

Dependency Relations in the Syntactic Structure of Tunisian Arabic

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Abstract

This paper deals with facets of the derivation and representation of sentences in Tunisian Arabic (TA), a Null Subject Language (NSL). The focus of investigation is on the dependency relations that make it possible to have sentences that are mainly the result of Merge and insertion/deletion processes in an Agree-, Phase-theoretic framework of assumptions (Chomsky 2001, 2004). These Merge processes also include movement (the operation Move as part of Merge) for the satisfaction of the EPP (Extended Projection Principle – namely, every sentence must have a subject) at the interface between syntax and discourse. Central to the EPP-feature driven movement analysis is the assumption that morphological rules operate first pre-syntactically, at vocabulary selection in the Numeration, and have post-syntactic effects, i.e. at Phonetic Form (PF), without affecting Logical Form (LF) representations (Roberts 2010a,b; Holmberg 2010). As in Miyagawa's (2010, pp. 5, 9) agreement approach to the EPP, not only are Merge and Move undertaken as a single syntactic operation – where elements projected onto the syntax are Merged and are then reprojected in a second-Merge operation – but also Move and the relation Agree are no longer distinguishable.

Keywords: Probe-goal, Spec-head, EPP, feature-driven, pro

1. Introduction

In the derivation of syntactic structure, the operation Move is primarily driven by the need to ‘localize’ the relation Agree by implementing Spec-head agreement between the probing head and the goal of the agreement relation or ‘Probe-Goal Union’ (Miyagawa 2010, p. 35). One representative example of such ‘localization’ of agreement relations in the derivation of sentences in null-subject languages is the generation of null *pro* elements. Such elements are generated (either by pure Merge or by Move) in the subject position of the relevant sentences as in Roberts’s (2010a,b) analysis of Romance null-subject systems.

In section 2, I show, by reference to sample examples of complement *that*-clauses and definite restrictive relative clauses in TA – with some cross-linguistic parallels – that instances of the pronominalization of gaps in subject position in the relevant null-subject sentences are instances of a general copy (*pro*) deletion mechanism (Holmberg 2010, Roberts 2010a). As far as pronominalization of a gap in subject position is concerned, copy deletion does not involve a trace, but a silent pronominal *pro*. Since the ban against *that-t* configurations (as far as gaps in subject position are concerned) should be operative cross-linguistically (cf. Roberts 2010a), allowing a gap in subject position in the relevant restrictive relative clauses in TA involves a silent *pro* allowing the *that-t* configuration to be overridden. In these instances of gap pronominalization, *pro* is referential, since in this case, *pro* is bound by an antecedent acting as a topic.

In section 3, I extend the analysis to *wh*-questions. In the derivation of subject *wh*-questions, the gap in subject position represents a silent expletive *pro*. The copy-deletion mechanism also operates in the derivation of such null-subject sentences whereby expletive *pro* deletes at PF, and is not represented at LF (Roberts, 2010a).

According to the proposed analysis of the derivation of null subject positions in a NSL like TA, a subject-related *pro* (referential or expletive) will always be instantiated in case no overt D or DP element is phonologically realized in subject position in these languages triggering subject-verb agreement (Roberts 2010a, p. 85, Biberauer 2010, p. 195).

The existence of subject-related *pro* elements in the derivation of the syntactic structure of Arabic has been the subject of a lot of research and debate in the Arabic linguistics tradition. Most linguists in this tradition would agree that referential *pro* is somehow involved in the derivation and representation of subject positions in the sentence structure of Arabic (Mohammad 1989, Benmamoun 1992, Fassi Fehri 1993, 2000, Soltan 2006; see Alexiadou & Anagnostopoulou 1998, 2001 and Akkal & Gonegai 2000 for an opposite view). However, the status of expletive *pro* in the sentence structure of Arabic has been much more controversial than referential *pro*. Whereas Fassi Fehri (1993, *contra* Mohammad 1989), Soltan (2006), Alexiadou & Anagnostopoulou (1998, 2001) and Akkal & Gonegai (2000) deny the existence of expletive *pro* in Arabic/NSLs, Benmamoun (1992) argues that expletive *pro* is only present in the standard variety of Arabic to the exclusion of the modern spoken dialects of Arabic (Moroccan Arabic in Benmamoun’s (1992) analysis of subject-verb agreement in Arabic). Another view is that: “...although there may very well be an expletive element preverbally in the VS cases – which we actually believe – this is not the element with which the verb agrees. Rather, it agrees directly with the postverbal subject” (Aoun *et al.*, 1994, p. 200).

In section 4, I ultimately show how the analysis extends to DPs, assuming that Tense is somehow instantiated in DP by the head D itself (cf. Pesetsky and Torrego's 2001, p. 361 claim that Nominative case is an uninterpretable T-feature on D: uT on D). Taking into account the uninterpretable D(eterminer)-feature on T (i.e., uD on T), uD on T and uT on D are equally important properties of the Tense/agreement pronominal system of Null-subject/Romance languages. The feature composition of D/DP elements and of the functional node that probes these elements (namely, T) is the basis of the dependency relations in the syntactic structure of TA in terms of which the agreement approach to the EPP finds further support.

In this light, the inter-dependency of feature interpretability in the IP/TP domain of sentence structure is reduplicated in the CP domain as evidenced by the structure of definite restrictive relative clauses and wh-questions (sections 1 and 2, respectively). These C-(T)-D/D-(T)-C interrelationships are first and foremost interpretable by virtue of the dependency/ordering relations that *derivationally* form them in the grammar (cf. Manzini 1995).

The sample sentences from Tunisian Arabic in this paper can be compared to similar examples in Talmoudi (1981), Halila (1992) and Chekili (2004). The examples are also very close to their Moroccan counterparts (e.g., Benmamoun 1992).

I followed the Qalam transliteration system of Romanization of Arabic for the transcription of the Arabic letters except for the 'hamza' letter/sound أ and the pharyngeal glide sound ع for which I adopted the International Phonetic Alphabet (IPA) transcription symbols ʔ and ʕ , respectively. The reason for my adopting the IPA symbols ʔ and ʕ is that the 'hamza' and the pharyngeal glide are not easily distinguishable in the Qalam transliteration system as both are represented by a quote-like diacritic.

2. Dependency relations in the structure of restrictive relative clauses

Holmberg (2010, p. 91) gives the following typology of languages as far as null subjects are concerned: the co-referential embedded subject position is obligatorily left empty in a consistently NSL like Italian (sentence (1b)), but only optionally in, what Holmberg (2010) calls, 'partially NSLs' like Marathi (sentence (1c)). None of these two paradigms is available in a non-NSL like English (sentence (1a)):

(1) a. John_i said that he_i wanted to buy a car.

b. Gianni_i dice che (*lui_i) vuole comprare una macchina. (Italian)

Gianni says that he wants buy a car

'Gianni says that he wants to buy a car.'

c. Ram_i mhanala ki (tyani_i) ghar ghetla (Marathi)

Ram said that he house bought

'Ram said that he bought a house.'

An Embedded subject position in TA would seem to pattern like the Marathi-type languages:

(2) Zaid_i qaal illi (huwwa_i) yi-Hib yi-shrii daar (TA)

Zaid said that he 3-want 3-buy house

‘Zaid said that he wants to buy a house.’

The free alternation of the pronoun and the gap in subject position in examples like (1c) and (2) above is evidence that some deletion mechanism operates on the structure of such sentences yielding two representations that converge at LF with the same interpretation.

A similar phenomenon also obtains in the object position of embedded sentences in TA (example (3a)) and Greek, another NSL, (example (3b)), but not in English (example (3c)):

(3) a. Shkuun_i zaid yi-fakkar zainab baash tizzaw(-u_i)? (TA)

Who Zaid 3-think Zainab will marry(-him)

‘Who does Zaid think that Zainab will marry?’

b. Pion_i ipoptefthike i Maria oti tha ton_i kalesoume? (Greek; adapted from

who-acc suspect-3sg the Maria that will him-acc invite Alexopoulou and

‘Who did Maria suspect we will invite?’ Keller 2003: 16)

c. Who does John think that Mary will invite (*him)?

Following Tsimpli (1999), Alexopoulou and Keller (2003, p. 16) note that resumption in Greek is only acceptable when the gap is embedded at least one *that*-clause away from the matrix (as in sentence (3b) above). A similar phenomenon is found in English whereby resumption becomes more acceptable as the extraction site becomes more deeply embedded (examples from Erteschick-Shir 1992, cited in Alexopoulou and Keller 2003, p. 16):

(4) a. This is the girl_i that John likes t_i/(**her*_i).

b. This is the girl_i that Peter said that John likes t_i/??*her*_i.

c. This is the girl_i that Peter said that John thinks that Bob likes t_i/?*her*_i.

d. This is the girl_i that Peter said that John thinks that yesterday his

mother had given some cakes to ?t_i/*her*_i.

In matrix clauses in English as well as in Greek (examples (5a) and (5c), respectively), resumption is no longer an option, but, in TA, they are perfectly well-formed (example (5c)):

(5) a. Who_i did you fire t_i/(**him*_i)?

b. Pion_i t_i/(**ton*_i) apelis? (Greek; Alexopoulou and Keller 2003, p. 16)

Who-acc t_i /*(*him_i) fire-2sg

‘Who did you fire?’

c. Shkuun_i (illi) Tarad-t(-u_i)? (TA)

who that fire -you(-him)

‘Who did you fire?’

This is accounted for by maintaining that the resumptive pronoun *-u* in the extraction site in the object position of sentence (5c), co-referring to the wh-word *shkuun*, is ‘optionally’ realized as *pro* (cf. Cinque’s 1991 binding chains that involve a *pro* in the base position of a wh-moved operator constituting what Cinque 1991, p. 98 calls a “(resumptive) A’-bound *pro* strategy”). On this account, the difference between object wh-extraction and subject wh-extraction (see section 3 below for subject wh-extraction) is that, whereas in both wh-extraction types the resumptive pronoun is ‘optionally’ marked for deletion (i.e. optionally realized as *pro*), only subject wh-extraction would involve the kind of movement operation from a post-verbal position that Rizzi (1982) identified as characteristic of NSLs. I will come back in section 3 to wh-extraction out of the subject position for its direct relevance to the type of inter-dependency relations I am primarily interested in in this paper. (For an overview of the differences between the resumptive and the gap strategies in wh-extractions (Standard Arabic and Lebanese Arabic, in particular) and the syntax of wh-constructions in Arabic, see Aoun *et al.*, 2010, Chapter 6).

In restrictive relative clauses like those in (6) below, pronoun deletion is as acceptable as in the other embedded contexts in (1c) and (2) above. I will mainly be dealing here with relativized subjects. The sentences in (6) are examples of relativization where the head of the relative clause, i.e. D, is [+Def] (see (9) below for the structure of the relative clause in TA):

(6) a. il-ulid_i illi (huwwa_i) njaH fi-l-imtiHaan ... (TA)

the-boy that (he) succeeded.3MS in-the-exam

‘The boy who passed the exam ...’

b. il-ulaad/il-bnaat_i illi (huma_i) najH-uu fi-l-imtiHaan ...

the-boys/the-girls that (they) succeeded-3P in-the-exam

‘The boys/girls who passed the exam ...’

In these relative clauses, the head noun is obligatorily [+Def], i.e. it must be preceded by the definite article *il* since it is only in such a context that the relative particle *illi* is obligatorily inserted. As exemplified by (7) below, *illi* cannot co-occur with an indefinite head noun:

(7) *jaa ulid illi njaH fi-l-imtiHaan (TA)

came boy.indef. that succeeded in-the-exam

‘A boy who passed the exam came.’

The fact that the resumptive ‘co-referential’ pronouns in the subject position of the embedded clauses in (6) are optionally phonologically realized as a subject pronominal or left unpronounced as a silent referential *pro* suggests that *illi* is not a relative pronoun. In either case, however, full subject-verb agreement obtains in (6a) and (6b) determined by Spec-head agreement between the pronoun in [Spec, IP] (phonologically realized or not) and the Agr element of INFL.

The kind of embedding we find in such subject relative clauses as in (6) above is determined by morphological processes that largely operate pre-syntactically in the Numeration and are carried out derivationally in the form of Merge processes from the Numeration to Spell Out (PF, the interface between syntax and the world of discourse on the sensory-motor side of the grammar) deriving one structure out of another (see section 4). If Nunes (2004, p. 174, note 2) is right in the claim that a DP part of larger phrase marker is derived independently of the larger structure and then merged to it, the relative clause in (6a), for example, could be ‘decomposed’ into two chunks:

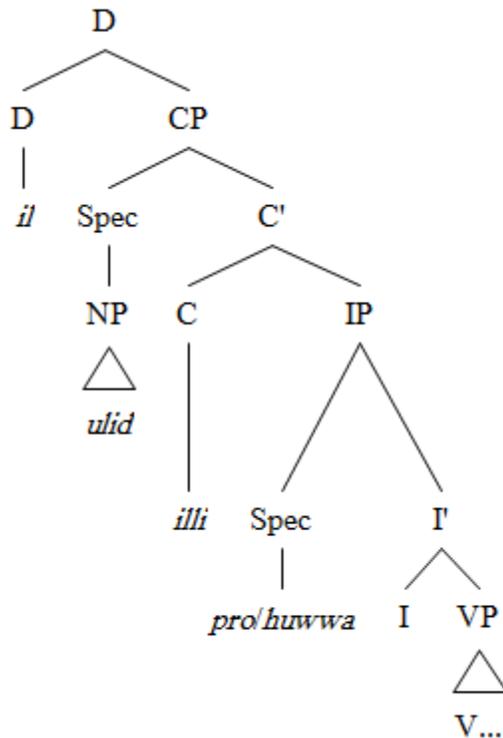
- (8) a. [DP [D *il*-[NP *ulid*]]] (TA)
 the.boy
 ‘The boy ...’
- b. [CP C *illi* [IP [Spec *pro* [I' [I-V *njaH/yi-njaH* *fi-l-imiHaan*]]]]]
 that *pro* succeeded.3MS/3-succeeds in-the-exam
 ‘ ... that succeeded/succeeds in the exam ...’

The silent argumental *pro* in [Spec, IP/TP] in (8b) corresponds to the optionally realized overt pronominal *huwwa* in (6a). The logic of this ‘decomposition’ view of the restrictive relative clause in TA is that the formation of such a clause consists in merging the DP in (8a) and the CP in (8b). The structural link between the two independently merged structures is the article-like (D-like) non-anaphoric C-particle *illi* yielding the restrictive relative clause in (6a).

The suggestion here is that relative clause formation in TA is a simple process of merging two independently derived structures into one bigger structural entity. This process is reminiscent of Clitic Left Dislocation (Topic-comment structures) in NSLs and Romance in general. In both relativization and Clitic Left Dislocation of the subject NP/DP, the process whereby the subject NP/DP is realized to the left and higher than the IP/TP is base-generation in that position. No movement of the relativized/Clitic Left Dislocated NP/DP ever occurs in these structures.

Thus, I suggest that the basic structure of subject relatives in TA is as in (9) below (to be compared with the structure of relative clauses in a language as English (Kayne 1994) as represented in (10)):

(9) The structure of subject relative clauses in TA

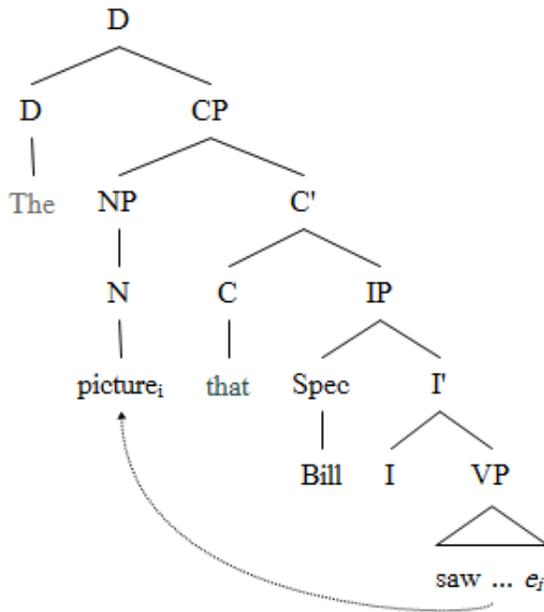


In (9), D is the head of the relative clause and it c(onstituent)-commands any of the nodes downwards. Thus, D can enter into anaphoric binding relations within this c-command domain (cf. Manzini's 1992: 76 notion of locality of dependency relations). This dependency relation that is established in this domain links D *il* to C *illi* (i.e., <*il*, *illi*>). Then, the chain/binding relation continues further down linking D-C to I, and – by virtue of the relation between I and [Spec, IP] (a basic Spec-head agreement configuration) – the sequence of structural dependencies establishes a link between the D in CP and the subject in [Spec, IP] – namely, the licensing of subject pronominalization as evidenced by the structures in (6) above.

Kayne (1994, p. 183, note 67) entertains the idea that there may be two levels of D-like projections above CP in relative clauses. The first of the two must be D since this is the only category that can be represented highest in the architecture of the relative clause. Presumably, the second projection that directly links to D is N (i.e., the head of the NP *picture* in (10) below), over and above the necessary relation between D and C. Kayne (1994, pp. 87, 112) identifies the problem of positioning the relativized noun (NP) as a conceptually important one. According to him, relative clauses are not complements of N. Nor are they right-adjoined to N or D. As Kayne (1994) maintains, in a structure like (10b) for the relative clause in (10a) below, NP raises from within IP up to [Spec, CP] in English-type languages:

(10) a. The picture that Bill saw ...

b.



Kayne (1994, p. 154, note 8) notes that the relation between the D element *the* and the NP *picture* in (10) is reminiscent of an ECM construction. Nevertheless, Kayne (1994: 154, note 7) entertains the idea that this is not the only possibility that languages could opt for.

Another possibility is that the structure of the relative clause could be simply [_{DP} D CP] without movement of NP to [Spec, CP]. Kayne (1994, p. 154, note 8) adds that, in some languages, a process of N-to-D raising applies from within [Spec, CP] by left-adjoining N to D. This process can be observed in relative clauses in Romanian – a NSL – as exemplified by (11) below (Kayne 1994, p. 88, example (11)):

(11) Certea pe care am citit-o (Romanian)

Book-the *pe* which I-have read-it

‘The book which I have read.’

Note that the possibility of having base-generation of NP in [Spec, CP] in (11) coincides with the resumptive pronoun strategy which is employed to a large extent in NSLs, as in TA (sentence (3a) above), or, in Greek (sentence (3b) above).

On this account, NSLs would opt for base-generating the relativized NP in [Spec, CP] and having a resumptive pronoun in the gap position in the IP. Disregarding the process of N-to-D raising in CP (which could, at best, be characterized as a language-specific mechanism much akin to the process of pronoun cliticization in subject-clitic NSLs), the process of deriving a relative clause in a NSL like TA (see the sentences in (6) above) is by optionally phonetically realizing the gap position. Alternatively – according to the copy deletion analysis (Roberts 2010a,b) – the subject pronoun is optionally deleted and ‘realized’ as *pro* at PF.

The licensing of *pro* at PF is achieved via the anaphoric links that relate *pro* in IP to its antecedent – the relativized NP in [Spec, CP] –, and ultimately, to D-C (due to transitivity of Spec-head/head-head agreement relations, à la Rizzi 1990). As Cinque (1991, p. 115) observes, the anaphoric relation linking the silent pronominal element to its A'-antecedent "... provides the overt grammatical indication needed for the ϕ -features of *pro*".

As discussed above, it is by virtue of the intrinsic relation that links the D-element *il* and the Complementizer *illi* in restrictive relative clauses in TA that the anaphoric relations between D-C and I and C and [Spec, IP] are established. The legitimacy of phonetically realizing the subject (and, for that matter, the gap in object position in object relativization) is evidence that:

- (i) *illi* is not pronominal. *Illi* is an article-like (D-like) non-anaphoric C-particle, inserted under C to provide a structural link between D in CP and C, and between C and I. Ultimately (by transitivity of structural agreement relations), the dependency relation is established between the gap (phonetically pronominalized or realized as *pro*) in [Spec, IP] and the antecedent in [Spec, CP]
- (ii) Relative clause formation in TA is a simple process of merging two independently derived structures into one larger structural entity. This process is reminiscent of Clitic Left Dislocation (Topic-comment structures) in NSLs and Romance in general.
- (iii) Over and above the licensing of a referential *pro* in [Spec, IP] via Spec-head agreement with the Agr element of INFL (or in object position licensed by the light verb v^* inside vP/VP), a resumptive A'-binding agreement strategy is at work linking [Spec, CP] and the pronoun/*pro* (with no movement ever involved to link the two elements). In this respect, relativization coupled with pronominalization of a gap in a NSL like TA is similar to the process of Clitic Left Dislocation in NSLs and Romance.

In the following section, I deal with subject wh-extraction in TA.

3. Dependency relations in subject wh-extractions in TA

Although in subject wh-extraction similar structural dependency relations to those operating in the derivation of relative clauses apply, the copy deletion mechanism seems to operate differently. The examples in (12) below show that a pronominal is barred from being phonetically realized in subject position in wh-extractions:

(12) a. Shkuun jaa?

who came
'Who came?'

b. Shkuun (*huwwa) jaa?

who he came

'Who came?'

The ungrammaticality of (12b) with the subject position [Spec, IP] phonetically realized is significant in that it testifies to the adequacy of the conclusion arrived at in section 2, namely, that for the (resumptive) pronoun strategy to work in that position there must be a necessary

–*u* or left silent as *pro*) does not depend on any licensing condition other than its being selected by the verb (i. e., via the θ -role assignment and Case-marking). By contrast, the structural subject position (i.e., [Spec, IP]) in the *wh*-constructions in (13) is necessarily derived and would have to meet some structural condition for its being pronominalized in such *wh*-extraction contexts. This is due to the absence of any structural link (i.e., the D-C link) that could establish the dependency relation between C, I, [Spec, CP] and [Spec, IP] as discussed in section 2 above in relation to the derivation of subject relative clauses in TA.

Nevertheless, the cases of optionality of phonetically realizing the subject position in embedded subjects in complement clauses, as in example (2) above, seem to be a counter-example to the restriction on the subject position witnessed in such subject *wh*-extraction contexts as in (12b) and (13b). The answer to this objection is that the silent pronominal copies are different in the two cases: in the case of an embedded subject in complement clauses (as in the case of subject restrictive relative clauses), *pro* is a resumptive pronoun referentially linked, in an anaphoric relation, to its A'-antecedent in [Spec, CP] (as summarized in point (iii) at the end of section 2). This co-referential anaphoric relation between the two elements explains why, in this instance, *pro* could easily be phonetically realized in [Spec, IP].

To understand the mechanisms that are involved in subject *wh*-extraction in TA, I first introduce in section 3.1, below, Chomsky's (2008) phase-theoretic view on subject *wh*-extraction in English. Then, in section 3.2, I show how subject *wh*-extraction in TA, in such cases as in (12a) and (13a) above, is substantially different from its counterpart in English. The difference finds a plausible account in terms of a silent EXPL(itive) *pro* that is licensed in the subject position of the clause [Spec, IP] via Spec-head agreement with the Agr element of INFL, which is an intrinsic property of NSLs.

3.1. Subject *wh*-extractions in English-type languages -Chomsky's (2008) phase-theoretic view on subject *wh*-extraction

Chomsky (2008, pp. 149-150) maintains that two different chains are formed when the subject of a sentence is *wh*-moved. In (15) below (Chomsky's (10)), the subject is extracted out of the subject position inside *v**P/VP. (15a) and (15b) show how the derivation proceeds. (15c) is the phonological output of the derivation at PF:

- (15) a. C [T [who [*v** [see John]]]]
 b. Who_i [C [who_j [T [who_k *v** [see John]]]]]
 c. Who saw John?

Chomsky (2008) contends that movement of a *wh*-phrase out of the subject position in *v**P, yielding the *wh*-question in (15c), forms two different chains: (a) an A'-A chain (chain₁), and (b) an A-chain (chain₂). Chain₁ links *who_k* in [Spec, *v**P] to *who_i* in [Spec, CP] – a typical A'-position. Chain₂ links *who_k* in [Spec, *v**P] to *who_j* in [Spec, TP] – a typical A-position. Since the two copies of the *wh*-phrase target two different positions in the derived *wh*-question, it is plausible to argue that two different features are valued in each chain. If Chain₂, linking [Spec, *v**P] to [Spec, TP], is arguably responsible for valuing T's Agree-features and its EPP feature (both of which, presumably, are transmitted from C to T; cf. Chomsky 2008, pp. 144-149, 157),

chain₁ values a certain Edge feature (EF) that C withholds from transmitting to T. For reasons of linearization processes at the PF component, only the first copy (i.e., the copy involved in Chain₁ <who_i, who_k>) gets a phonological matrix. The second copy (i.e., the copy involved in Chain₂ <who_j, who_k>) remains silent.

Chomsky's (2008, p. 149, example (12)) evidence for two different copies *who_i* and *who_j* in (15b)) in subject wh-extractions comes from such contrasts as in (16):

(16) a. Who was [who] never seen?

b. *Who was there never seen?

In (16a), the square-bracketed lower wh-moved copy *who* is silent. If, prior to the deletion of the wh-copy *who*, at PF (as argued above), no other element can occupy the landing site of this lower wh-copy, then the ungrammaticality of the wh-extraction case in (16b) is explained: EXPL *there* in (16b) cannot be inserted in the position where the lower copy of *who* is supposed to land.

As first argued by Rizzi (1982), NSLs 'naturally' resort to the post-verbal position (which, under current Minimalist assumptions, is [Spec, v*P] after V-to-T movement applies) for subject wh-extraction. The effect of this extractability procedure is that *that-t* violations are successfully avoided because of the free option available to NSLs of having an EXPL *pro* occupy [Spec, IP]. As the subject wh-extraction examples in (12a) and (12b) show, *illi*-insertion is as legitimate as in the cases of embedding in complement and relative clauses in TA (see section 2). Thus the structure of subject wh-extraction in TA necessarily involves an EXPL *pro* which would be the counterpart of the silent wh-word Chomsky (2008) gives evidence for in English. At PF, EXPL *pro*, in the case of subject wh-extraction in TA, and the silent wh-copy, in the case of English subject wh-extraction, delete for PF interpretability and constraints on linearization.

As argued above, there is no way that a C-I dependency relation can be established in subject wh-extractions in TA in the absence of the required D-C link in CP. Thus, as Manzini (1992, p. 72) notes, since the structural conditions for extractability of the subject apply without having recourse to any agreement mechanism between C and I, null-subject languages – in contrast to English-type languages – do not resort to such mechanism for extraction purposes. Instead, extraction of the subject from a post-verbal position is the only option these languages can opt for.

3.2. Subject wh-extractions in NSLs –Subject wh-extraction in TA/NSLs necessarily involves an EXPL *pro* in [Spec, IP/TP], not a wh-copy

As discussed in relation to (12a) and (13a) above, the derivation of subject wh-extraction cases in TA involves an EXPL *pro* since only that category can license the NSL specific feature D on T/I. A silent copy in [Spec, IP] of the wh-moved subject could not satisfy such an inherent feature in TA as a NSL. On this account, the derivation of a subject wh-extraction case in TA (sentence (17a) below) would have the structural representation in (17b) (I use the trace convention for ease of exposition):

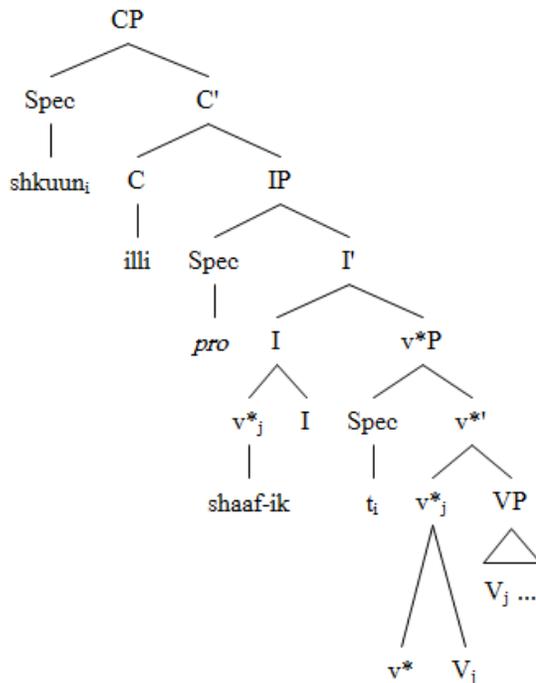
(17) a. *Shkuun illi pro shaaf-ik?*

(TA)

who that saw-you

‘Who saw you?’

b.



As can be seen in the representation in (17b), the wh-word *shkuun* is extracted directly from its base position in [Spec, v*P] without having to leave a copy of its movement in [Spec, IP], which position is already occupied by EXPL *pro*.

Some interesting evidence, involving EXPL *there*-associate pairs in English, suggests that the EXPL version of subject wh-extraction could also be available in a strictly SVO language like English. Thus, Chomsky 1995, p. 158) makes reference to such contrasts as the following (Chomsky’s example (50) from Safir 1985):

(18) a. [_{wh} How many men] did John say that there were *t_{wh}* in the room?

b. *[_{wh} How many men] did John say that *t_{wh}* were in the room?

(18b) is a common *that-t* violation that is obviated in (18a) by virtue of *there*-insertion. As Chomsky (1995, p. 158) notes, this is essentially Rizzi’s (1982) analysis of wh-extraction of subjects in Italian, with the only difference that the EXPL in English-type languages must be overt, whereas it has to be null in TA as a NSL – namely, *pro*. The TA examples in (19) are the counterpart of the English examples in (18):

- (19) a. [_{wh}Qaddash min raajə]l qul-t (illi) *pro* kaan-uu fii l-biit?
 how many of man say-2S that be-3MP in the-room
 ‘How many men did you say were in the room?’
- b. *_{wh}[Qaddash min raajə]l qul-t (illi) huma kaan-uu fii l-biit?
 how many of man say-2S that they be-3MP in the-room
 ‘How many men did you say were in the room?’

In (19), over and above the role EXPL *pro* plays in valuing the EPP-feature of T, the presence of this EXPL element is also fundamental in the valuation of the T-node’s intrinsic D-feature. The *wh*-question (19b) shows that, in TA, nothing other than a silent EXPL *pro* can occupy [Spec, IP/TP]; hence, the ungrammaticality of spelling out the EXPL as a pronominal (*huma* in (19b)) in that position. Thus, the existence of such parallels in the realization of EXPL-associate pairs in English and TA lends credence to the EXPL *pro* analysis of the relevant data in a null-subject language like TA.

As in normal cases of EXPL-associate pairs, the presence of the EXPL is a necessary condition on the derivation/representation of the sentence: T can value its intrinsic [*u*D] feature by virtue of the dependency relation that EXPL establishes with the associate. As Biberauer (2010, p. 163) notes: “In the specific case of expletive subjects, it would seem that [*u*D] on T can be valued either [+definite] or [-indefinite] as T appears to agree with the associate” as the contrast in (20) shows (Biberauer 2010, p. 162, example (11)):

- (20) a. There remains a problem/*the problem /*every problem.
- b. *pro*_{EXP} irthe kapios fititis/o Petros/to kathe pedi (Greek)
 arrived some students/the Petros/the every child
 ‘Some student/Petros/Every child arrived.’

On this account, the absence of any ‘Diesing Effects’ in (20b) is the consequence of T’s D-probe bearing a movement trigger necessitating the EXPL-associate dependency relation to be established. The same is true of TA, as the sentences in (21) show:

- (21) a. jaaw l-qliil min l-ulaad (TA)
 came.3P the-few of the-boys
 ‘A few boys came.’
- b. jaaw l-ulaad l-kul-hum
 came.3P the-boys the-all-them
 ‘All the boys came.’

c. jaaw barsha ulaad wa bnaat

came.3P many boys and girls

‘Many boys and girls came.’

d. jaaw ulaad wa bnaat ya-sʔal-uu ʕan-k

came.3P boys and girls 3-ask-P about-you

‘(Some) boys and girls came and asked about you.’

As Biberauer (2010, p. 195) puts it: “English, Msc [Mainland Scandinavian] and, on the deletion analysis, canonical NSLs have a canonical subject position in the sense of the original EPP, i.e. a position which must always be occupied either by a subject or a subject-related expletive”. As Biberauer (2010, p. 162) further explains: “...the deletion approach to null subjects entails SpecTP projection, with the difference between canonical NSLs and non-canonical NSLs being that the feature composition of T in the former is such that pronouns which have undergone raising to SpecTP will be deleted at PF”. In relation to Chomsky’s (2008) subject wh-extraction examples in (15) above, this is exactly what happens to the silent wh-copy *who* in [Spec, TP], with the only difference that in an NSL language like TA, the silent element is an expletive *pro*, as discussed above.

The relevant feature composition Biberauer (2010) alludes to is the additional D-feature of the I/T node, which as an uninterpretable feature [μ D] of the probe must be valued by an interpretable D-feature on the goal. The effect this feature has on structural representations – and dependency relations in derivational terms – is to relate D on T to ϕ -feature specification, and by that token, pronominalizing the structural subject position of clauses for EPP satisfaction. As Roberts (2010a, p. 80) puts it, “... *pro* is just like an overt pronoun; its non-overtness is purely a PF matter.”

In this section, I have discussed some relevant evidence in relation to the derivation of wh-extraction of subjects showing that TA, as a NSL, is not so different from a language like English. Both languages must fulfil the requirement of filling up the subject position by merging some element in subject position of the relevant structures. In this respect, T, in English and TA, has an EPP feature that has to be valued by filling up [Spec, IP/TP] (cf. Roberts 2010a, p. 76). Nevertheless, the two language types differ in that T, in TA, has an additional D-feature that is an inherent characteristic of the subject position in NSLs. Unlike the EPP feature, the D-feature allows a null EXPL *pro* to be inserted so that the subject could be wh-moved directly from a post-verbal position. Similarly, the same procedure applies in EXPL-associate pairs. The fact that English shows evidence of the involvement of EXPL-associate pairs in such instances of subject wh-extraction, as in (18) above, lends credence to the EXPL *pro* analysis of the relevant data in an NSL like TA.

In the next section, I briefly consider the structure of simple DPs in TA, and show how the present analysis in terms of dependency relations between constituents in the derivation of structural representations yield the same effects – namely, relating T (or C-T) to D and vice versa.

4. Dependency Relations in the Structure of DP in TA

The sentences in (22) are instances of simple DPs in TA:

(22) a. *il-ulid il-Sghiiir* (TA)

the-boy the-little

‘The little boy’

a’. *ulid Sghiiir*

boy little

‘A little boy’

b.* *il-ulid il-Sghiiir il- mriiD*

the-boy the-little the-sick

‘The little sick boy’

b’. * *ulid Sghiiir mriiD*

boy little sick

‘A little sick boy’

c. *il-ulid il- Sghiiir wa il-mriiD*

the-boy the-little and the-sick

‘The little sick boy’.

c’. *ulid Sghiiir wa mriiD*

boy little and sick

‘A little sick boy’

As the examples in (22) show, in TA, the structure of the DP (definite, marked by the use of the article *il* or indefinite, marked by the absence of the article *il*) allows only one AdjP to co-exist with the head N/D. The DP in (22b, b’) with two adjectives become grammatical if coordination separates the two adjectives, yielding (22c, c’). The same facts apply if the DP is derived within a sentence as exemplified in (23):

(23) a. * *jaa il-ulid il-Sghiiir il-mriiD* (TA)

came.3MS the-boy the-little the-sick

‘The little sick boy came.’

operations to extend the derived structure by concatenating the elements already formed. The same is true of the derivation of the structure of definite relative clauses.

Similar considerations arise in other contexts as in the examples in (25):

- (25) a. *il-ulid il-raakib darraaja* (TA)
 the-boy the-riding a.bicycle
 Lit: ‘The boy riding a bicycle’
- b. *il-ulid illi (huwwa) raakib darraaja*
 the-boy who (he) is.riding a.bicycle
 ‘The boy who is riding a bicycle’
- c. *il-ulid y-irkib darraaja*
 the-boy 3-ride/be.riding a.bicycle
 ‘The boy rides/is riding a bicycle.’

Examples (25a) and (25b) represent a DP and a relative clause, respectively. They are for that reason incomplete thoughts, but are in themselves complete referring expressions (i.e., DPs) and two alternative ways to refer to *il-ulid* (the boy), specifying that he is, at the moment, riding a bicycle. The same meaning applies to example (25c), but here the expression is a complete sentence informing the interlocutor about *il-ulid* (the boy) – that he is, at the moment, riding a bicycle or that he is usually doing so.

Again, the suggestion is that these examples are counterpart of one another in structural terms. In these examples, it is a D-feature on the functional head D (realized as *il*) in (25a), on the functional head C (realized as *illi*) in (25b), and on the functional head T in (25c) that allows the kind of dependency interrelationships exemplified in the previous sections. These interrelationships can find an explanation in the system of Chomsky (2001, 2004, 2008) in that D, C, and T are elements that are directly involved in phases (only derivatively for T, i.e. C-T) in the process of deriving syntactic derivations, and they are prone to show structural affinities that explain the dependency relationships they exhibit.

Another explanation for these interrelationships can be formulated in Pesetsky and Torrego’s (2001, p. 361) terms that Nominative case is an uninterpretable T-feature on D (i.e. μT on D). Similarly, the D-feature that is characteristic of Definite relative clauses and DPs in TA could be thought of as an uninterpretable D(eterminer)-feature on T and C (i.e. μD on T and C).

5. Conclusion

The copy-deletion analysis of the derivation and representation of the subject position in the sentence structure of NSLs is adequate enough to cover the empirical facts dealt with in the

previous sections – namely, the availability of *pro* elements (resumptive/referential or expletive) in such languages.

The advocated analysis has also shown that EXPL-associate pairs are attested cross-linguistically. In NSLs, these pairs involve an EXPL *pro*. In English-type languages, they must involve a phonetically spelled-out EXPL, without which the sentence, where the EXPL-associate pair is derived, will not find an interpretation (violation of the EPP).

In all the instances of the derivation and representation of the subject position in the language types discussed above, EXPL plays a fundamental role in the syntax of these languages reducing to a minimum the variation that exists between such language types in the relevant structural contexts.

Due to the amount of similarity witnessed in EXPL-associate pairs cross-linguistically, the next step in the study of the feature structure of typologically different languages is to show that the availability of an additional intrinsic [μ D] feature, in conjunction with the EPP, might also arise in the very instances where such EXPL-associate pairs obtain irrespective of language type. Such an attempt is the subject of ongoing research (Jouini, forthcoming a,b).

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