جامعة عمر المختار
مجلة كلية التربية- البيضاء
المجلد الأول- العدد الثاني الصفحات 1-19 2017

Some Morpho-Syntactic Issues in Arabic

Dr. Mohammed S. Rakas

Benghazi University
DOI:https://doi.org/10.54172/2qt63f86

Abstract

The topic explored in this study is a hierarchal intermediary level known in linguistics as Morpho-Syntactic level, to bridge Morphology and Syntax in languages. This level in Arabic language is examined here in two parts: part one considers Derivational and Inflectional morphologies in the language, and shows how they project into syntax. It also examines central grammatical properties needed in syntax such as aspect, mood, finiteness, agreement, etc. Part two is devoted to some syntactic structures and central syntactic concepts such as positions, heads, phrases, etc., adopted in this study to attest and verify universal principles posited by the universal Generalized Phrase Marker. The structure of the Noun Phrase category and the Verb phrase complex are considered.

The syntactic distinction between Complement and Adjunct categories is established in terms of adjacency and distribution. This distinction is taken as an evidence for the existence of the intermediate X-bar level in the language. Arabic coordination structures provide a further distributional evidence in support of this distinction. Structural coordination facts suggest that Strict Adjacency Principle holds at all levels, and is extendable to all head categories in the language Rakas (2017a). Extra-position, pre-posing and questioning structures show that Complements are X-sisters and Adjuncts are X-bar sisters. Furthermore, the pronoun waahid-u/a/i-n/ ‘one’ in Arabic is a pro-N-bar, rather than a pro-N form. In line with the pro-N-bar form, the verb complex citation form /fa‘ala ka-ðaalika/ ‘(he) did so’ is a pro-V-bar, rather than pro-V form. This N-bar and V-bar parallel structural behavior indicates that sentences in Arabic are structured out of phrases, and all phrase categories observe the principles posited by the Generalized Phrase Marker Rakas (ibid). Hence, the focus of this study is placed on three grammatical relations, linking the Arabic interacted morphology with syntax, i.e. (i) the rich

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

agreement declension on nouns, (ii) the rich conjugation on verb complex, and (iii) the relation between the functional positions of sentences and the two intermingled morphologies in the language.

الملخص

تتناولت هذه الدراسة الجسر الأوسط الرابط بين مستوي الصرف و الاشتقاق المورفولوجي من ناحية ومستوي تركيب الجملة في اللغة العربية من ناحية أخري. يعرف هذا المستوي الوسطي في علم اللغة الحديث (المستوي الصرفي الاشتقاقي النحوي). تتناول الدراسة هذا المستوي في اللغة العربية من جزأين :

يبحث الجزء الأول في الصرف والاشتقاق العربي في إطار علم المرفولوجيا الحديث ويبين دورهما المرفولوجي-النحوي في تركيب الجملة العربية في إطار علم اللغة الحديث ويتناول الجزء الثاني من هذه الورقة مجال تركيب الجملة في العربية بالقياس والمفاهيم العلمية الحديثة لنظرية علم تركيب الجملة المتداولة في دراسة لغات البشر (X-bar Theory of Syntax).

تأخذ هذه الدراسة تركيبات الجملة في العربية كأدلة لوجود الثلاث مستويات اللغوية بالمفهوم الرياضي من حيث رفع القوة إلي واحد وذلك بإثبات أن هناك معمول لعامل بمستوي الصفر كتركيب أساسي وهناك معمول لعامل بالمستوي الأول كتركيب مكمل. تقترح هده الدراسة مفاهيم وتركيبات لغوية افتراضية بالمستويات التركيبة الثلاثة غير مألوفة للنحو العربي التقليدي.

تثبت هذه الدراسة, علي سبيل المثال, عدم وجود المفهوم التقليدي للكلمة والضمير لا يعود علي الاسم بقدر ما هو يعود علي وحدة الاسم متكاملة كما انه هناك ضمائر تعود علي وحدة تركيبة الفعل ووحدات تركيبة الصفة و الحال و الجار و المجرور, كما أن مقومات الجملة وحدات متجانسة تسمي (phrase) وليس الكلمات و في العموم أن العربية شانها شان لغات البشر الاخري ترتكز علي ثلاث مستويات لغوية و تتطابق مع مفاهيم وأسس علم اللغة العام (Universal Linguistic Theory).

Introduction

This paper has a two-folds integrated parts. Part one considers morphological issues and part two examines some syntactic issues in Arabic. Morphology and syntax in Arabic as, presumably, in other languages, are bridged by an intermediate morpho-syntactic level. The integrated Dderivational and Inflectional

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

morphologies in Arabic, respectively, provide syntax with lexical phrasal categories and grammatical properties needed for sentence projection. These two morphologies are quite distinct in English and interacted in Arabic.

The method assumed here for the analysis of the Arabic illustrative exaples has three hierarchal levels: (i) CLA sentences are transcribed into their phonetic script, with hyphenated lexical words and functional affixes, (ii) lexical words are translated into English and affixes are glossed with morpho-syntactic properties. For instance, /'al/-(def)inite), /-t/-(3fsg), /-u/-(nom.), /ja-/-(imp.)perfect, etc. and (iii) each sentence is translated into English. The descriptive power of this method allows non-Arabs to understand the implications of these Arabic informative data in terms of pronunciation, morpho-syntactic functional features and their English translation.

It is assumed in various models of syntax that Derivational/Lexical morphology provides syntax with lexical phrasal categories to articulate sentences syntactic functional positions such as (spec)ifiers, subjects, complements, adjuncts, heads, etc. Inflectional morphology provides sentence syntactic positions with grammatical features needed for sentences understanding. For instance, verb specific conjugations such as aspect, mood, finiteness, etc., and noun declension properties such as gender, number, case, etc. These grammatical features indicate how syntactic positions in sentences, e.g. head, complement, predicate, etc. are related. The verb-complex in Arabic expresses grammatical properties such as gender, number and person in agreement with its subject. By and large, it is assumed that Arabic has no infinitival verb form, but rather it exhibits word lexical complexes based on consonantal roots. These roots acquire vocalic patterns in order to assume their word categories, for example, the root ...k...t...b... must acquire patterns of vocalic affixation, termed in the Classical Arabic (CLA) tradition as /mawaaziin/ (templates), to express word-categories: e.g. /kitaab/ ‘a book’, /kutub/ 'books' /ja-ktub-u/ ‘he-writes’, /katab-a/ ‘he-wrote’, /kaatib/ ‘author’ /maktab/ ‘office’ /maktabah/ ‘bookshop/library’, etc.

(S)ubject (V)erb (O)bject (SVO) word order is recognized by CLA grammarians as /mubtada' wa xabar 'Topic and Comment (T-C) 'structure, vis-à-vis Subject-Predicate in modern jargons. The 'Topic' /mubtada'/ category is an initial functional position in nominal sentences, assigned structural (nom)inative case by the adjacent V position. It could be speculated that the basic sentence structure in CLA is VSO, and the SVO word order is a marked topialized structure Rakas

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

(2017c). In VSO word order, the subject is categorized as Agent. (T-C) structure shows full (Subject-Verb) agreement, with explicit number, but VSO structure exhibits partial agreement, without number overt marking. Sentences syntactic positions are crystallized by lexical phrasal categories. Functional positions and their syntactic relations are indicated in written Arabic by diacritics and morphological affixation.

2. Part one: Morphology:

2.1 Finiteness

It is generally assumed that (non)finite (infinitival) clause distinction is, to a large extent, based on morphological criteria; that is finite clauses necessarily contain a verb inflected for tense and agreement while non-finite clauses contain tense-less and agreement-less verbs. Arabic, as far as one can tell, shows only the former type of clauses in which the verb complex inflects for aspect and shows full agreement in gender and number with the subject in SVO word order.

2. 2 Aspect:

According to Crystal, D. aspect is a category used in grammatical description of verbs in languages. Along with other morphological affixations and mood inflection, aspect in Arabic describes the verb complex and refers primarily to the way Arabic grammar marks the duration of the action denoted by the verb complex. This aspectual duration is well expressed by the contrast between perfective and imperfective verb forms in the language, the former referring to the completion of the action of the verb, the latter indicates duration without reference to completion.

Imperfective aspect in CLA is expressed by a set of consonants, i.e. the glottal stop /'/, the voiced alveolar nasal /n/, the voiced palatal approximate /j/ and the voiceless alveolar plosive /t/, pronounced as /'-n-j-t/ necessarily prefixed to the verb complex forms. In other words, imperfective aspect is encoded by the markers /ʔ-(1sgm/f), n-(1plm/f), j-(3sg/plm), t-(2/3sg/plf/, prefixed to the verb complex. Perfect verb forms in Arabic show suffixed Subject-Verb Agreement markers Rakas (2008a).

Since Arabic does not allow [=VC] syllable structure and since no more than one consonant in the onset position of the syllable, then epenthetic vowels are

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

inserted to split these aspectual consonants and verbs initial consonants (see table 1 below). Only imperfect verb forms express aspect and mood in Arabic The imperfect verbs in Arabic are categorized as present and the perfect verb forms are classed as past. The endings suffixed to the perfect verb forms express agreement with their subjects in the T-C structures.

The imperfect prefixes and their function together with the indicative mood marker are tabulated as follows:

Table 1:imperfect aspect and mood markers

imperfect verb complex forms	prefixes	Function	indicative mood
'a-drus-u (I study)	'-	(1sg-m/f)	-u
na-drus-u (we study)	n-	(1pl/dl-m/f)	-u
ta-drus-u (you/she study)	t-	(2/3-f/m-sg/pl)	-u
ja-drus-u (he/they study)	j-	(3sg/pl-m/f)	-u

2.3 Mood:

Mood, mode or Modality is a stylistic property marked on the verb and extends to the scope of the sentence as a whole, i.e. unmarked vs. marked structures. The indicative vs. subjunctive mood distinction in Arabic is determined by the main verb Rakas (2008c) and (2017c: to appear). Consider the following Arabic data and the subsequent analysis:

(1) ’a-‘lamu/‘alim-tu ’anna-k-a (sa)-tu-ghaadir-u/ghaadar-ta ’ila faransa
know/knew-1sg that-2msg-acc (fut)-imp-leave-ind./left-2msg to France
‘I know/knew that you (will) leave/left for France’

(2) sa-’u-ghaadiru ’in habat-at/ta-hbuta taa’irah
will-1sg-leave if landed-fsg/imp-land def-plane(fsg)
‘I will leave if the plane landed/*lands’

(3) ’a-qtarihu/’i-qtarah-tu ’an (*sa)tu-ghardira/*ghadar-ta ’ila faransa
suggest/suggested-1sg that/to (*fut)imp-leave/left-2msg to France
‘I suggest/suggested that you leave/*will leave/*left for France’

(4) ’i-ntadar-tu ’ila ’an habat-at/*ta-hbuta t-taa’irah
waited-1sg to that landed-fsg/imp-land def-plane
‘I waited till the plane landed /*lands’

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

(5) (sa)-’a-ntadiru ’ila ’an ta-hbuta/*habat-at t-taa’irah
(will)-1sg-wait to that fsg- land/landed-fsg def-plane-fsg
‘I will wait till the plane lands /*landed’

In (1) above, the embedded clause is introduced by the subordinate declarative Complementizer C /’anna/ ‘that’, which selects a nominal Inflectional Phrase (IP) complement, where the verb can assume perfect or imperfect verb form. The C, assigns accusative case -a to the subject of the embedded clause –k-a. Example (2), is a conditional structure, in which the matrix verb is imperfect (future) and the embedded verb assumes the default perfect form Fehri (1993). In (3), the complement is introduced by the subordinate subjunctive mood assigner C /’an/ ‘that/to’, which selects verbal IP complement. The verb assumes imperfect aspect and inflects for agreement. Examples, (4) and (5) show that the aspect of the embedded verb is dictated by the aspect of the main verb. In (4) the main verb and the embedded verb are in perfect forms and in (5), both verbs show imperfect forms.

Thus, verbs in indicative clauses (1) and conditional clauses (2) are specified for aspect and agreement, whereas those verbs in subjunctive clauses (2) to (5) are not specified for aspect. It could, therefore, be concluded that the Cs /’i/anna/ ‘that’ are indicatives, and /’an/ ‘to’ and /’in/ ‘if’ are subjunctives. The conclusion that could be abstracted is that indicative Cs, e.g. /’i/anna/ subcategorize for SVO nominal complements with inflected verbs, and subjunctive Cs, e.g. /’an/ ‘that/to’ introduce necessarily VSO verbal complements with imperfect verb forms.. Thus, /’anna/ is sensitive to VSO, and /’an/ is sensitive to SVO.

Having adopted the two-folds criterion of aspect and mood as a test for a constituent status, we may proceed to examine the status of subjunctive subordinate structures. Subjunctive verbal subordinate clauses introduced by the subjunctive C /’an/ ‘that/to’ show similar behavior to declarative nominal clauses. Compare the following structures:

(i) ’aqtarihu [e] ya’tii l-walad-u l-yawma wa [e] ta’tii l-bintu ghadan
(ii) ’qtarihu [’an] ya’tii l-walad-u l-yawma wa [e] ta’tii l-bintu ghadan
(iii) *’aqtarihu [’an] ya’tii l-walad-u l-yawma wa [e] - l-bintu ghada
(iv) ’aqtarihu [e] ya’tii l-walad-u l-yawma wa [’an] ta’tii l-bintu ghadan
(v) ’aqtarihu Ø ya’tii l-walad-u l-yawma wa Ø - l-bintu ghadan
(vi) *’aqtarihu [’an] ya’tii l-walad-u l-yawma wa [’an] - l-bintu ghadan

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

(vii) *’aqtarihu [e] ya’tii l-walad-u l-yawma wa [‘an] - l-bintu ghadan.
‘I suggest [that] the boy comes today and [that] the girl comes tomorrow’

Example **(i)** is a coordinated CP structure with empty C nodes, and (ii) has a suppressed C node in the second coordinated CP (cf. iv). Example, (iii), however, shows that the CP and the IP constituents cannot be coordinated with each other, hence gapping is not possible. Example, (iv) shows coordinated CP constituents, the first complement CP has an empty subjunctive C and the second CP has an overt subjunctive C. Its grammaticality is explained in virtue of the coordination constraint that only identical constituents can be coordinated. It follows, then, that the first clause must also be a CP category with the C position left empty. Example, (v) shows coordinated IPs and thus gapping is possible. Since CP gapping is not possible as shown by (vi) and (vii), the IP coordinated analysis in (v) is based on the fact that the second gapped clause must be an IP. Examples, (vi) and (vii) are ruled out for the same reason; that is gapping does not hold for conjoined CPs. The analysis that the C position in Arabic is the position typically occupied by Cs is also supported by other structures, in which the C must be overtly expressed.

1. Relative subordinate clauses encoded by any of the relative /’alladi/ ‘that-msg’ Cs Rakas (2000).

2. The overt yes/no question Cs /hal/’a/ ‘Modal/aux’, /’alaa/’ala/ ‘Modal/aux not’ to introduce interrogative clauses. English, which has no such a C, uses, instead, subject-auxiliary inversion i.e. I to C head movement.

3. Exclamation main clauses are introduced by overt Cs such as the intensifiers /kam/ ‘how' and the exclamatory /maa/ ‘what/how’.

4. The 2-person vocative pronoun /yaa/ ‘Oh, you’

To recapitulate, coordinated CP structures in Arabic show that both C nodes may be lexically filled, both are null or either of them is filled. Only CPs are co-coordinated, only IPs are coordinated and only coordinated IPs undergo gapping Rakas (2008c). This argument presupposes that the CP and IP are independent categories. The generalization abstracted here is that only identical constituents can be coordinated and only coordinated IP constituents allow gapping.

3. Part two: Syntax

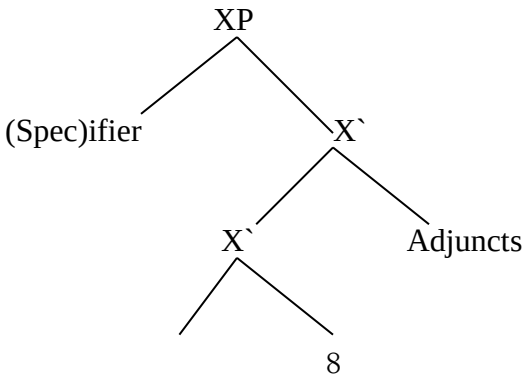
© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

CLA normative grammar developed in the Arab traditions is a two-levels model, a word level and a sentence level, in which words enter into linear dependency relations. I conjecture that no categorical terms are given for the (head) and (phrase) notions, nonetheless, certain structural relations such as Constituent Command, government, syntactic positions and morphological markers are explicitly stated in the Arabic traditions Mubaarak (1979). The most effective testing device used by CLA grammarians to classify grammatical categories in the language, is the substitution test; that is only identical categories (constituents) can fill the same syntactic slot. The central categories for CLA grammarians are the verb and its agent, all other categories are deemed fadla 'marginal' or 'leftover'. In the following discussion, the X-bar (X') syntactic level will be taken as a theoretical device to explore some syntactic issues pertaining to phrase structure, and to verify whether Arabic has a two-levels flat structure or a configurationally three-levels phrase structure Rakas (2017a).

A two-levels theory is postulated and widely adopted in the traditional literature on syntax: a word-level (Head) category and entire phrase level category, in which only the head is central and obligatory element. The tradition of the intermediate X' level goes back to the late forties and early fifties. Harris' (1951) article 'Structural Linguistics' and Wells' (1957) article 'Immediate Constituents' Radford (1988), developed views on the hierarchy structure of the phrase, which became central to American Structuralism (taxonomic linguistics). These views were later adopted and developed by researchers working with the transformational model, who posited an intermediate X' structural level of a phrase category, smaller than a full phrase and larger than a single head.

The most influential method adopted in this respect is Chomsky's (1982) Bar-Notation, where the Head X is a variable symbol to stand for a lexical and functional heads in languages. The following, is the generalized X` schema cross-linguistically posited to regulate the structure of phrases and clauses Haegeman (1991: 95),

Fig 1 GPM



© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

X Complement

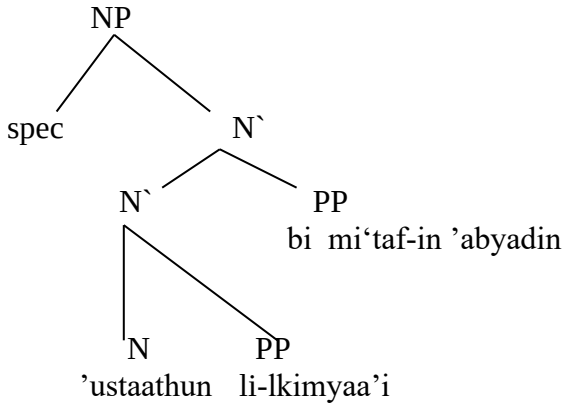
Jackendoff (1977.) proposes that Complements expand X into X`, Complements are sisters of X and daughters of X`, Adjuncts are both sisters and daughters of X`, and Spec node is a sister of X` and a daughter of XP. The diagram indicates that while Spec. expands X` into XP, Adjuncts expand X` into another X` (recursive-ness). A phrase category is defined as a set of elements, which form a constituent, with no restriction on the number of these elements. For example, an XP constituent expands an obligatory head X without any implication that the maximum projection XP must contain anything other than the head X. Thus, a single unmodified head can have the same distributional syntactic status as its phrasal counterpart.

3. 1. Noun Phrase Internal Structure:

The evidence for N` intermediate level in Arabic can be established on a distributional basis. The three-levels syntactic structure of the Noun Phrase (NP) in Arabic is expressed by the following expansions:

(16) ’ustaath-u-n li-l-kimyaa’-i bi-mi‘taf-i-n 'abyad-i-n
prof.-nom-indef to-def-chemistry-gen with-coat-gen-indef white-gen-indef.
‘a professor of chemistry with a white coat’

Fig 2



The reference of the head Noun (N) ’ustaathun is specified by the PP Complement li-lkimyaa’i, expanding N into an N` ’ustaath li-l-kimyaa’i, which is both modified and expanded into another N` category by the PP Adjunct 'bi mi‘tafin ’abyadin'. The resulted N` category ’ustaath li-l-kimyaa’i bi mi‘tafin ’abyadin' is further expanded into the NP maximal projection, in which the

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

Determiner Spec node expands N` into NP (Determiner Rule, Radford (ibid). X`-theory proponents impose a severe restriction on the distribution of Complement constituents, which specify N (usually PPs or NPs), and Adjunct constituents, which modify N` (usually PPs or/and APs). Advocates of X' propose the seemingly valid universal principle that when the head N is modified by a Complement and an Adjuncts, the former must precede the latter. Consider the grammaticality of sentence (17) below, in which the Complement is adjacent to its head N, as opposed to the ungrammaticality of sentence (18), in which the Adjunct precedes the Complement. In other words, example (18) violates the universal 'Strict Adjacency Principle' (SAP), expressed in Arabic tradition as ʔal-ʕaamilu wa l-maʕmuula (Lit: the governor and the governed).

(6) ’ustaath-u-n [li-t-taarix-i] [bi-mi‘taf-i-n ’abyad-i-n]
prof-nom-indef. [to-def-history-gen] [with-coat-gen-indef white-gen-indef.
‘a professor of history with a white coat’

(7) *’ustaath-u-n [bi mi‘taf-i-n ’abyad-i-n] [li-t-taarix-i]
prof-nom-indef. [with coat-gen-indef. white-gen-indef.] [to-def-history-gen]
‘*a professor with a white coat of history’

The optional Adjunct rule, [N → N` (PP)], as it is expressed by the appearance of the N` category on both sides of the arrow, is recursive and predicts that Adjuncts PPs can be indefinitely stacked on top of each other. The Complement rule [N` → N (PP)] is not recursive since N` appears only on the left of the arrow. The rule, thus, states that a head noun may, but does not have to, be specified by one and only one Complement PP. Appositive Adjuncts categories can be indefinitely embedded. Another piece of syntactic evidence in support of the Complement/Adjuncts distinction comes from coordination. Since Complements are sisters of an N, then they are attached to the N-level, and since Adjuncts are sisters of N`, then they are attached to the N`-level. This distributional restriction predicts that only constituents belong to the same level can be coordinated. The following four examples illustrate the four, possible, logical combinations:

(i) Complement + Complement (N-level):

(8) ’ustath-u-n li l-kimyaa’-i wa li l-’ahyaa’-i
prof.-nom-indef to def-chemistry-gen and to def-biology-gen
‘a professor of chemistry and (of) biology’

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

(ii) *Complement + Adjuncts (N + N'):

(9) *'ustaath-u-n li l-kiymyaa-i wa bi rijl-i-n
prof.-nom-indef to def-chemistry-gen and with leg-gen-indef.
mabtura-t-i-n
amputated-f-gen-indef
'*a professor of chemistry and with an amputated leg'

(iii) Adjuncts + Adjuncts (N' + N'):

(10) (a) muhaader-u-n bi-sha'r-i-n tawiil-i-n wa (bi)
lecturer-nom-indef with-hair-gen-indef. long-gen-indef. and (with)
rijil-i-n mabtuura-t-i-n
leg-gen-indef amputated-f-gen-indef.
'a lecturer with long hair and with an amputated leg'

(b) muhaader-u-n bi-rijil-i-n mabtuura-t-i-n wa
lecturer-nom-indef with-leg-gen-indef amputated-f-gen-indef. and
(bi) sha'r-i-n tawiil-i-n
(with) hair-gen-indef. long-gen-indef.
'a lecturer with an amputated leg and (with) long hair)

(iv) *Adjuncts + Complement (X' + X):

(11) *daabit-u-n tawii-u-n wa mina sh-shurta-t-i
officer-nom-indef. tall-nom-indef. and from def- police-f-gen.
'*a tall officer and from the police'

The coordination process given above reveals that complements and adjuncts can be coordinated only at their structural levels, i.e. X and X' respectively, as shown by the ungrammaticality of (9) above, where a complement and an adjunct are coordinated, and (11), where an adjunct and a complement are coordinated. In contrast to coordination, the universal constraint 'SAP' stipulates that complements precede adjuncts. I speculate that 'SAP' holds here because complements belong to the X level and adjuncts belong to the X' level as shown by the ungrammaticality of (7), (9) and (11) above. In other words, coordination excludes structures such as (9) and (11), where Complements and Adjuncts are

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

coordinated at the same level. 'SAP' excludes structures such as (7), where adjuncts precede complements, i.e. X' precedes X. complements can be coordinated at their X level as in example (8).

Adjuncts can be coordinated at their X' level as in (10a/b), when they co-occur, complement must precede adjuncts as shown by (17) cf. (18) above.

Since [N + Complement] projects N' level, and [N` + Adjunct] projects the same N' level, it is expected that they can be coordinated with themselves and each other as shown in (12 to 15) below.

(i) Complement + Complement:

(12) daabit-u-n min j-jaysh-i wa jundii-u-n min
officer-nom.indef. from def-army-gen and soldier-nom-indef from
l-'ihtiyaat-i
def-reserve-gen
'an officer of the army and a soldier of the reserve'

(ii) Adjunct + Adjunct:

(13) daabit-u-n bi-zayy-i-n 'askari-i-n wa
officer-nom-indf. with-uniform-gen-indef. military-gen-indef. and
jundi-u-n bi-zayy-i-n madaniy-u-n
soldier-nom-indef with-uniform-gen-indef. civil-gen-indef.
'an officer in a military uniform and a soldier in a civil uniform'

(iii) Complement + Adjunct

(14) daabit-u-n min l-htiyaat-i wa jundii-u-n
officer-nom-indef from def-reserve-gen and soldier-nom-indef.
bi rijil-i-n mabtuura-t-i-n
with leg-gen-indef amputated-f-gen-indef.
'an officer of the reserve and a soldier with an amputated leg'

(iv) Adjunct + Complement:

(15) jundii-u-n bi-rijil-i-n mabtura-t-i-n wa
soldier-nom-indef. with-leg-gen-indef. amputated-f-gen-indef. and
daabit-u-n min l-htiyaat-i

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

officer-nom-indef. from def-reserve-gen
'a soldier with an amputated leg and an officer of the reserve'

A third argument for the Complement/Adjuncts dichotomy in Arabic is based on the syntactic process of Extra-position. The PP Adjuncts in (16) below is extra-posed from its VP category in (17), more freely than the PP Complements in (18) when extra-posted in (19) below. In structural terms, the more closely related an PP is to its head, the less freely it can be extra-posed.

(16) daabit-un daxal-a l-maktab-a bi-zayy-i-n
officer-IN came in-3msg def-office-acc with uniform-gen-indef.
madaniy-i-n
civil-gen-indef.
'an officer came into the office in a civil uniform'

(17) daabit-u-n bi-zayy-i-n madaniy-i-n daxal-a
officer-nom-indef. with-uniform-gen-indef. civil-gen-indef. came in-3msg
l-maktab-a
def-office-acc.
'an officer in a civil uniform came into the office'

(18) daabit-u-n min sh-shurta-t-i daxal-a l-maktab-a
officer-nom-indef. from def.police-f-gen came-in-msg def-office-acc
'an officer from the police came into the office'

(19) *daabit-u-n daxal-a l-maktab-a min sh-shurta-t-i
officer-nom-indef. came in-msg def-office-acc from def-police-f-gen
'*an officer came into the office from the police'

Further structural tests for complement/adjunct distribution in Arabic are pre-posing and questioning. Complements can be pre-posed or questioned while Adjuncts can neither be pre-posed nor questioned; that is an NP which is the object of a preposition heading a Complement PP can be pre-posed or questioned more freely than an NP which is the object of a preposition heading an Adjuncts PP. Accordingly, one may claim that the pre-posed Complements in (20a/b) are more closely linked to their heads than the Adjuncts in (32a/b) below.

(i) pre-posing:

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

(20) (a) ’ustaath-u-n min l-jaami‘a-t-i
professor-nom-indef. from def-university-f-gen
‘a professor from the university’

(b) ’al-jaami‘a-t-u qaabal-tu ’ustaath-a-n min-haa
def-university-nom met-1sg professor-acc-indef. from-3fsg
‘the university I met a professor from’

(21) (a) ’ustaath-u-n bi qamiis-i-n bunniy-i-n
prof-nom-indef. with shirt-gen-indef. brown-gen-indef.
‘a professor with a brown shirt’

(b) *qamiis-u-n bunniy-u-n qaabal-tu ’ustaath-a-n
shirt-nom-indef. brown-nom-indef. met-1sg prof-acc-indef.
bi-hi
with-3msg
‘*a brown shirt I met a professor with’

(ii) questioning:

(22) huwa daabit-u-n min sh-shurta-t-i
he officer-nom-indef. from def-police-f-gen
‘he is an officer of the police’

(23) ’ayy-u shurt-t-u-n huwa daabit-u-n
which-nom police-f-nom-indef. he officer-nom-indef.
min-ha?
from-3fsg
‘which police is he an officer from?’

(24) ’imra’at-u-n bi sha‘r-i-n ’ashqar-i-n
woman-nom-idef. with hair-gen-indef. blond-gen-indef.
‘a woman with blond hair’

(25) *’ayyu sha‘r-u-n ’shqar-u-n hiyya ’imra’at-u-n
which hair-nom-indef. blond-nom-indef. she woman-nom-indef.
bi-hi?

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

with-it(3msg)
'*Which blond hair is she a woman with?'

Unlike Adjunct PPs, Complement PPs in Arabic restrict the choice of their heads nouns (26) cf. (28):

(26) 'ustaath-u-n li t-taarix-i (PP complement)
prof-nom-indef. to def-history-gen
'a professor of history'

(27) 'ustaath-u-n bi sha'r-i-n 'abyad-i-n (PP adjunct)
prof-nom-indef. with hair-gen-indef. grey-gen-indef.
'a professor with grey hair'

(28) *fataat-u-n li t-taarix-i (PP complement)
girl-nom-indef. to def-history-gen
'*a girl of history'

(29) fataat-u-n bi sha'r-i-n 'abyad-i-n (PP adjunct)
girl-nom-indef. with hair-gen-indef. gray-gen-indef.
'a girl with gray hair'

Arabic exhibits a structural parallelism between the PP Complement (30i) and the construct state second term NP Complement (30ii) as shown by the following paradigm:

(30) (i) 'an-naa'ib-u li r-ra'iis-i (ii) naa'ib-u r-ra'iis-i
def-vice-nom to def-president-gen vice-nom def-president-gen
'the vice to the president' 'the vice president'

Structural ambiguity may rise when a construct phrase NP is modified by an Adjunct or an attribute adjective, because the modifying category modifies an N` at different levels.

(31) 'ustaath-u t-taaix-i [l-mu'aasi-i]
prof-nom def-history-gen [def-contemporary-gen]
'the contemporary history professor'

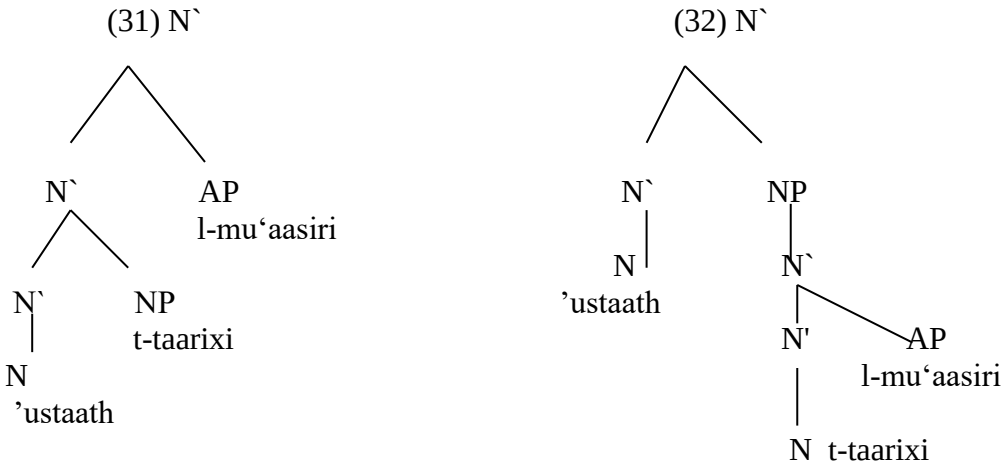
(32) 'ustaath-u [t-taarix-i l-mu'aasir-i]

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

prof-nom [def-history-gen def-contemporary-gen]
'the professor of the contemporary history'

In (31), the bracketed AP modifies the entire preceding construct state N' 'ustaathu t-taaixi, while in (32) the AP modifies the N` second term of the construct state t-taarixi. This structural ambiguity is due to the different deep structural relations shown by the following configurations:

Fig 3



Hornstein and Lightfoot (1981a: Ratford 1981) claim that each N` level specifies a semantic property. The fact that (31) shows two modified N` constituents, entails that two properties are attributed to the head N 'ustaathu, namely, that (i) he is a contemporary and (ii) he is a professor of history. By the same token (32) contains only one modified N` constituent, it follows that it attributes only one semantic property to the head N t-taarixi, which is that it is contemporary.

It is generally accepted that the traditional pro-Noun 'one' is, in fact, a pro-N`, rather than a pro-N Radford (ibid) and Cowper (1992). The 'pro-N` device has been widely used for the establishment of the N`-level in different languages. As for Arabic, it has a pro-N` pronominal form, i.e. waahid-u-a-i-n 'one', which shows agreement with the antecedent head noun, to which it refers as shown in (34) cf. (33).

(i) N-level:

(33) *huwa qaabal-a 'ustaath-a-n li-l-kimyaa'-i wa
he met-3msg professor-acc-indef. to-def-chemistry-gen and

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

'anaa qaabal-tu waahid-a-n li-l-‘ulum-i
I met-1sg one(msg)-acc-indef. to def-science-gen
‘*he met a professor of chemistry and I met one of science’

(ii) N`-level:

(34) huwa qaabal-a taabit-a-n bi-zayy-i-n
he met-3msg officeer-acc-indef. with-uniform-gen-indef.
madaniyy-i-n wa anaa qaabal-tu waahid-a-n bi-zayy-i-n
civil-gen-indef. and I met-1sg one-acc-indef with-uniform-gen-indef.
‘aaskariy-i-n
military-gen-indef.
‘he met an officer with a military uniform and I met a one with a civil uniform’

3. 2. The Verb Phrase:

In contrast to NP, the VP category in Arabic exhibits the same three X`-structural levels given above. Thus the VP category in Arabic is a projection of a head verb V. Together with its complement, the head V projects V' category, and together with its modifying (adverbial) adjunct(s), it projects another V' category, V' and its spec. project the maximum VP shell. In harmony with N', V' in Arabic displays pro-V`, rather than pro-V level. The pro-V` complex in Arabic is ‘fa‘al-a (ka)thaalika’ ‘he did so/likewise’. This verbal complex may substitute for a V', but not for a head V as indicated by the following examples respectively.

(i) V`-level:

(35) ’uxt-i ba‘atha-t risaalat-a-n ’ila waalidat-i
sister-1sg:poss sent 3fsg letter-acc-indef. to mother-1sg:poss
wa ’ax-i fa‘ala- a ka-thaalika
and brother-1sg:poss. did-3msg likewise/so
‘my sister sent a letter to my mother and so did my brother’

(ii) V-level:

(36) *’ax-i darab-a l-kalb-a wa ka-thaalika fa‘ala-t
brother-1sg:poss hit-3msg def-dog-acc and like-that did-3fsg

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

’uxt-i l-qittat-a
sister-1sg:poss def-cat-acc
‘*my brother hit the dog and my sister did so the cat’

Conclusion:

Consideration of the Arabic integrated Lexical and inflectional morphologies reveals that no basic or stem lexical forms exist, hence no tense inflectional verb paradigms. Instead, the language displays consonantal root patterns, and resorts to vocalic templates, called /mawaziin s-sarf/ "inflection templates' to produce lexical words. The verb complex shows two aspectual (im)perfct forms. Finiteness and mood properties are considered in relation to the verb complex category, verb complexes show inflections, hence finite clauses.

In harmony with the principles postulated in the X' theory of syntax, Arabic shows a hierarchical structure, in which X head and X' are distinct levels. A complement constituent is a sister of, and adjacent to, its head, This implies that complements precede adjuncts. This precedence relation between complement and adjuncts categories is pinpointed in CLA grammar as /'al-'aamil wa l-ma'muul/ 'the governor and the governed' The complements and adjuncts different structural relations to their heads are attested against certain universal constraints such as "SAP", coordination and GPM principles. It is shown that complement and adjunct categories belong to different structural levels, only identical constituents can be coordinated and only coordinated IP constituents allow gapping. Spell out of complement and adjunct positions is optional whereas Spec and Head positions realization is obligatory. Syntactic processes such as pre-posing, post-posing, and questioning provided illustrative evidences in support of the complement adjunct distinction, which leads to the conclusion that Arabic has a hierarchical three-levels phrase structure, and hence the existence of the intermediate X' level. Pro-N' and Pro-V' show parallel syntactic behavior in the sense that they observe the levels of coordination.

Three major problematic issues are encountered in this study, i.e. (i) whether the CLA T-C structure and the SVO word order are different structures, (ii) whether the basic word order in Arabic is SVO or VSO and (iii) whether the nom. case marked on T is inherently assigned by the initial governing position of the nominal sentence, called in CLA grammar /'ibtidaa'/, or structurally assigned by the adjacent verb complex in the predicate position.

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.

References:

Al-Mubaarak, M. (1979) ʔal-*ʔidaah fi ʕilal l-nahu* 3rd ed. Dar n-nafaaʔis Beirut

Brown, E,K, & Miller, J. E. Miller (1984) *Syntax: A Linguistic Introduction to Sentence Structure* Hutchinson & Co. (publishers) Ltd

Cowper, E. (1992) *A Concise Introduction to Syntactic Theory*: *The Government Binding Approach* Chicago: The University of Chicago Press

Fassi Fehri, A. (1993) *Issues in the Structure of Arabic Clauses and Words* London/Boston: Kluwer Academic Publishers

Haegeman, L. (1991) *Introduction to Government and Binding Theory* Oxford: Basil Blackwell

Jackendoff, R. (1977) X-*bar Syntax: A study of phrase structure* Cambridge: MIT press

Radford, A. (1988) *Transformational Grammar* Cambridge University Press

Rakas, M. (2000) *The Relative Clause in Arabic: a surface oriented study* Ph.D. thesis The University of Malta-Malta

Rakas, M. (2008a) *Tri-literal Perfect Verb Endings in Classical Arabic: Phonetic & Mprphosyntactic Considerations* Al-Bahith Scientific Journal (7) Al-Tahaddi University

Rakas, M. (2008c) *Indicative and Subjunctive Clauses in Arabic* Journal of Arts (32) Benghazi University.

Rakas, M. (2017a) *The Syntax of Phrase in Arabic: X-bar Analysis* Journal of Science and Humanities El-Marj (25) Benghazi University.

Rakas, M. (2017c) *ʔanna-Particles in Classical Arabic* Scientific Journal (5) faculty of education Benghazi University.

© The Author(s). This open access article is distributed under a CC BY-NC 4.0 license.