually associated with the thematic domain and case positions. An A-position in the left periphery neither has a thematic role, nor is it valued for case structurally; it gets its case either as the default case (nominative) or via valuation by a lexical category such as a complementizer or a preposition. Third, this analysis adheres to the view that agreement is checked in a *spec-head* configuration, which is abandoned in favor of the simple operation *Agree* under c-command (Chomsky, 2000, 2001). A major tenet of *Agree* is that *spec-head* configurations are not necessary for feature valuation.

What is more substantial than the theoretical issues above is that the assumed agreement-nature of the pronominals that appear on complementizers in these sentences is questionable. One piece of evidence against this comes from the observation that these pronouns can appear in Coordinate Structures conjoined with overt DPs. (18b) is an example¹²:

- (18) a. $\text{ʕalijj-un wa ʔahmad-u} \quad \text{ðʕnan-tu} \quad \text{ʔanna-humaa}$
 Ali-NOM and Ahmed-NOM think.PERF-1SG that-them
 $\text{katab-aa} \quad \text{d-dars-a}$
 write.PERF-3.DUAL the-lesson-ACC
 'Ali and Ahmed, I thought that they wrote the lesson.'
- b. $\text{ʕalijj-un} \quad \text{ðʕnan-tu} \quad \text{ʔanna-}[\text{hu}_j \text{ wa } \text{ʔahmad-a}] \quad \text{katab-aa}$
 Ali-NOM think.PERF-1SG that-him and Ahmed-ACC write. PERF-3.DUAL
 d-dars-a
 the-lesson-ACC
 'Ali, I thought that he and Ahmed wrote the lesson.'

12. Similar examples are found in Ibn Maalik (1990: 629) where a clitic pronoun is conjoined with an overt DP.

(18b), in which the pronominal (-hu) is conjoined with *Ahmed*, poses a challenge to the view that these pronominals are agreement heads in AgrP, to which the complementizer raises and left-adjoins. If they are agreement elements, they would not have been expected to appear coordinated with other DPs. Compare (18) to (19) below (adapted from Soltan, 2007: 195).

- (19) ?atay-tu *(?anaa) wa muḥammad-un
 come.PERF-1SG I and Mohammed-NOM
 'Mohammed and I came.'

In (19), the first person pronominal (-tu) attached to the verb is an agreement suffix and therefore is unconjoinable with the DP *Mohammed*.¹³ So, to gain some insight into what kind of elements these pronominals are and what function they assume in the structure, let us first review in the next section the range of elements that can follow the two complementizers in question.

3.2 What is it that follows ?anna and ?inna?

Various constituents can follow ?anna and ?inna to yield licit constructions. There is no strict requirement for them to be DPs.

- (20) a. ḏʿanan-tu ?anna ?aḥmad-a ?ar-risaalat,-u
 think.PERF-1SG that Ahmed-ACC the-letter-NOM
 qara?-a-haa,
 read.PERF-3SG.MASC-it
 'I thought that [as for] Ahmed, the letter, he read (it).'
- b. ḏʿanan-tu ?anna ?ar-risaalat,-a ?aḥmad-u
 think.PERF-1SG that the-letter-ACC Ahmed-NOM
 qara?-a-haa,
 read.PERF-3SG.MASC-it
 'I thought that [as for] the letter, Ahmed read (it).'
- c. ?alim-tu ?anna fii l-bayt-i razul-an
 know.PERF-1SG that in the-home-GEN man-ACC
 'I came to know that in the house is a man.'

13. In classical Arabic, the conjunction in (19) is also grammatical, in which case (-tu) is better treated as a pronominal clitic incorporated into the verb, as proposed in Fassi Fehri (1993).

- d. *ʕalim-tu* *ʔanna razul-an* *fii l-bayt-i*
 know.PERF-1SG that man-ACC in the-home-GEN
 'I thought that a man is in the house.'
- e. *ʕalim-tu* *ʔanna bi-l-ʔams-i* *wasʕal-a*
 know.PERF-1SG that in-the-yesterday-GEN arrive.PERF-3.DUAL
ʔaħmad-u
 Ahmed-NOM
 'I came to know that yesterday Ahmed arrived.'
- f. *ʕʕanan-tu* *ʔanna l-jawm-a* *sa-ya-sʕil-u*
 think.PERF-1SG that today-ACC will-3SG.MASC-arrive-IND
ʔaħmad-u
 Ahmed-NOM
 'I thought that today Ahmed would arrive.'
- g. *ʕalim-tu* *ʔanna razul-an* *ʔawiil-an* *fii l-bayt-i*
 know.PERF-1SG that man-ACC tall-ACC in the-home-GEN
 'I came to know that a tall man is in the house.'

In (20a–b), the complementizer is followed by definite DPs, whereas in (20d–g), it is followed by indefinite ones. In (20c–f), it is followed by a prepositional phrase and an adverb. (20) is evidence that what comes after the complementizer can be a phrase of any type so long as it is not a verb, i.e., the complementizer cannot be followed by a VSO clause (Mohammad, 2000). In all these sentences, the complementizer does not inflect for agreement. What transpires from this is that the agreement analysis seems more structure-specific due to its dependency on the presence of a null *pro* in SpecAgrP. In other words, why does not a complementizer show agreement when there is an overt subject? (20) along with (18b) are an indication that the occurrence of pronominals in (16) might be due to the same reason as other DPs, and that their attachment to the complementizer is a PF cliticization that is ascribed to their phonological deficiency. So, the question that sequels is what is responsible for the distributional facts reflected in (20). In the next section, we take up this question, and then we provide an alternative analysis of the pronominals in (16).

3.3 Possible account

The presence of these diverse constituents after the complementizer can be ascribed to a requirement that the clausal semantic content be anchored to information structure (i.e., discourse layer) through a mechanism of feature checking (Franco, 2012; Sigurðsson, 2011, C/Edge-linking in Sigurðsson's terms). In her account of stylistic fronting in Norwegian, Danish and Icelandic, which is viewed

as a fulfillment of clause anchoring to information structure, Franco associates two features with Fin^0 , namely [finiteness] and [definiteness].¹⁴ [Definiteness] can equally be checked by a [-definite] or [+definite] constituent, whereas finiteness can be checked by a temporal or locative adverb. Finiteness anchors the event time and location with the speech time and location, whereas definiteness anchors the clausal content to information structure, the common ground knowledge shared by all interlocutors. This proposal bears the seeds of an appropriate explanation, but cannot be extended to SA as it is for two reasons: First, it entails that *?anna* and *?inna* select FinP , which is not supported empirically. They both cannot appear directly on top of FinP following FocP as shown in (21a), nor can they directly be followed by FocP as in (21b). Rather, as proposed in (15), both appear higher than TopP . Second, one might argue that this account can be extended to SA if the base-position of both complementizers is taken to be Fin^0 and then they roll up the structure to Force^0 . This account, however, is theoretically untenable. It would have difficulty providing a conceptual justification for complementizer movement. Put differently, if both express force, what is the motivation for the assumption that they start out in Fin^0 ?

- (21) a. *kitaab-an ?inna t^c-t^caalib-a sa-ja-qra?-u
 book-ACC that the-student-ACC will-3SG.MASC-read-IND
 ‘A BOOK, verily, the student will read.’
 b. *?inna risaalat-an ?ahmad-u qara?-a
 that letter-ACC Ahmed-NOM read.PERF-3SG.MASC
 ‘Verily, THE LETTER, Ahmed read.’

Based on the hierarchies given in (15) and the facts in (20), the constituents following the complementizer in (20) must be higher than SpecFinP . This rules out the explanation provided by Franco’s proposal in its original formulation. In the next section, we develop a more elaborate account which has some basic commonalities with Franco’s.

14. This proposal has its conceptual roots in Haegeman (2006: 47) who, in her investigation of Romance clitic left dislocation as opposed to topicalization in English, concluded that Fin^0 might be responsible for the projection of the lower TopP in the split CP in Romance. Haegeman puts it as follows: “Based on the observation that control complements allow the (low) topicalized constituent and raising complements do not, I propose that the lower topic position depends on Fin , the lowest position of the left periphery. The analysis raises the question why the lower topic position is not available to English (and similar languages). One option is to directly associate the low topic position with the content of Fin . Possibly the rich mood system of Romance is encoded in Fin and contributes to the licensing of the lower topic position.”

3.4 Proposal

3.4.1 *Basic assumptions*

As indicated above, a reconsideration of the sentences in (16), for which Shlonsky designed his agreement account, reveals that the embedded clause in each is a null-subject clause, i.e., the subject argument is dropped. Argument drop is widespread across languages and is not confined to subjects since some languages, such as Pashto, Swedish and Chinese, allow object drop as well (Sigurðsson, 2011: 2f). This cross-linguistic structure has received several accounts, some of which were embedded in the Government and Binding framework (GB) (e.g., Rizzi, 1982), and some were embedded in the minimalist approach enriched with the utilization of cartography (e.g., Sigurðsson, 2010, 2011; Frascarelli, 2007; Sigurðsson and Maling, 2007).

A recurring theme in recent accounts is that argument drop is conditioned by the linkage of the dropped argument to discourse. In her investigation of null subjects in a set of languages with specific focus on Italian, Frascarelli (2007) argues that the interpretation of a thematic *pro* in the subject position is crucially dependent on the syntax and discourse properties of topic constituents. In this vein, Frascarelli proposes a tripartite classification of topics into *Aboutness Topics*, *Contrastive Topics* and *Familiar Topics*, which appear in the C-domain in this order.¹⁵ She then attributes argument linkage to discourse in the case of Italian third person null subjects to a [+aboutness] feature on the higher topic head. In an elaboration of the same line of argument, Sigurðsson (2011: 5) accommodates first and second person null subjects by his assumption of two other features, viz. [Λ_A] and [Λ_p], which are matched/valued by first and second person null subjects, respectively. He then states his generalization that “any definite argument, overt or silent, positively matches at least one C/Edge-linker in its local C-domain, where C/Edge-linkers include Top(ic) features and speech participant features (‘speaker’ and ‘hearer’).

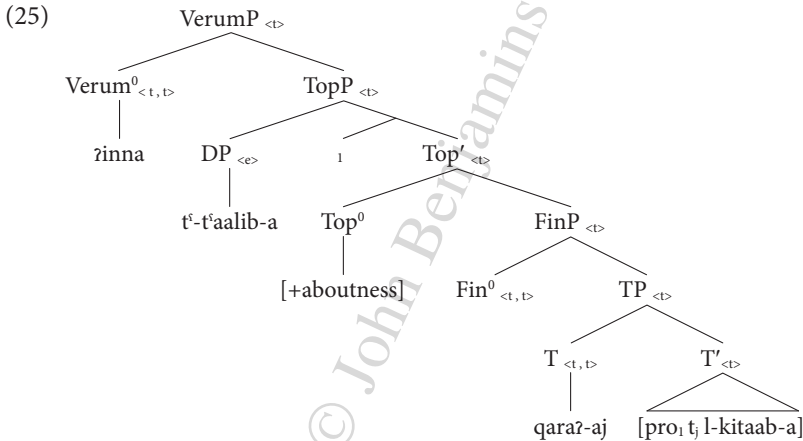
Frascarelli (2007) argues that the constituent that satisfies the proposed [+aboutness] feature can either be a DP or a strong pronoun. Below is an illustrative example (p. 703).

- (22) *[il mio capo]_i come diceva Carlo [...] pro_i è un exreporter [...] pro_i è stato in giro per il mondo [...] pro_i mi ha preso in simpatia solo che siccome pro_i è mostruosamente lunatico, è capace che domani non gli sto più simpatica e pro_i mi sbatte fuori [...] comunque a parte questo pro_i mi diverte moltissimo – poi c’è M.F._k che*

15. The pursuit of whether these three types appear in SA in the same order is beyond the scope of this paper, but it suffices to mention that the definite nominative DPs that appear preverbally in SA are either subjects or clitic-left dislocated arguments, and they display flexibility in order (see Bakir, 1980; Shlonsky, 2000; Aoun et al., 2010).

Since the data we intend to account for is a mixture of third person subjects, as in (16a) and (16b), and expletives, as in (16c), we propose, following Frascarelli (2007), that Top^0 has a [+aboutness] feature. We add to this basic proposal the assumption that predicate abstraction is the semantic role this feature has in the structure. To see how this works, let us consider (24) below. The DP $t^s-t^s aalib-a$ ‘the student’ introduces a binder (λ -abstract) as shown in (25). The semantic denotation of the thematic domain yields (x read the unique z s.t. z is a book). The [+aboutness] on Top^0 introduces a binder that reopens the proposition to become $[\lambda x: x$ read the unique z s.t. z is a book], which allows it then to combine with the DP $t^s-t^s aalib-a$ ‘the student’ merged in SpecTopP.

- (24) $\text{ʔinna } t^s-t^s aalib-a$ [qaraʔ-a *pro* l-kitaab-a]
 that the-student-ACC read.PEFR3SG.MASC the-book-ACC
 ‘Verily, the student read the book.’



In addition to the assumption of a [+aboutness] feature on Top^0 , we maintain from Shlonsky the idea that ʔanna and ʔinna are associated with a formal feature [+F], which happens to be spelled out as accusative case when the following constituent is a DP. The reason to maintain this assumption is sentences like (20e) above where this feature is satisfied but with no overt morphology; there is no constituent in the domain of the complementizer that bears accusative case. With these assumptions in place, let us revisit the pronominals in (16) and provide an account of what they are and what their semantic contribution is.

3.4.2 Complementizer + pronominal

3.4.2.1 Null referential pronouns

The first case is that of referential pronouns as in (16a) repeated below.

- (26) zaʕamtu ʔanna-hu kataba *pro* ʔal-risaalat-a
 (I) claimed that-[3MASC.SG] wrote the-letter-ACC
 ‘I claimed that he wrote the letter.’

-hu satisfies the [+aboutness] on Top⁰ below *ʔanna*, and, as indicated, is responsible for the identification of *pro* through Agree. This [+aboutness] feature introduces a predicate abstract such that the end result of the semantic computation of (26) is as shown in (27):

- (27) *I claimed that* [λx : *x* wrote the letter] (1)

The index (1) in (27) denotes an individual whose value is determined by a contextual assignment function in the sense of Heim and Krazter (1998). An assignment function simply assigns to a variable a value drawn from a set whose members are part of the common ground shared by interlocutors. Possible values may include {Ahmed, Ali, Zayd...}. If the value given to (1) from the context is *Ahmed*, (26) would be true if and only if *I claimed that Ahmed wrote the letter*. Besides that observation that pronominals like (*-hu*) are conjoinable with other DPs as shown in (18), what the above discussion means is that the pronominal cannot be an agreement suffix as argued in Shlonsky (2000). Rather, it functions as a discourse linker in the sense of Frascarelli (2007) and Sigurðsson (2010, 2011), i.e., it links the null *pro* to an individual salient in the context of the utterance. The same argument can be run for (16c), repeated in (28).

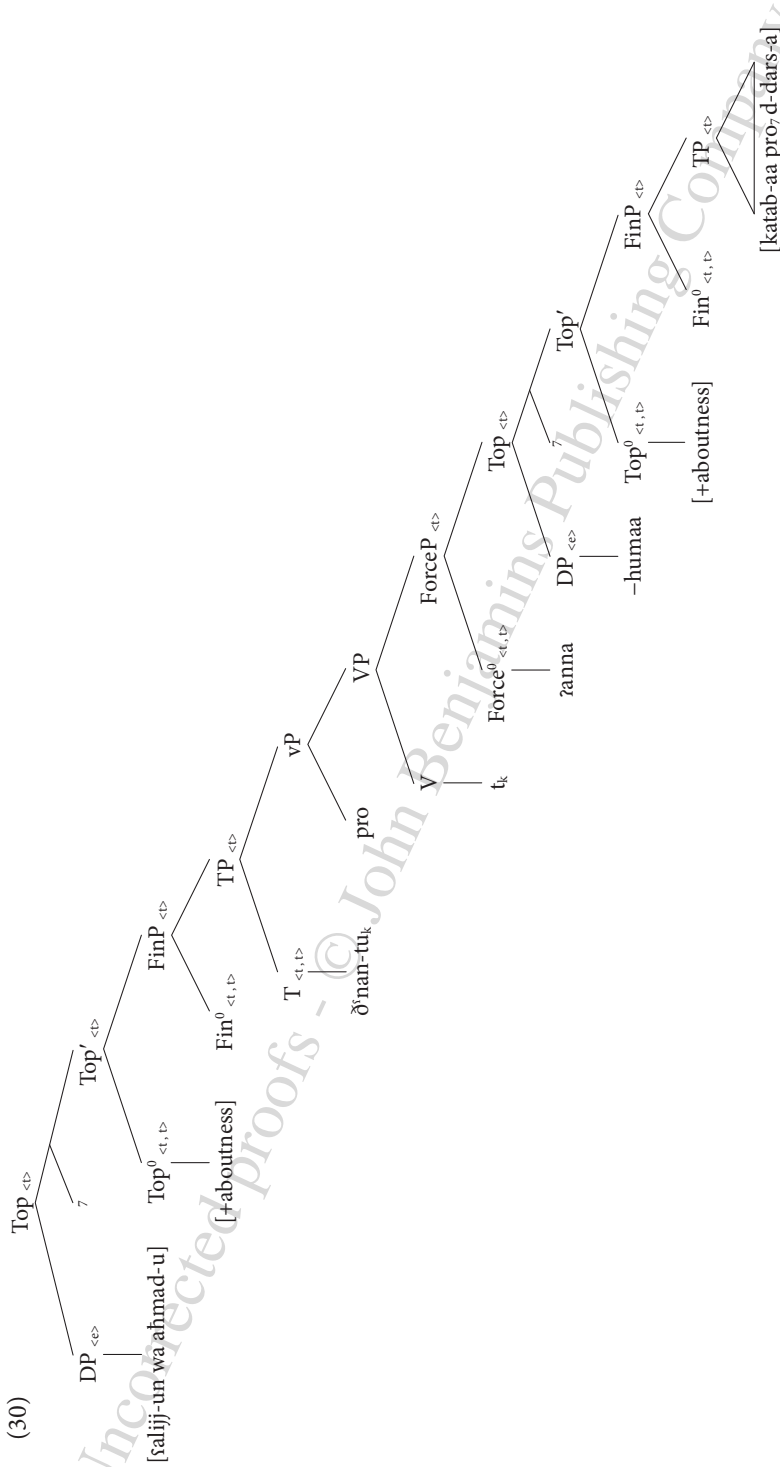
- (28) man zaʕamta ʔanna-hu dʕaraba *pro* zayd-an
 who (you) claimed that-[3MASC.SG] hit Zayd-ACC
 ‘Who did you claim that hit Zayd?’

The pronoun (*-hu*) identifies the null *pro* in the embedded thematic subject position, and links it to the *wh*-word in the matrix clause. This kind of analysis presupposes that *man* ‘who’ is externally merged in the matrix clause, i.e., it does not arrive there by movement (See Soltan (2007: 53) for a similar argument on using *man* to question an object in an SVO clause).

3.4.2.2 Anaphoric pronouns

Let us consider (18a), repeated in (29):

- (29) ʕalijj-un wa ʔahmad-u ðʕnan-tu ʔanna-humaa
 Ali-NOM and Ahmed-NOM think.PERF-1SG.MASC that-them
 katab-aa d-dars-a
 write.PERF-3.DUAL the-lesson-ACC
 ‘Ali and Ahmed, I thought that they wrote the lesson.’



The satisfaction of [+aboutness] on the embedded Top⁰ introduces a predicate abstract such that the pronoun (-humaa) links the embedded subject *pro* to the matrix aboutness Topic ‘*Ali and Ahmed*’ which in turn satisfies [+aboutness] on the matrix Top⁰. This means that by the time the semantic component reaches in its computation to the matrix TopP, it yields the following statement:

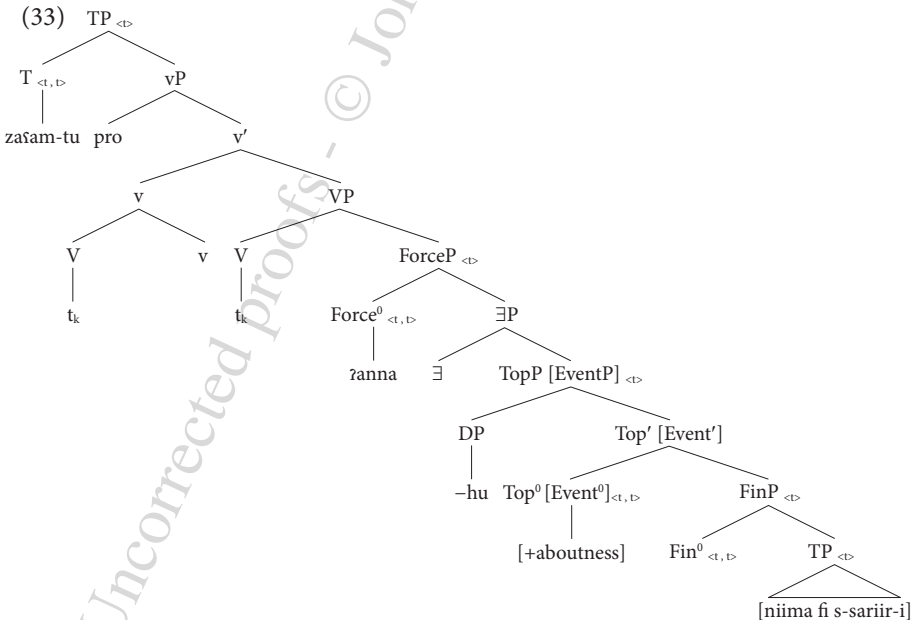
(31) I thought that [λx : x wrote the lesson] (Ali & Ahmed)

(31) shows that the pronominal in the embedded clause serves as a linker in a way that links the embedded subject to the matrix, as both are bound by the conjunction ‘*Ali and Ahmed*’.

3.4.2.3 Non-referential pronouns (expletives)

Expletives are among the elements whose presence has mostly been attributed to structural reasons. However, many analyses (e.g., Higginbotham, 1987; Stowell, 1991; Krazter, 1995) argue that an expletive has a semantic import in that it serves the function of existential quantification over event or situation arguments. We follow them in this assumption. That is, when [+aboutness] is satisfied by an expletive as in (16b), repeated in (32), it introduces an existential quantifier that quantifies over events or situations.

(32) zaʕam-tu ʔanna-hu niima fi ʔal-sariir-i
 (I) claimed that-[3MASC.SG] slept in The-bed-GEN
 ‘I claimed that it was slept in the bed.’



The semantic computation of (32), in an approximation, amounts to: *I claimed that there exists an event or situation of sleeping in the bed*. The expletive anchors the utterance to an event argument.¹⁶

To conclude, we have argued in this section that the pronominals treated as agreement by Shlonsky are either variables, whose values are fixed referentially or anaphorically, or existential quantifiers over events in the case of expletives.¹⁷

16. A reviewer pointed out that this approach to expletives may be valid in this specific context but cannot naturally be extended to expletives such as “it” in sentences like (*it seems that...*). This may be so, but we would like to mention that a thorough discussion of expletives in all contexts is beyond the scope of the current work, and our attention is limited to those instances where an expletive is viewed as some form of complementizer agreement as argued in Shlonsky (2000). However, as cited in Butler (2002: 13), many researchers contend that expletives have the same semantics in all contexts, i.e., they are existential quantifiers. Butler points out that: “various people have convincingly propounded an alternative view of expletives that does take into account their semantic effects, where they relate not to the subject of vP, but rather its situation interpretation”.

17. We limited the discussion to DPs for the simple reason that they are the only type of constituents that are related to what Shlonsky calls complementizer agreement, which is one of the questions we are after. However, if an analysis of the locative and temporal adverbs in (20c), e and f is to be pursued, they can be analyzed in terms of Sigurdsson’s (2010) features of *Speech Time* and *Speech Location*. Sigurdsson (2010: 161f) proposes splitting Fin^0 into two separate head features which he terms as *Speech Time* and *Speech Location*, S_T and S_L respectively. These two features can be *negatively* matched, in Sigurdsson’s terms, by the expletive *there* or the time adverbial *then*, which dissociate the utterance from the *here* and *now* local to the speech event. Nevertheless, unlike Sigurdsson, an analysis along this line for SA would have to assume that these features are not located on Fin^0 , but are higher in the C-domain because these adverbs have to precede focus. Below is an example.

- (i) fii l-bayt-i qaabl-a fahd-un ʕalijj-an
 in the-home-GEN meet.PERF-3SG.MASC Fahad-NOM Ali-ACC
 ‘In the house, Fahd met Ali.’
- (ii) *ʕalijj-an fii l-bayt-i qaabl-a fahd-un
 Ali-ACC in the-home-GEN meet.PERF-3SG.MASC Fahad-NOM
 ‘ALI, in the house, Fahd met.’

The ungrammaticality of (ii) is due to the locative appearing below the focused phrase *Ali*. One might also argue that the locative in (i) is analyzable in terms of Sigurdsson’s *Speaker Feature* [Λ_A], which he assumes to be higher in the C-domain than *Speech Time* and *Speech Location*. This line of analysis is justified by the observation that the locative can have a speaker-oriented epistemic modality reading; the sentence under this reading would amount to saying “*given the knowledge that the speaker has, it was in the house that Fahd met Ali.*” Therefore, incorporating adverbs into the discussion would have to deal with all these observations and this would take us far afield, given the diverse semantic contributions of adverbs (see Cinque (1999) for an elaborate discussion of the diverse adverbial functions).

4. Extraction patterns

4.1 Ban on extraction across the preverbal DP in SVO

Fassi Fehri (1993) and Soltan (2007) point out that SVO structures do not allow extraction across the preverbal subject, neither for focus-preposing nor for *wh*-questions. Below are examples.

- (34) a. muḥammad-un qaraʔ-a kitaab-an
 Mohammed-NOM read.PERF-3SG.MASC book-ACC
 'Mohammed read a book'
- b. *kitaab-an muḥammad-un qaraʔ-a
 book-ACC Mohammed-NOM read.PERF-3SG.MASC
 'A BOOK Mohammed read.'
- c. *maaḏaa muḥammad-un qaraʔ-a
 What Mohammed-NOM read.PERF-3SG.MASC
 'What did Mohammed read?'

The question is: how are focus-fronting and *wh*-questions derived in such constructions? Let us consider (35).

- (35) a. muḥammad-un kitaab-an qaraʔ-a
 Mohammed-NOM book-ACC read.PERF-3SG.MASC
 'Mohammed, a BOOK, he read'
- b. muḥammad-un maaḏaa qaraʔ-a
 Mohammed-NOM what read.PERF-3SG.MASC
 'Mohammed, what did he read?'

We take (34) and (35) as an indication that the preverbal DP is not base-generated in the thematic domain; rather, it is base-generated in an A-bar position in the left periphery. Soltan (2007) argues that this position is SpecTP, an A-bar position for him, and that it binds a null *pro* in SpecvP. The question is: how could Soltan's analysis be extended to explain the patterns in (34) and (35)? Before we attempt to answer this question, let us expand our data by the examination of long-distance extractions from embedded clauses. Unlike root clauses, extraction across preverbal DPs from embedded clauses is unproblematic as shown in (36) below.

- (36) a. ʔanan-ta ʔanna muḥammad-an qaraʔ-a
 think.PERF-2SG.MASC that Mohammed-ACC read.PERF-3SG.MASC
 kitaab-an
 book-ACC
 'You though that Mohammed read a book.'

- b. maaḏaa ḏʿanan-ta ʔanna muhammad-an
 what think.PERF-2SG.MASC that Mohammed-ACC
 qaraʔ-a
 read.PERF-3SG.MASC
 ‘What did you think that Mohammed read?’
- c. kitaab-an ḏʿanan-ta ʔanna muḥammad-an
 book-ACC think.PERF-2SG.MASC that Mohammed-ACC
 qaraʔ-a
 read.PERF-3SG.MASC
 ‘A BOOK, you thought Mohammed read.’

Extraction is problematic if it involves moving across a preverbal DP in the matrix clause as in (37).¹⁸

- (37) a. ʕalijj-un ḏʿann-a ʔanna fahd-an qaraʔ-a
 Ali-NOM think.PERF-3SG.MASC that Fahd-ACC read.PERF-3SG.MASC
 kitaab-an
 book-ACC
 ‘Ali thought that Fahd read a book.’
- b. *maaḏaa ʕalijj-un ḏʿann-a ʔanna fahd-an
 what Ali-NOM think.PERF-3SG.MASC that Fahd-ACC
 qaraʔ-a
 read.PERF-3SG.MASC
 ‘What did Ali think Fahd read?’
- c. *kitaab-an ʕalijj-un ḏʿann-a ʔanna fahd-an
 book-ACC Ali-NOM think.PERF-3SG.MASC that Fahd-ACC
 qaraʔ-a
 read.PERF-3SG.MASC
 ‘A BOOK Ali thought Mohammad read.’

4.2 Proposal

To account for the facts demonstrated in (34) through (37), we push Soltan’s 2007 analysis further and propose that preverbal DPs in SVO structures are base-generated in the left periphery in SpecTopP, rather than SpecTP. This position is higher than focus as shown in (15), and is assumed to be higher than wh-questions as well. These assumptions account for (34) and (35). It also follows from this proposal that the ban on extraction across preverbal DPs in root clauses is an inaccurate

18. Judgments on these sentences reflect the intuition of the authors and they correspond with the judgments reported in the literature for extraction across topics in simple clauses (e.g., Fassi Fehri, 1993; Soltan, 2007)

rendition of a fixed hierarchical order in the left periphery, namely that topics precede *wh*-questions and focus.¹⁹ The ban does not exist, otherwise (36), where the object is extracted all the way from its embedded position across the preverbal DP in its respective clause to the matrix clause, would remain unsolved mysteries. These long-distance extractions are assumed to proceed successive-cyclically through the edge of each phase up until the end position in the matrix clause. For example, the derivation of (36c) proceeds as shown in (38).

$$(38) \left[\text{FocP} [\text{kitaab-an}] \dots \text{Foc}^0 \left[\text{TP} \dots \text{T}^0 \left[\text{vP} \text{t}_1 \dots \text{v}^0 \left[\text{VP} \dots \text{V}^0 \left[\text{ForceP} \text{t}_1 \dots [\text{?anna}] \left[\text{TopP} \dots \left[\text{TP} \dots \text{T}^0 \left[\text{vP} \text{t}_1 \dots \text{v}^0 \left[\text{VP} \dots \text{V}^0 \text{t}_1 \right] \right] \right] \right] \right] \right] \right] \right] \right]$$

The movement in (38) does not violate subjacency and is in line with the phase impenetrability condition (Chomsky, 2000). Extracted elements cannot remain in SpecForceP of embedded clauses, as this position is considered as a mere escape hatch.

5. Conclusion

We argued in this paper that, contrary to Shlonsky (2000), the two complementizers *?inna* and *?anna* assume two different positions in the left periphery in Standard Arabic, based on their distributional patterns as well as on their inherent semantics. *?inna* does not express Force but is rather a Lexical Verum Operator whose function is to emphasize the truth of a proposition (p) whenever the question ‘*whether p?*’

19. A reviewer pointed out that an assumption of a fixed hierarchy to explain the adjacency of focus to T is less explanatory than an explanation in terms of some derivational mechanisms, such as the traditional T-to-C movement. In fact, there are many ways to explain this adjacency without resorting to T-to-C movement. For instance, Miyagawa (2010: 12), based on a feature inheritance approach, argues that T inherits [focus] from C, hence the movement of focused constituents to SpecTP. Clearly, his proposal derives the adjacency requirement as a by-product of feature inheritance. What we have shown is that the so called pre-verbal subject in SVO is distributionally identical to CLLD in that they appear in an A-bar position, namely SpecTopP. This idea is not completely new to the literature as the same is argued for Italian by Frascarelli (2007). Besides the distributional facts presented in sentences (33) through (37), this proposal is further supported by the fact that a pre-verbal subject can alternate in position with a CLLD element unrestrictedly as shown below.

- (i) *?ar-risaalat-u l-walad-u katab-a-haa*
the-letter-NOM the-boy-NOM write.PERF-3SG.MASC-it
‘The letter, the boy, he wrote it.’
- (ii) *?al-walad-u r-risaalat-u katab-a-haa*
the-boy-NOM the-letter-NOM write.PERF-3SG.MASC-it
‘The boy, the letter, he wrote it.’

is the question under discussion. The two complementizers project in structures as follows:

- (39) ForceP>TopP*> VerumP ?*inna* >TopP*>FocP>FinP>TP
 ForceP ?*anna*>TopP*>FocP>FinP>TP

The fact that both complementizers cannot directly be followed by focus or verbs is put down to a number of features including a [+aboutness] feature on Top⁰, Speaker and Hearer features as well as Speech time and Speech Location features. These features require the presence of a constituent in the pre-FocP field. Definite and indefinite DPs as well as adverbials and PPs can satisfy these features. The pronominal clitics analyzed as agreement by Shlonsky (2000) are then taken to value the [+aboutness] feature on Top⁰, and hence are not for agreement. The semantic contribution of [+aboutness] is that it introduces a predicate abstract that binds a variable in the thematic domain. In the case of expletives, it introduces an existential quantifier which quantifies over events or situations. Finally, the ban on extraction across preverbal DPs in SVOs is reexamined, and two arguments are made. First, we argue that the preverbal DP in these structures is base-generated in SpecTopP in the left periphery, a position that precedes focus and wh-questions. Based on the positions of Focus and Wh-questions in matrix clauses and on the patterns of long-distance extractions, we argue that the ban on extraction across preverbal DPs does not exist.

References

- Aoun, J. E., Benmamoun, E., & Choueiri, L. (2010). *The syntax of Arabic*. New York: Cambridge University Press.
- Bakir, M. (1980). Aspects of clause structure in Arabic. (Doctoral Dissertation). Indiana University, Bloomington.
- Brody, M. (1990). Some remarks on the focus field in Hungarian. *UCL Working Papers in Linguistics*, 2, 201–225.
- Büring, D. (1997). *On the meaning of topic and focus*. London: Routledge.
- Butler, J. (2004). On having arguments and agreeing: Semantic EPP. *York Papers in Linguistics Series*, 2(1), 1–27.
- Chomsky, N. (1986). *Barriers*. Cambridge, Massachusetts: MIT Press.
- Chomsky, N. (1995). *The minimalist program*. Cambridge, Massachusetts: MIT Press.
- Chomsky, N. (1998). Some observations on economy in generative grammar. In P. Barbosa, D. Fox, P. Hagstrom, M. McGinnis & D. Pesetsky (Eds.), *Is the best good enough* (pp. 115–127). Cambridge, Massachusetts: MIT Press.
- Chomsky, N. (2000). Minimalist inquiries: The framework. In Martin, R., D. Michaels & J. Uriagereka (Eds.), *Step by step: Essays on minimalist syntax in Honor of Howard Lasnik* (pp. 89–156). Cambridge, Massachusetts: MIT Press.

- Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz (Ed.), *Ken Hale: A life in language* (pp. 1–52). Cambridge, Massachusetts: MIT Press.
- Chomsky, Noam. (1977). On wh-movement. In P. Culicover, T. Wasow & A. Akmajian (Eds.), *Formal syntax* (pp. 71–133). New York: Academic Press.
- Culicover, P. (1991). Topicalization, inversion, and complementizers in English. In D. Delfitto, M. Everaert, A. Evers & F. Stuurman (Eds.), *OTS working papers: Going Romance and beyond* (pp. 1–45). Utrecht: University of Utrecht.
- Fassi-Fehri, A. (1993). *Issues in the structure of Arabic clauses and word order*. Dordrecht: Kluwer. <https://doi.org/10.1007/978-94-017-1986-5>
- Fintel, K. V., & Heim, I. (2011). *Lecture notes in intensional semantics*. Ms.: MIT.
- Franco, I. (2012). *Verbal stylistic fronting in Old Florentine*. Ms.: Leiden University.
- Frascarelli, M. (2007). Subjects, topics and the interpretation of referential pro. *Natural Language & Linguistic Theory*, 25(4), 691–734. <https://doi.org/10.1007/s11049-007-9025-x>
- Gutzmann, D., Hartmann, K., & Matthewson, L. (2017). Verum focus is verum, not focus.
- Haegeman, L. (2006). Argument fronting in English, Romance CLLD, and the left periphery. In R. Zanuttini, H. Campos, E. Herburger, & P. Portner (Eds.), *Crosslinguistic research in syntax and semantics: Negation, tense and clausal architecture* (pp. 27–52). Washington: Georgetown University Press.
- Heim, I., & Kratzer, A. (1998). *Semantics in generative grammar*. Oxford: Blackwell.
- Higginbotham, J. (1987). Indefiniteness and predication. In: E. Reuland & A. ter Meulen (Eds.), *The representation of (in)definiteness* (pp. 43–70). Cambridge, Massachusetts: MIT Press.
- Hintikka, J. (1969). Semantics for propositional attitudes. In J. W. Davis, D. J. Hockney & W. K. Wilson (Eds.), *Philosophical logic* (pp. 21–45). Dordrecht: Reidel. https://doi.org/10.1007/978-94-010-9614-0_2
- Höhle, T. N. (1992). Über Verum-Fokus im Deutschen. In J. Jacobs (Ed.), *Infonnationsstruktur und Grammatik* (pp. 112–141). Opladen: Westdeutscher Verlag. https://doi.org/10.1007/978-3-663-12176-3_5
- Ibn Maalik, M. (1990). *faarhu ʔtashiil* (volume 4). Beirut: Dar Al-kotob Al-ilmiyah.
- Kratzer, A. (1995). Stage and individual level predicates. In G. N. Carlson & F. J. Pelletier (Eds.), *The generic book* (pp. 125–175). Chicago, IL: University of Chicago Press.
- Krifka, M. (2008). Basic notions of information structure. *Acta Linguistica Hungarica*, 55 (3–4), 243–276. <https://doi.org/10.1556/ALing.55.2008.3-4.2>
- Ladefoged, P., & Johnson, K. (2015). *A course in phonetics*. Connecticut, Stamford: Cengage Learning.
- Larson, R. K. (1988). On the double object construction. *Linguistic Inquiry*, 19 (3), 335–391.
- Lohnstein, H., & Stommel, H. (2009). Verum focus and phases. *Linguistic Analysis*, 35(1), 109–140.
- Miyagawa, S. (2010). *Why Agree? Why Move? Unifying agreement-based and discourse configurational languages*. Cambridge, Massachusetts: MIT Press.
- Mohammad, M. A. (2000). *Word order, agreement, and pronominalization in Standard and Palestinian Arabic*. Philadelphia: John Benjamins Publishing. <https://doi.org/10.1075/cilt.181>
- Müller, G., & Sternefeld, W. (1993). Improper movement and unambiguous binding. *Linguistic Inquiry*, 24(3), 461–507.
- Nissenbaum, J. (1998). Movement and derived predicates: Evidence from parasitic gaps. *MIT Working Papers in Linguistics*, 25, 247–295.
- Omar, M., Zahran, M., & Abdullatif, M. (1994). *Al-Nahw-u Al-Asasijj-u ‘the basic syntax’* (4th Edition). Kuwait: Dar-u Al-Ssalaasil-i.

- Ouhalla, J. (1994). Verb movement and word order in Arabic. In D. Lightfoot & N. Hornstein (Eds.), *Verb movement* (pp. 41–72). Cambridge: Cambridge University Press.
<https://doi.org/10.1017/CBO9780511627705.004>
- Ouhalla, J. (1997). Remarks on focus in Standard Arabic. *Amsterdam Studies in the Theory and History of Linguistic Science Series 4*, 9–46.
- Pollock, J. Y. (1989). Verb movement, universal grammar, and the structure of IP. *Linguistic Inquiry*, 20 (3), 365–424.
- Rizzi, L. (1997). The fine structure of the left periphery. In L. Haegeman (Ed.), *Elements of grammar* (pp. 281–337). Dordrecht: Kluwer. https://doi.org/10.1007/978-94-011-5420-8_7
- Rizzi, L. (2001). On the position “Int(errogative)” in the left periphery of the clause. In G. Cinque, L. Renzi, and G. Salvi (Eds.), *Current studies in Italian syntax* (pp. 287–296). Amsterdam: Elsevier.
- Rizzi, L. (2004). Locality and left periphery. In A. Belletti (Ed.), *Structures and beyond* (pp. 223–251). Oxford: Oxford University Press.
- Rooth, M. (1985). Association with focus. (Doctoral dissertation). University of Massachusetts, Amherst.
- Rooth, M. (1992). A theory of focus interpretation. *Natural language semantics*, 1(1), 75–116.
<https://doi.org/10.1007/BF02342617>
- Russell, B. (1940). *An inquiry into meaning and truth*. London: George Allen and Unwin LTD.
- Sauerland, U. (1998). Two structures for English restrictive relative clauses: The meaning of chains. (Doctoral dissertation). MIT, Cambridge.
- Shima, E. (2000). A preference for Move over Merge. *Linguistic Inquiry*, 31(2), 375–385.
<https://doi.org/10.1162/ling.2000.31.2.375>
- Shlonsky, U. (1994). Agreement in comp. *The Linguistic Review*, 11(3–4), 351–376.
- Shlonsky, U. (2000). Remarks on the complementizer layer of Standard Arabic. In J. Lecarme, J. Lowenstamm & U. Shlonsky (Eds.), *Research in Afroasiatic grammar: Papers from the third conference on Afroasiatic languages* (pp. 325–343). Amsterdam: John Benjamins.
<https://doi.org/10.1075/cilt.202.15shl>
- Sigurðsson, H. Á. (2010). On EPP effects. *Studia Linguistica*, 64(2), 159–189.
- Sigurðsson, H. Á. (2011). Conditions on argument drop. *Linguistic Inquiry*, 42(2), 267–304.
https://doi.org/10.1162/LING_a_00042
- Sigurðsson, H. Á., & Maling, J. (2008). Argument drop and the empty left edge condition (ELEC). *Working Papers in Scandinavian Syntax*, 81, 1–27.
- Soltan, U. (2007). On agree and postcyclic merge in syntactic derivations: First conjunct agreement in Standard Arabic. In E. Benmamoun (Ed.) *Perspectives on Arabic Linguistics XIX* (pp. 191–213). Amsterdam: John Benjamins. <https://doi.org/10.1075/cilt.289.15sol>
- Soltan, U. (2007). On formal feature licensing in minimalism: Aspects of Standard Arabic morphosyntax. (Doctoral dissertation). University of Maryland, College Park.
- Stowell, T. (1991). The alignment of arguments in adjective phrases. *Syntax and Semantics*, 25, 105–135.
- Zimmermann, M., & Hole, D. (2008). Predicate focus, verum focus, verb focus: Similarities and difference. Paper presented at the Potsdam-London IS Meeting.

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